

An aerial rendering of a large, modern airport terminal complex at dusk. The terminal features a long, central building with multiple wings extending outwards, each with numerous aircraft parked at gates. The architecture is illuminated from within, casting a warm glow. The surrounding area includes runways, taxiways, and various support buildings. In the background, a vast body of water stretches to the horizon under a twilight sky. A single aircraft is visible in the upper right corner, flying over the water.

**PRACTICAL EXPLORATION OF INTEGRATED CONSTRUCTION AND  
OPERATION MODEL IN THE NEW AIRPORT CONSTRUCTION PROJECT**

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# INTRODUCTION

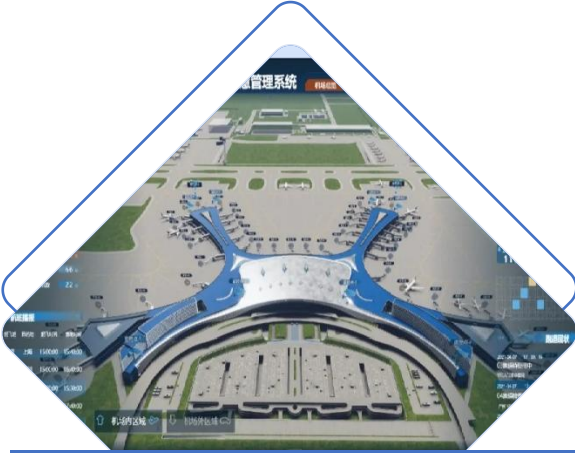


- Airport construction units and operation units were independent ;
- The construction units were only responsible for construction;
- Operational risks and engineering modifications occur .



- In the construction phase, the operational units have not participated in the planning, design and operation preparation;
- Issues related to facility systems, process efficiency, flight commencement procedures, physical assets relocation, scheduling and organizational support occur.

# INTRODUCTION



## Facility Systems

- Planning and Design;
- Installation;
- Stress Testing;
- Staff Training.



## Process Efficiency

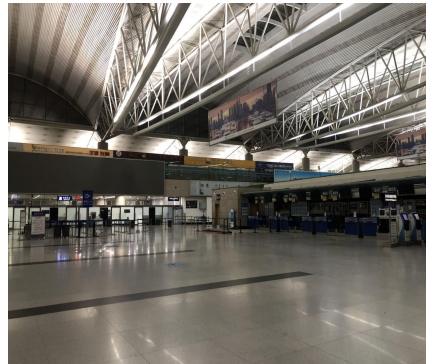
- Aircraft operations;
- Passenger boarding;
- Transportation connections;
- Guiding signs;
- Service facilities;
- Resource allocation.



## Flight Commencement Procedures

- Calibration flights;
- Test flights;
- Industry acceptance;
- Project acceptance;
- Port acceptance procedures.

# INTRODUCTION



## Physical Assets Relocation

- Moving Ground Equipment;
- Overnight Transition;
- Dismantling-Assembling-Transporting-Unloading-Adjusting Process.



