

Leveraging Smart Facilities To Ensure Seamless Terminal Operations: A Case Study of Taoyuan International Airport T3, Taiwan

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- Smart airport's facilities architecture
- Smart security construction for good passenger experience
- Build up new Baggage Handling System to solve existing bottleneck
- Integrate all facilities for Airport Collaborative Decision Making

"Smart" Terminal Planning



What is Smart Terminal Planning?

- Provides functional solutions that are flexible as the future is uncertain
- Finds the most suitable technical solution and enables its integration
- Proofs that the solutions work









Terminal 3 facilities





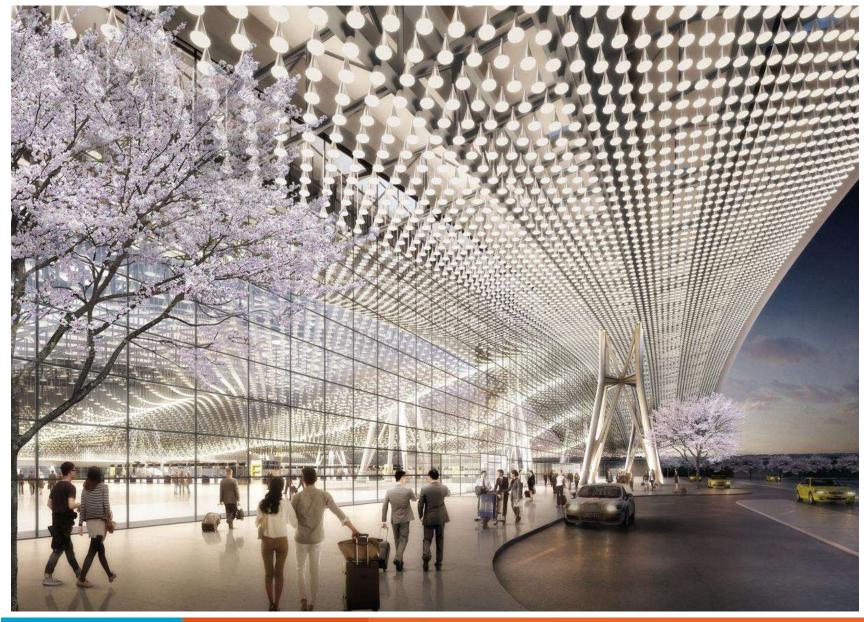
Introduction to Terminal 3 - TPE





