



*International Civil Aviation Organization*

**The Fourth Meeting of ICAO Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/4)**

Bangkok, Thailand, 1 – 5 December 2014

---

**Agenda Item 4: Review of Current CDM/ATFM Operations and Problem Areas**

**Agenda Item 5: Development of Regional ATFM Framework**

**CURRENT CDM/ATFM STATUS IN CHINA**

(Presented by CHINA)

**SUMMARY**

This paper presents current CDM/ATFM status in China. With the rapid development of traffic volume, great efforts including organizational structure, construction of a national ATFM unit, staff training and working plan on ATFM development have been made by CAAC ATMB.

**1. INTRODUCTION**

1.1 In recent years, the traffic flow of China civil aviation has been increasing at an average annual rate of 11 percent, and air transport is showing a strong development momentum. With the rapid development of national traffic volume, China's airports and airspace system are under increasing pressure, which leads to frequent flight delays. Viewing the overall trends of the relationship between China's traffic flow and delays, the percentage of on-time flights continuously decreased with the increase of flight volume since 2007. The way of reducing flight delays and alleviating the negative impact has become the focus of China civil aviation.

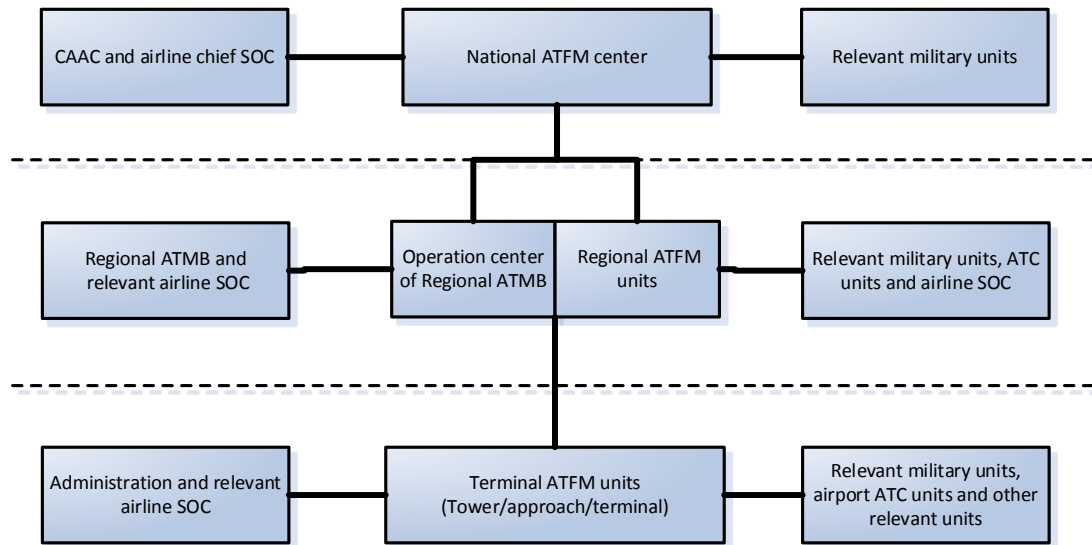
1.2 ATFM is the main method for reducing delay, increasing airspace availability, and improving ATC operation efficiency. CAAC ATMB has attached more importance to ATFM and obtained some achievements with many years' effort. These will be respectively introduced from several aspects as follows:

**2. DISCUSSION**

Organizational Structure of ATFM

2.1 CAAC ATMB had preliminary established its civil aviation ATFM organizational structure which is composed of three levels: national level, regional level, and terminal level. The responsibilities of the national level are borne by Operations Management Center of ATMB. The responsibilities of the regional level are borne by Operations Management Centers of regional ATMBs and regional ATFM units, and the work of the regional ATFM units are undertaken by eight upper air control areas of Beijing, Shanghai,

