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THE POSITIVE ROLE OF CHINA'S WHOLE-PROCESS BAGGAGE TRACKING SYSTEM IN IMPROVING PASSENGERS' AIR TRAVEL EXPERIENCE

(Presented by China)

EXECUTIVE SUMMARY

This information paper introduces the whole-process baggage tracking system which utilizes Radio-Frequency Identification (RFID) technology to promote technology convergence, business integration and data integration through data concentration and sharing, thus breaking down information barriers and synchronizing the information on baggage transporting, passenger travels and flight details. The whole-process baggage tracking system will reduce baggage mishandling, such as baggage that is mismatched or missed, make passengers' access to more baggage information and improve passengers' travel experience. At the same time, it will help airlines transform traditional service concept and model, and accelerate the innovation of new air travel services, contributing to the digitization, electronic application and intelligent development trend in the air travel services around the world.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective — <i>Economic Development of Air Transport</i> .
<i>Financial implications:</i>	No additional resources are required for the activities mentioned in this information paper.
<i>References:</i>	IATA Resolution 753: Baggage Tracking IATA Resolutions Manual: RP1740C

¹ English and Chinese versions provided by China

1. INTRODUCTION

1.1 In recent years, the mismatch between an ever enlarging passenger volume and the low level of informationization in baggage transporting has become more prominent in China, the second largest air transport market in the world. Firstly, the lack of information technology (IT) support has led to a high incidence of baggage that is mismatched, missed, lost and damaged, the major parts of passenger complaints; Secondly, the operating costs spent by airlines of baggage mishandling have been increasing year by year and have negative effect on airlines' brand; Thirdly, the failure to synchronize baggage tracking information for passengers during transferring, transmitting or changing their journey enables passengers to acquire no precise location of their baggage, which may lead to dissatisfaction towards the airport or the airlines, and ultimately affect the overall image of the industry.

1.2 In order to solve the aforementioned difficulties and bottlenecks in baggage transporting, and further meet passenger demand for personalized, diversified and quality services, in 2019, the Civil Aviation Administration of China (CAAC) officially proposed to use RFID technology to build a whole-process baggage tracking system in the whole industry. Through data concentration and sharing, this system will promote technology convergence, business integration and data integration to break down information barriers and synchronize the information on baggage transporting, passenger travels and flight details. The whole-process baggage tracking system will meet passengers' demand in baggage service during their air travel and upgrade baggage handling process at the same time, thus improving baggage service, strengthening the industry governance efficiency and fundamentally enhancing people's sense of gain and happiness.

1.3 The building of the whole-process baggage tracking system is a tough project that requires a holistic, systematic and coordinated effort with the collaboration among airlines, airports and other entities. To this end, the CAAC has joined hands with TravelSky, China Academy of Civil Aviation Science and Technology, the Second Research Institute of CAAC, the CAAC Information Center, Air China, China Eastern Airlines, China Southern Airlines, Beijing Capital Airport, Beijing Daxing Airport, Shanghai Hongqiao Airport, Shenzhen Airport, Guangzhou Baiyun Airport, and Chongqing Airport, to carry out research and pilot programs for nearly two years and developed the Implementation Plan for Building Air Passenger Baggage Tracking System. It is expected that by the end of 2022, the whole-process baggage tracking system will be completed at major airports and be promoted at small and medium-sized airports, thus providing the whole-process baggage tracking services across the industry.

2. DISCUSSION

2.1 **The Positive Role of the Whole-Process Baggage Tracking System in Improving Passengers' Air Travel Experience**

2.1.1 Effectively improve passengers' experience in airlines' services. Through the whole-process baggage tracking system, baggage that is mishandled, missed, lost and damaged has been reduced, with complaints resulting from such problems being decreased significantly, thus comprehensively improving the service of civil aviation enterprises. At the same time, the airlines can send passengers messages to provide them with the real-time tracking information on their baggage, thus making them experience better services and helping build the brand of China's civil aviation service. In 2021, the whole-process baggage tracking system was applied to about 1.54 million pieces of baggage transported on more than 64,000 flights, from baggage delivery, security check, distribution, loading and unloading, transit to baggage claim in China, which enabled passengers to easily access the information on their baggage on

their cell phones and other mobile terminals, thus realizing the goal of delivering a carefree and convenient travel.