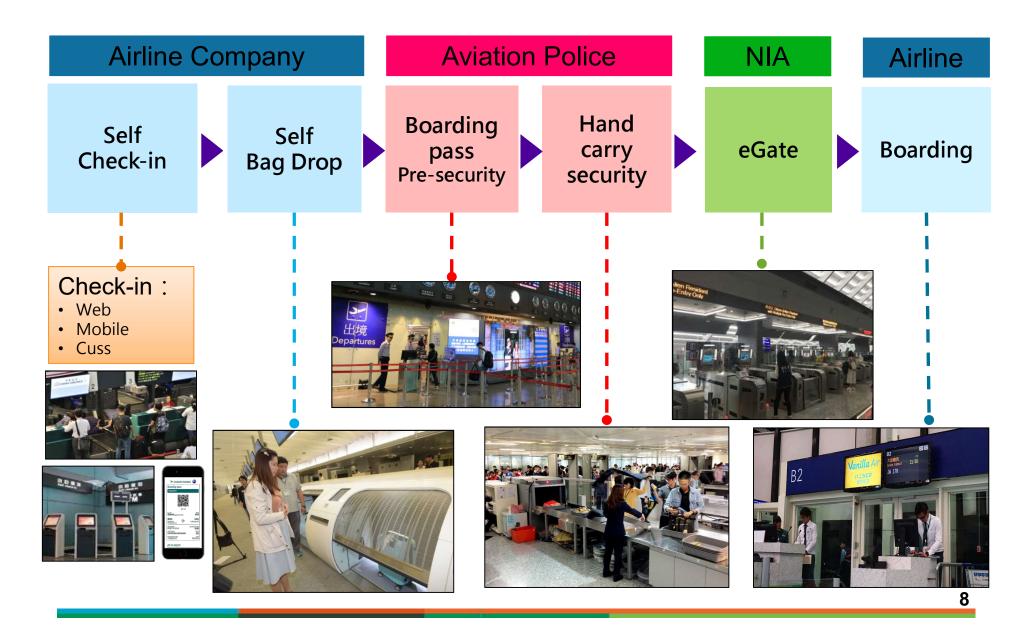
Introduction to Terminal 3 - TPE





Smart Security Process





 Parallel divest: a completely different approach to preparing passengers for the screening process
Automatic diversion: an efficient method of separating suspicious baggage from the main conveyor
Automated tray return: eliminates the needto transport trays manually





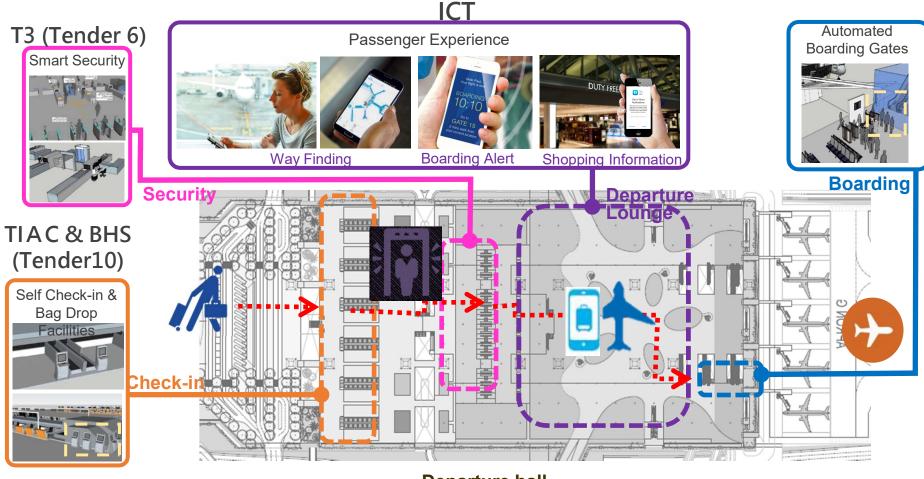


iLane.evo

Advanced checkpoint conveyor system with a high degree of automation

Passenger Experience Summary - Departure





Departure hall

The purpose of promoting self-service departure clearance



1. Impressive passenger's experience :

✓ Shorten passengers departure clearance time, reduce travelling document checkpoints, reduce service manpower, and improve passenger satisfaction.