## Time Planning

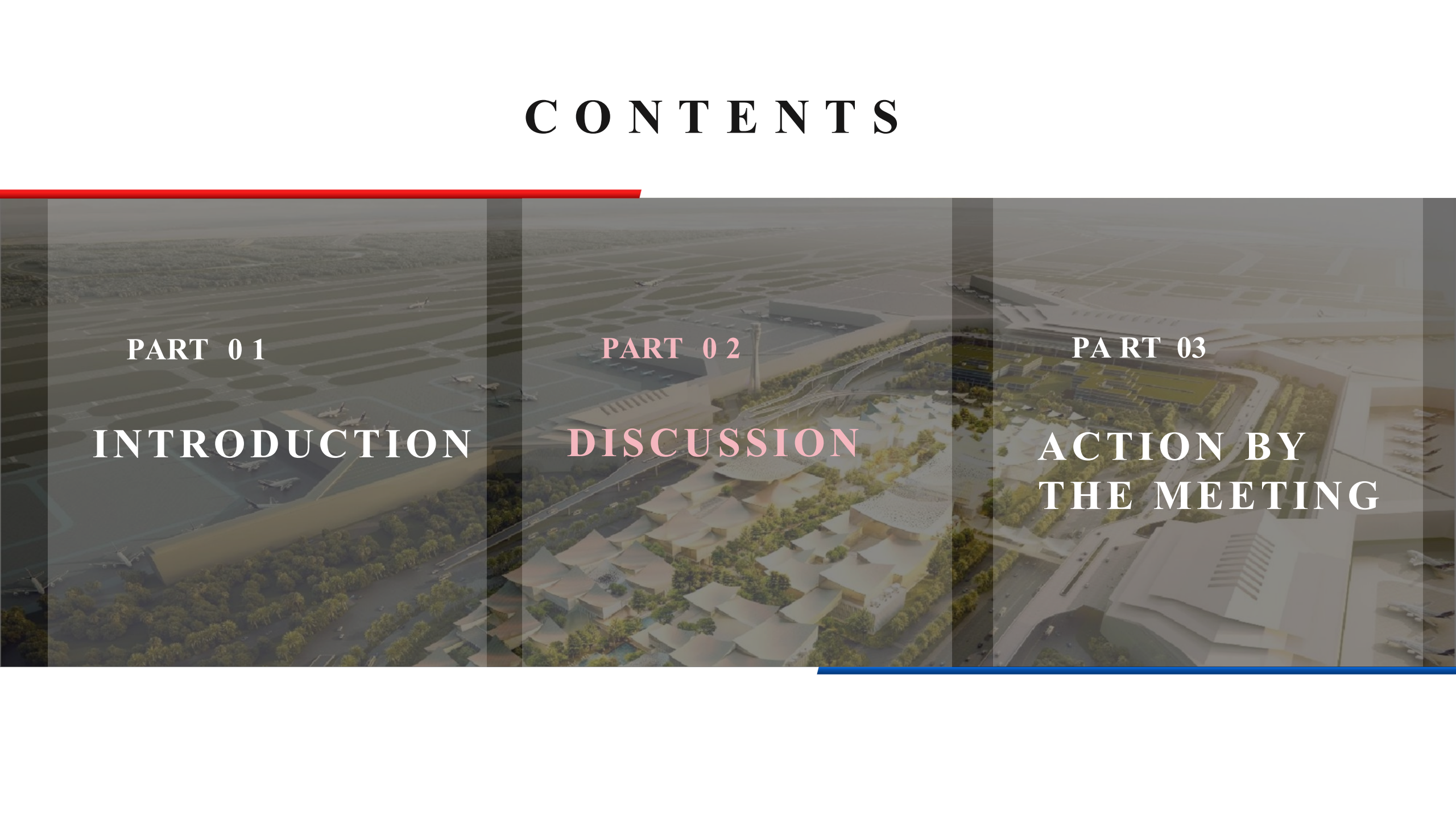
- Engineering Construction Plan;
- Operation Preparation Plan;
- Testing, Training, Drills, Acceptance.



## Organizational Support

- Dual Operations (Old & New Airport);
- Organizational Structure Balance;
- Operational Preparation Mechanisms;
- Risk Resolution Capability.

# CONTENTS

An aerial architectural rendering of a city, likely Dubai, featuring a large airport with multiple runways and taxiways. In the foreground, there is a complex of modern buildings with distinctive, angular, and tiered roofs, surrounded by greenery and palm trees. The background shows a vast, flat landscape with some distant structures and a clear sky. The image is divided into three vertical panels, each representing a different part of the document's contents.