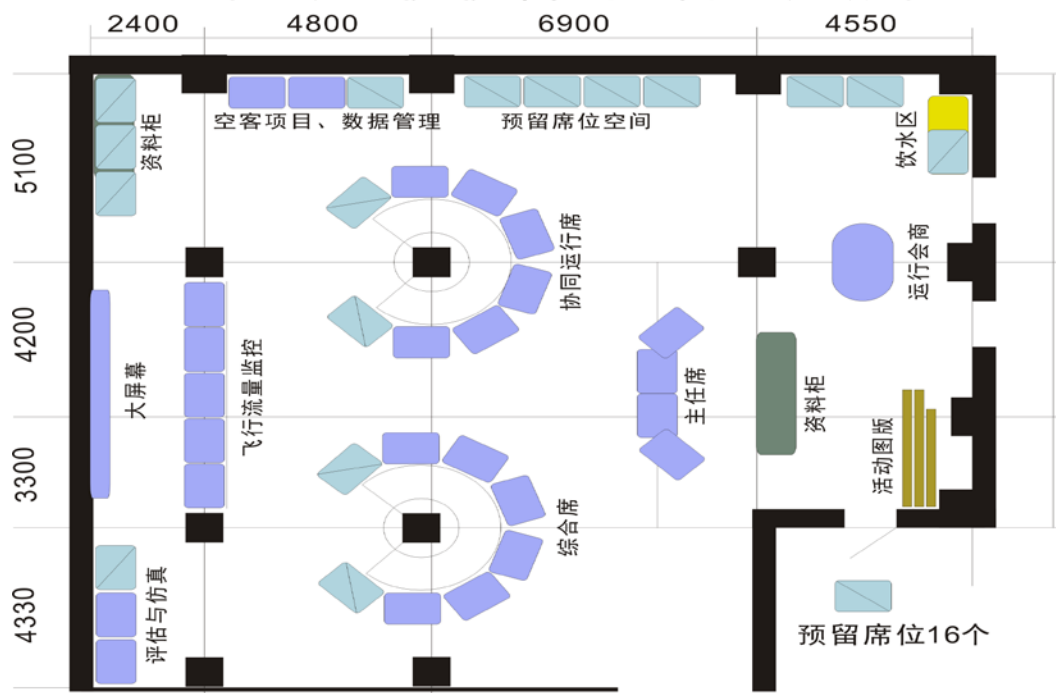
Guangzhou, Chengdu, Xi'an, Shenyang, Urumqi, and Sanya.



Construction of national ATFM unit

2.2 For the purpose of enlarging the office, increasing functions and consummating system instruments, CAAC ATMB had reformed the national ATFM unit since last year. The brand-new national ATFM center has been divided as many functional areas such as supervisor area, operation monitor area, coordination/cooperation area, composite work area (flight plan management, meteorology officer, airline coordinator, etc.), operations evaluation area and conference area. The main duties of these areas are as follows:

空管局办公楼4楼席位布局图 (确定方案)