2.1.2 Significantly improve operational efficiency of the industry. The building of the whole-process baggage tracking system involves data collection from various airports, and data integration and sharing at the public platforms, which enables airlines, airports and other entities to obtain the information on the location and status of the baggage in a timely manner, enhances airlines' ability of baggage transport management by boosting precision of baggage transport and punctuality of baggage arrival, and avoids flight delay caused by baggage mishandling. In the meantime, the whole-process baggage tracking system will substantially support the baggage interline service among different airlines, and the Door-to-Door baggage transfer between airports with turnover of 10 million passengers on a yearly basis, to improve the transfer capacity and operational efficiency of hub airport. In addition, the CAAC can monitor the baggage transport through the whole-process baggage tracking system, and issue rectification requirements to entities or regions where problems arise frequently, thus promoting the quality and efficiency of baggage transport.

2.1.3 Promote the standardization and collaboration of baggage transport. No country in the world has so far truly realized nationwide whole-process baggage tracking. With bold innovation and exploration, China's civil aviation organized relevant departments to develop and issue *the Guidance on Building Airport-End Whole-Process Baggage Tracking System for Air Passengers*, the *Technical Specifications on Storing and Reading RFID Data of Baggage Tracking in Civil Aviation*, the *Interface Standards of Data Exchange in Whole-Process Air Passengers' Baggage Tracking*, the *Message Specifications on Nodes Reporting of Whole-Process Air Passengers' Baggage Tracking*. These standards and specifications, which have Chinese characteristics and are also internationally compatible, will play an exemplary and leading role in providing baggage tracking service in global civil aviation.

2.1.4 Assist with the digital transformation of civil aviation services. The building of the whole-process baggage tracking system has accelerated IT transformation of baggage transport support process and given birth to a myriad of innovative applications that are digitalized, intelligent and unique. For example, Air China and Beijing Capital Airport have applied RFID baggage tracking system to improve baggage services in such large events as the Beijing Winter Olympics; Beijing Daxing Airport has explored the use of baggage tracking information to improve flight regularity; Shenzhen Airport and Shanghai Hongqiao Airport have joined hands with courier enterprises to provide passengers with Door-to-Door baggage service, which has already been promoted at 21 airports. China Southern Airlines has rolled out new services and products, including baggage insurance, baggage storage and baggage deliver to home, and has created the brand of Easy Baggage Travel. It became the first airlines in Asia which obtains the qualification of providing digital service in the global baggage network certified by relevant international organizations.

2.2 Challenges Ahead

2.2.1 The whole-process baggage tracking system, as an important initiative to improve public services in the civil aviation industry, is a systematic, holistic and strategic project that operates cross-subject, cross-system and cross-platform. This project involves hardware equipment modification, software facilities upgrading and information interconnection, with most of the tasks being interlinked and reinforced. Therefore, the building of the whole-process baggage tracking system is a gradual and steadily advanced process. It requires efforts of the whole industry to promote the system, continuously improves relevant standards and specifications, and actively delivers new technologies and new models to realize the goals of optimizing passengers' service experience, improving airport business processes, burnishing airlines brand image and extending the aviation service chain. Meanwhile, combined with the development

vision of the global civil aviation industry, China will actively share experience during the building of baggage tracking system, and strengthen the exchange and sharing of passenger baggage data on international air routes with other states so as to improve the service quality in the global civil aviation industry.

3. **CONCLUSION**

3.1 For the civil aviation industry, the building of the whole-process baggage tracking system reduces the incidence of baggage that is mishandled or missed, increases passengers' access to baggage information and improves their air travel experience. At the same time, it promotes the transformation of traditional service concept and model, accelerates the innovation of new services in airlines and contributes to the digitization, electronic application and intelligent development trend in the air travel services around the world.

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