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# DISCUSSION

## ✈ Planning Highlights—Architectural Design

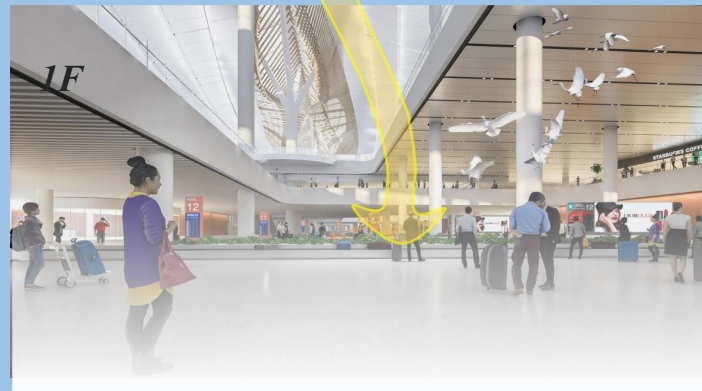
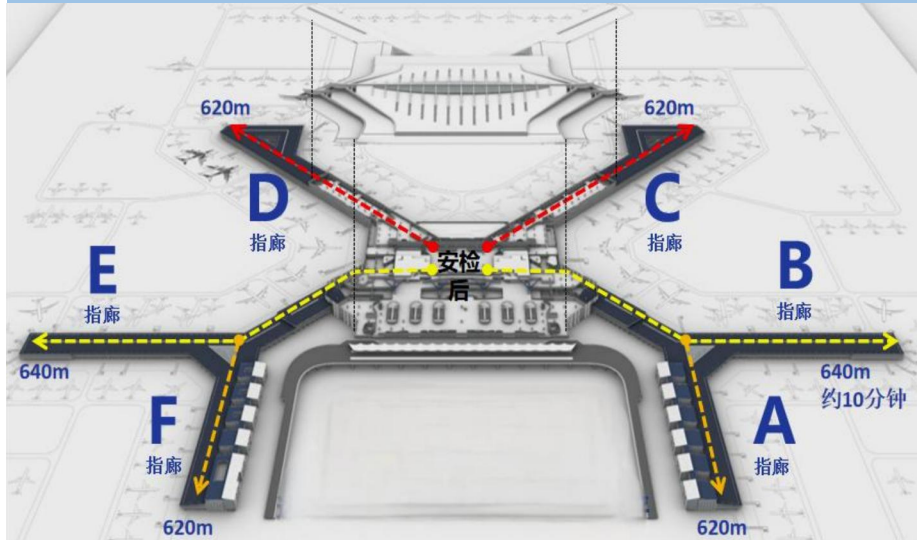


The terminal area buildings incorporate elements of "**Southern Fujian traditional houses**" and "**Tan Kah Kee architecture**", continuing the urban architectural memory of Xiamen Airport. The main building's roof is designed in the form of a three-tiered eave.

# DISCUSSION

## ✈ Planning Highlights——Terminal Configuration

- "One Main Building Plus Six Concourses;
- An average walking distance of no more than 640 meters;
- The 550,000 square meters terminal has as many as 97 close stands.



# DISCUSSION

## ✈ Planning Highlights——Process And Service

### Passenger Whole-process Intelligentization



Self-service check-in



Self-service baggage drop



Self-service security check



RFID baggage tracking



Smart Restroom



#### ■ Humanistic Twenty Scenes ;

- City Characteristics (Piano Performances, Concerts, Stone Carving Art, Aviation Photography);
- Unbounded Airport.



# DISCUSSION

## ✈ Planning Highlights——Transfer Capabilities

- International Transfer Hub;
- The international transfer function zone is **10,000 square meters**;
- Three flow lines: international to domestic, international to international, and domestic to international.