The concept of ICAO single token

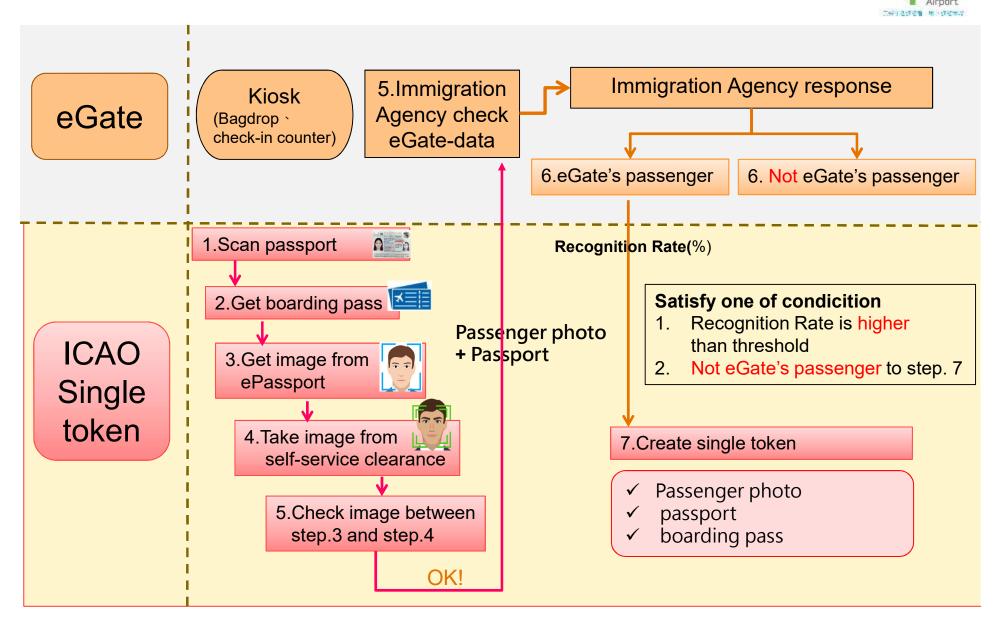


2. Collaboration with CIQS :

 Preventing illegal departures and confirming the identity of boarding passengers

Recommend that airlines and immigration offices adopt the same verification method, and identity verification include check-in and transfer passengers

ICAO Single Token



Facial recognition Boarding Gate

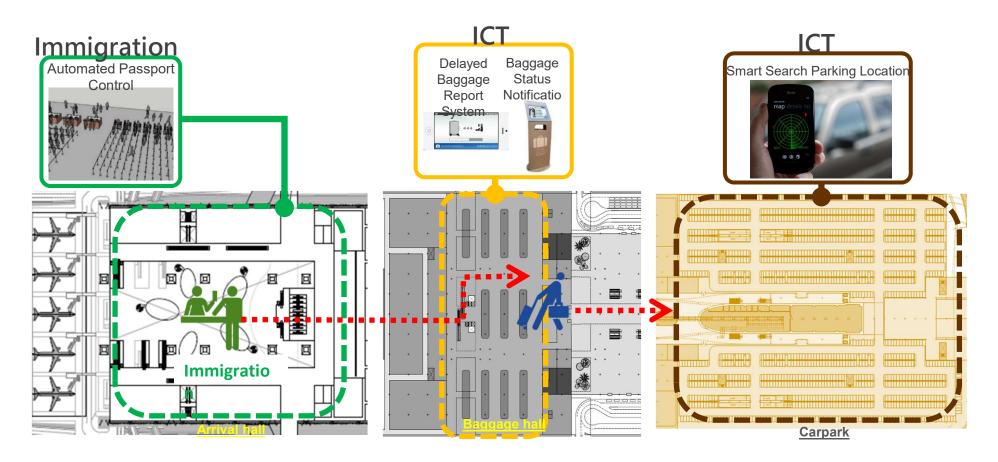




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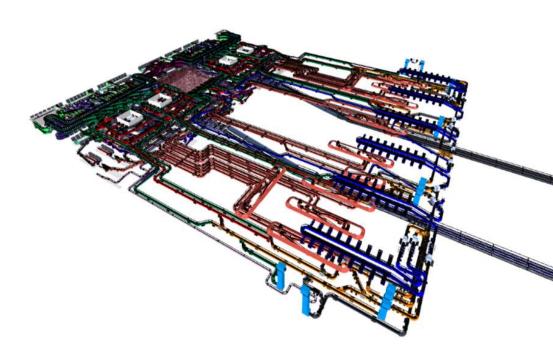
Passenger Experience Summary - Arrival





