



ICAO

The Third Meeting of the Asia/Pacific Aerodrome Assistance Working Group (AP-AA/WG/3)

Video Teleconference, 23 to 26 March 2021

Agenda Item 8: Any Other Business

THE THEORY OF DEVELOPMENT OF FOUR CHARACTERISTICS AIRPORT TO IMPROVE AIRPORT OPERATION AND SERVICE CAPACITY

(Presented by China)

SUMMARY

The Theory of Development of Four Characteristics Airports, put forward by CAAC, defined the path of high-quality development of airport with safe, green, smart and humanistic as the core. A lot of achievements were obtained after doing lots of work. So, China would like to share this theory with partners in Asia/Pacific Region to promote the high-quality development of airports.

1. INTRODUCTION

1.1 In recent years, some organizations and countries have proposed their visions for the future development of airport, such as ASBU, Next Gen, NEXTT and SESAR. Based on the exploration of others, CAAC has also put forward the theory of high-quality development of airport, and defined the path of Four Characteristics Airports with safe, green, smart and humanistic as the core.

2. DISCUSSION

2.1 Safe means the operation of the airport is safe, stable and controllable; Green refers to low-carbon operation and environmental friendliness; Smart means efficient and intelligent; Humanistic is that the airport is people-oriented and full of humanistic care.

2.2 Different from other visions, the Four Characteristics Airports is a holistic development theory, rather than deployment of technology or focusing on partial weakness. The theory of Four Characteristics Airports emphasizes smart as the driving force, and the fundamental purpose is to make the airport safer, greener and more humanistic; It is a theoretical system that integrates development power, goal, basis and route.

2.3 After more than five years of research, at the beginning of 2020, CAAC issued the "15-year Action Plan for the Development of the Four Characteristics Airports", which defined the roadmap. Recently, CAAC issued the "Guidance for the Development Framework of the Four Characteristics Airports". As a standard, it defines the key points and framework for the development of airports.

2.4 Under the guidance of the theory of Four Characteristics Airports, China has done a lot of work and get many achievements. For example, Beijing Daxing Airport has created a model of intelligence by comprehensively applying intelligent equipment, such as the intelligent passenger security check system, to realize facial recognition, identifying baggage and its owner, luggage tracking and other functions, improved efficiency and emergency response capability.

2.5 Shanghai Pudong Airport developed the perimeter panoramic detection system. It can track and identify intrusion target, collect and analyze data automatically. Chengdu Tianfu Airport introduced the green concept to its planning, applied solar panels widely and built GPU system for ground equipment in the remote aircraft stands. Changsha Airport promotes the application of new energy, constructs charging piles massively, uses intelligent energy management system, and energy saving rate reaches 40%.

2.6 Beijing Capital Airport has built a smart runway, which is equipped with sensors such as infrared thermal imager and laser wheel tracking instrument, so the health status of the runway can be observed in real time and maintain it timely and effectively. Harbin Airport has developed a dispatch system for deicing and snow removal to realize the visualization and intelligent dispatch of operating vehicles. In terms of humanistic airport, Xiamen Airport integrates art and culture, creating unique activities such as four-season concert and tea culture festival to enhance passengers' experience.

2.7 Now, China is promoting the development of Four Characteristics Airports. At the same time, evaluation criteria is being compiled. China will translate the "Guidance for the Development Framework of the Four Characteristics Airports" into English and share it with APAC States. China will also continue to share the results of more research and practice, and remain open to suggestions to improve the theory.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) call on States and organizations in the Asia Pacific Regions to note the theory of Four Characteristics Airport, and
- b) note that the theory of Four Characteristics Airports is beneficial in promoting the high-quality development of airports.

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