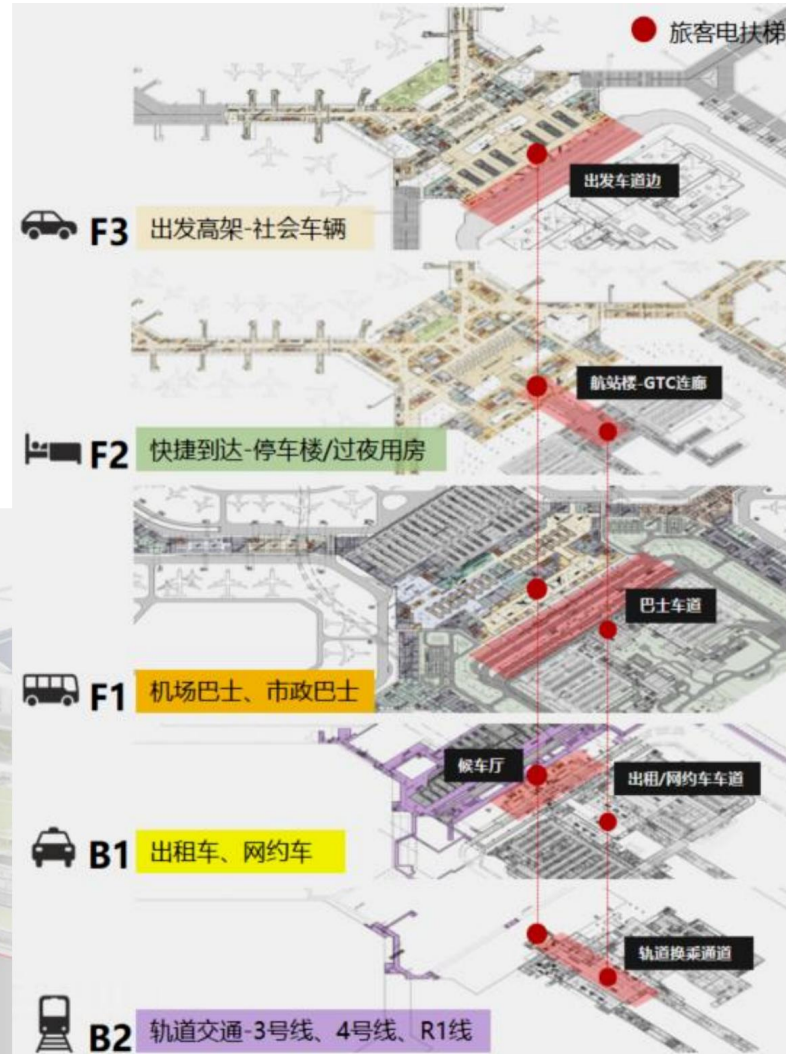
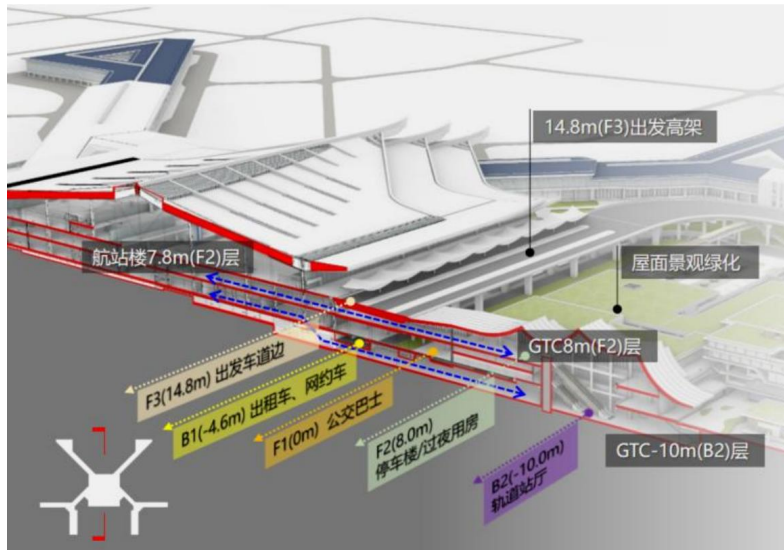


# DISCUSSION

## ✈ Planning Highlights——Comprehensive Transportation

### A Multi-level Integrated Transportation Hub

- Long and short-distance buses, public buses, subways, intercity railways, ride-hailing services, and private cars;
- With an overall walking distance of 100-200 meters.



# DISCUSSION

## ✈ Planning Highlights——Smart Airports



- Quantity Surveying and Pricing;
- BIM5D Management Platform;
- Intelligent Construction On-Site;
- Digital Monitoring;
- Smart Operation and Maintenance.