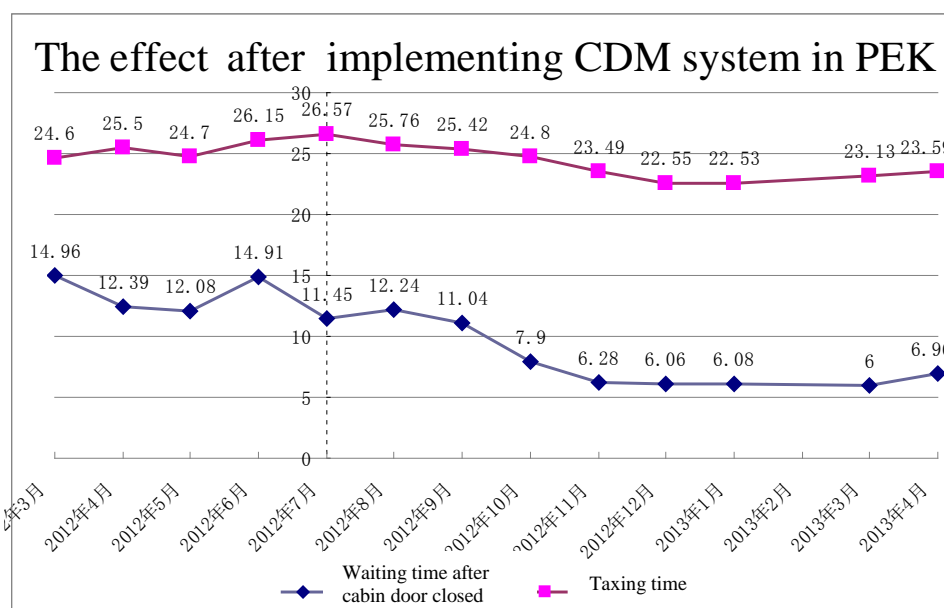


- a) nationwide airports and cross-regional operations monitoring
- b) cross-regional flight coordination instruction publication
- c) operational capabilities and traffic flow adaptation monitoring
- d) nationwide ATC system performance monitoring
- e) operational restriction verification
- f) coordination and disposal of massive delays
- g) unified flight plan approval
- h) coordination with airlines and IATA
- i) handling emergencies
- j) video monitoring of operation
- k) assessment analysis of ATFM

2.3 The main applications of the new ATFM center include flight situation monitoring system, airports operation situation monitoring system, pre-flight plan management system, the Morrow flight plan verification system, operations performance monitoring and flow management system, coordination system of operation management center, GDP/AFP management software, and nationwide CDM system.

Construction progress of CDM system in China

2.4 In 2013, 23 airports with annual passenger throughput over 100,000,00 movements including Beijing Capital International Airport had deployed CDM system. The system has effectively reduced waiting time and taxing time on the ground, saved fuel costs, and reduced carbon emissions.



	2013	2014	2015
Saving economic cost (aircraft performance)	¥10,217,448,120	¥13,992,229,472.10	¥19,334,135,508.27
Carbon emission reduction	59,428,749	86,763,141.84	120,278,359.49
Reducing waiting time for passengers (minutes)	11	13.31	19.0333
Remarks	21 airports	44 airports	178 airports

ATFM staff training

2.5 The abilities required:

- a) being familiar with ATC operation and the capabilities of coordinating with ATC units;
- b) analysis skill and capabilities of airports/controlled sectors capacity;
- c) capabilities of organizations and implementing ATFM measures;
- d) capabilities of being engaged in one or more phases of ATFM.

2.6 Personnel selection requirements:

- a) having obtained airport/approach/area controller license and 10 years relevant working experiences;
- b) any experience of qualified airport/approach/area control instructors, inspectors or supervisors;
- c) having finished ATFM courses and qualified which organized by CAAC ATMB or regional ATMBs;
- d) with abundant knowledge of ATC and ATFM;
- e) With sound communication and coordination abilities.