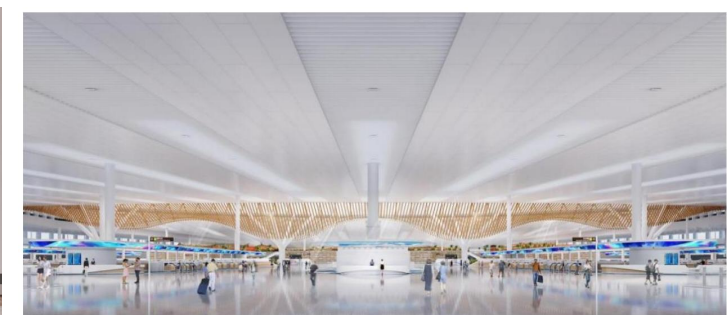
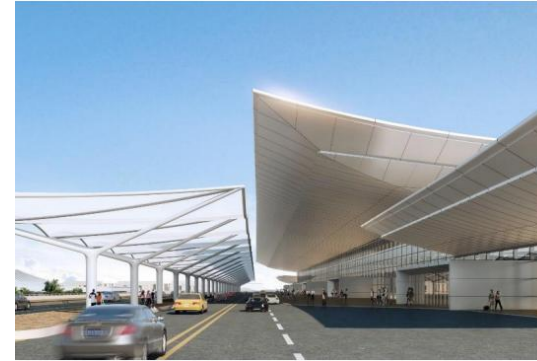
- AI Comprehensive Airport Management;
- International Hub Airport Construction;



# DISCUSSION

## ✈ Construction and Operation Integration—Organizational Support

- Commissioned Panport Construction Company to be responsible for the overall implementation and promotion of the construction project;
- Selected experienced personnel with airport operation background (aircraft operation, terminal management, commercial management, integrated transportation management, etc.) to establish a new airport liaison office.



# DISCUSSION

## ✈ Construction and Operation Integration—Work Planning

厦门翔安机场转场运营筹备工作总进度计划  
(2.3版)

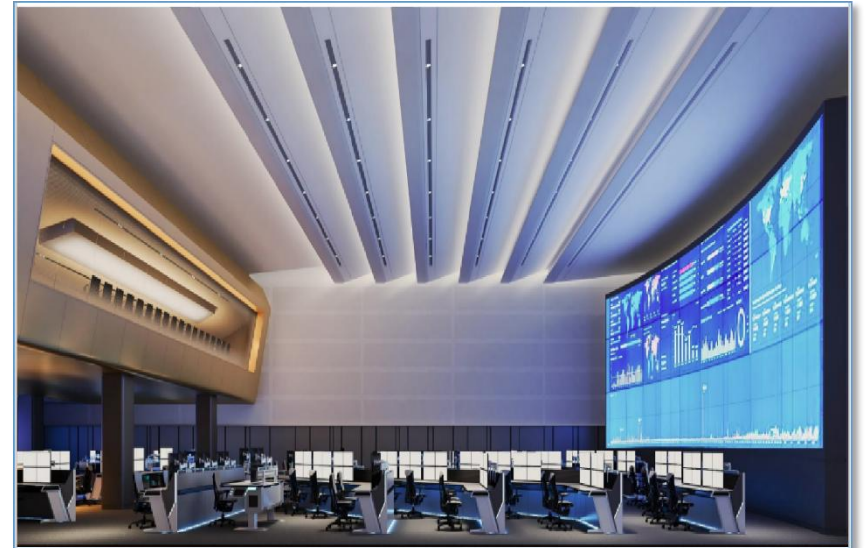


厦门市机场片区指挥部  
同济大学运营筹备进度课题组  
2024年9月

- “Overall Schedule for the Preparation of the Xiamen New Airport’s Transition Operation”;
- Which are broken down into four stages: planning, preparation, actual operation, and sprint.



- "1 main line + 7 business lines" ;
- With the help of task supervision and platform coordination systems, the transfer work is steadily advanced.



# DISCUSSION

## ✈ Construction and Operation Integration—Special Projects

- Process Optimization;
- Model Innovation;
- Service Standards;
- Airworthiness Support
- Digital Construction;
- The Construction Of An International Hub



*More than 300*  
research achievements

# DISCUSSION

## ✈ New Airports Worldwide Facing Widespread Safety Challenges when put into operation



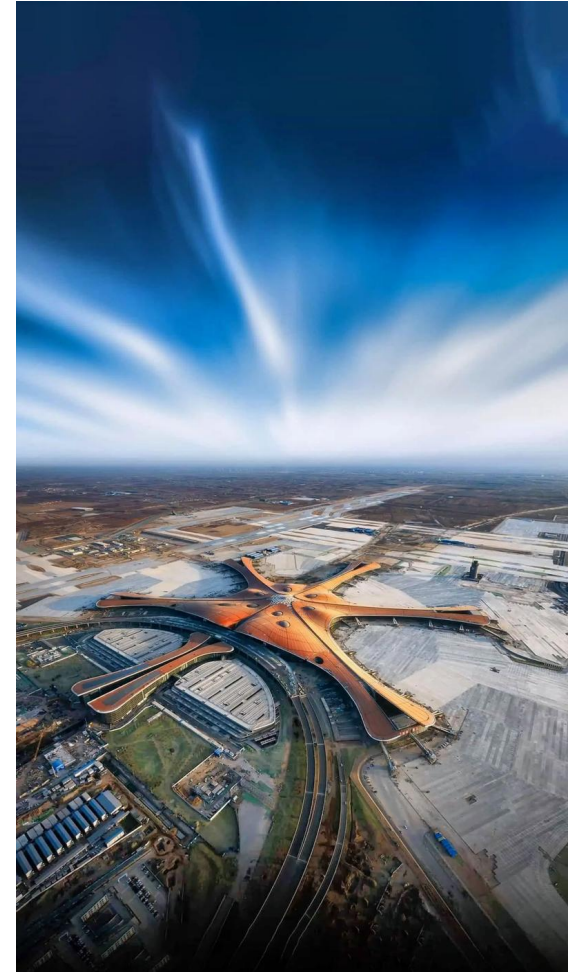
**How to manage a newly built airport and ensure its safe operation?**

**Newly built airports are most prone to unsafe incidents and even accidents during the initial phase of operation.**



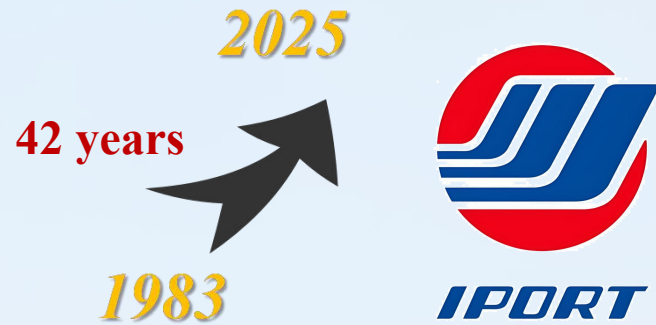
## NOTES

By engaging more professional airport operation teams to participate in the later stages of airport construction, it is possible to achieve a smoother integration of airport construction and operational safety.



# DISCUSSION

## ✈ New Airports Worldwide Facing Widespread Safety Challenges when put into operation



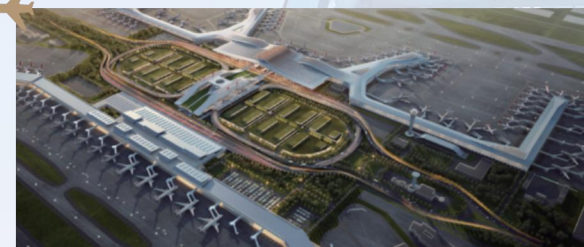
Xiamen, Fuzhou, Wuyishan, and Longyan.

The Entire  
Lifecycle

¥ Investment and  
Financing

✂ Construction  
Management

⚙ Maintenance



# CONTENTS



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ACTION BY  
THE MEETING

# ACTION BY THE MEETING

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- New concepts for the planning and construction of new airports;
- Integrated experiences in airport construction, operation and transition;
- Attention to the operational safety risks of newly built airports;
- Promote the application of the delegation management model.

An aerial photograph of an airport at dusk or dawn. The terminal building is illuminated, and several aircraft are parked at the gates. A control tower stands prominently. The surrounding landscape includes greenery, a small pond, and parking areas. The sky is a mix of blue and orange, with a single plane visible in the upper right. A semi-transparent dark grey rectangle is overlaid across the middle of the image, containing the text "Thank you for your attention!".

**Thank you for your attention!**