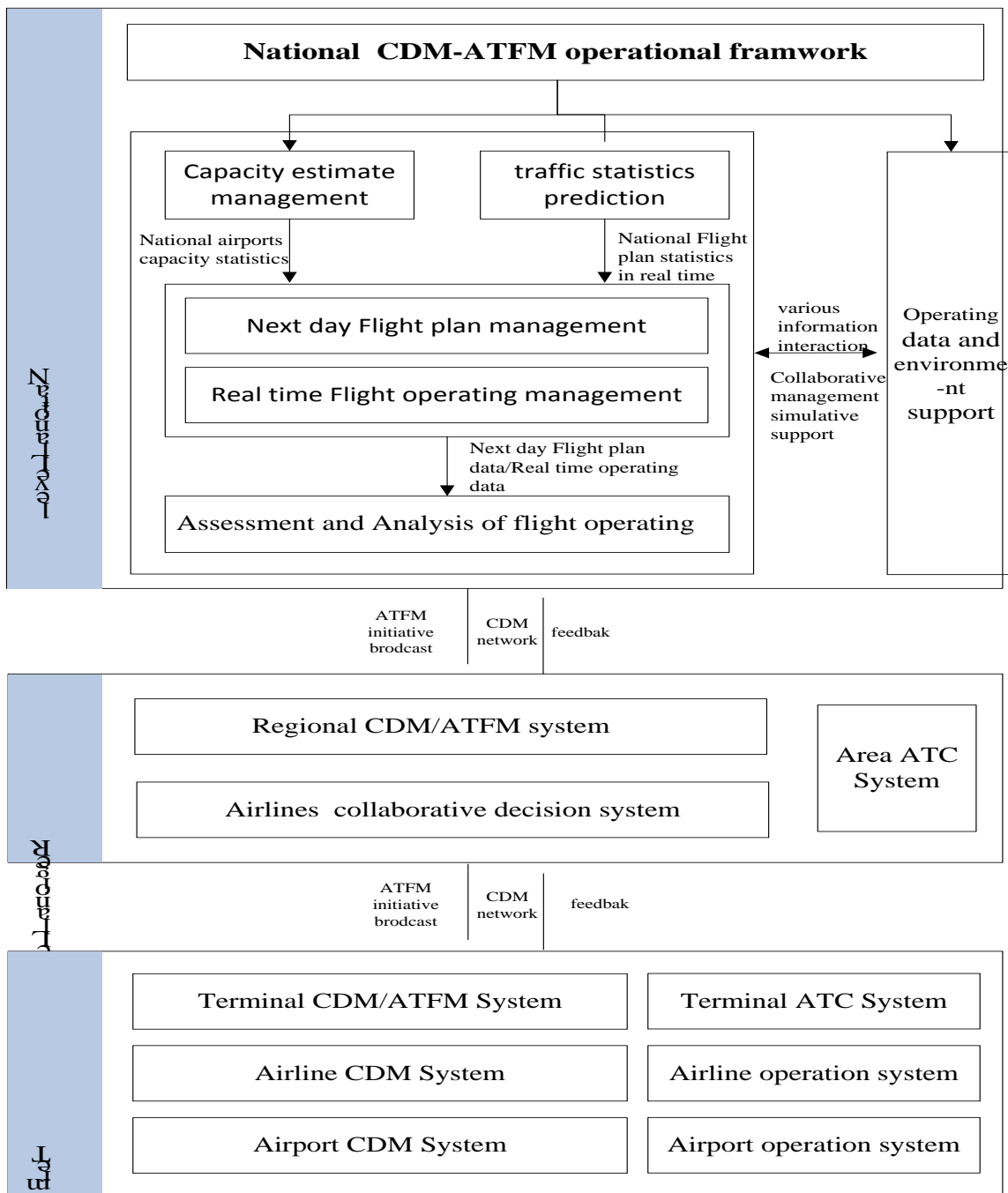
2.7 ATFM staff training. In 2014, CAAC ATMB formulated syllabus, training program and teaching material, organized 300 people separated 10 batches learning the ATFM training course, developed many ATFM personnel, and laid a solid foundation for CAAC ATFM.

Working plan

2.8 The efforts to lay a good foundation for operational flights will be launched by managing nationwide flight plan and flight dynamic information centralized processing, building up two mutual backup nationwide flight plan processing centers, and realizing the EOBT management and air route management.

2.9 Complete the operation program, the theory and algorithm of decision-making, the mechanism of coordination and evaluation, etc.

2.10 National level CDM-ATFM system. CDM concept has been introduced into the construction of ATFM system at national level to achieve progress and collaborative adjustment of national flight plan, to monitor national air traffic status in real time, to analyze and predict the demand/capacity on airspace and airports, and to notify national air traffic imbalances (severe overbalance problems) in time. This system comprehensively resolves the trans-regional problems through the implementation of collaborative ATFM initiatives such as GDP, CR, and MIT.



**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) Reference to ATFM practice in China, improve the ATFM framework;
- c) discuss any relevant matters as appropriate.

.....