Baggage Handling System



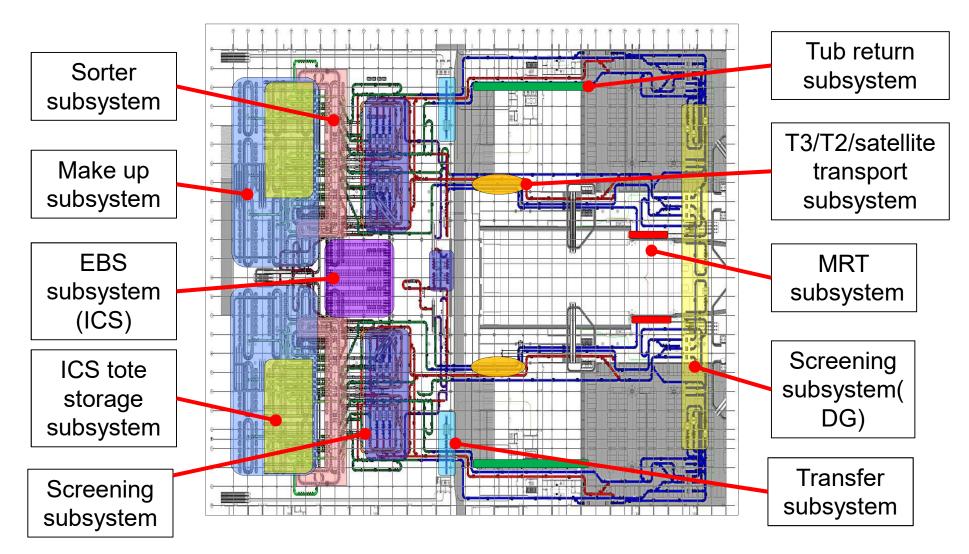


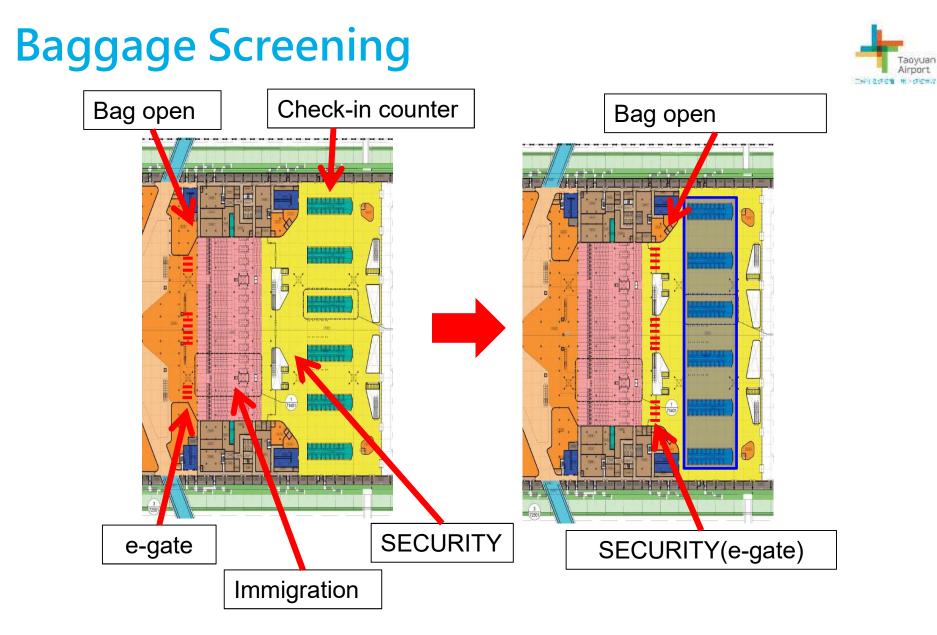
Departure System

- Capacity : 10,098 bph
- Designed to handle golf bag up to 1.2m length
- 12 check-in rows, 204 counters
- 12 Standard 2 machines & 4 CT machines for dangerous goods and explosive screening
- 4 tilt tray sorters (994m)
- 24 make-up carousels
- Automated Individual Carrier System (ICS) Early Bag Store capacity of 3000 bags
- Integrated link with MRT from City Check-in
- Integrated backbone via ICS between Terminal 1,2,3 and future Satellite
- Arrival System
- 22 Arrival line with customs screening
- 12 Arrival carousels

Departure System





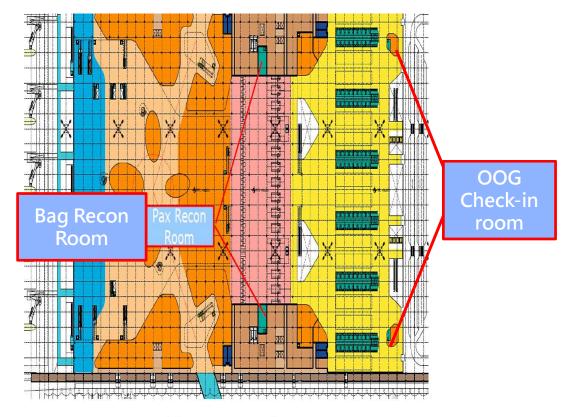


Bag Reconciliation process & OOG(Out of Gauge) check-in Build smart security via ICT





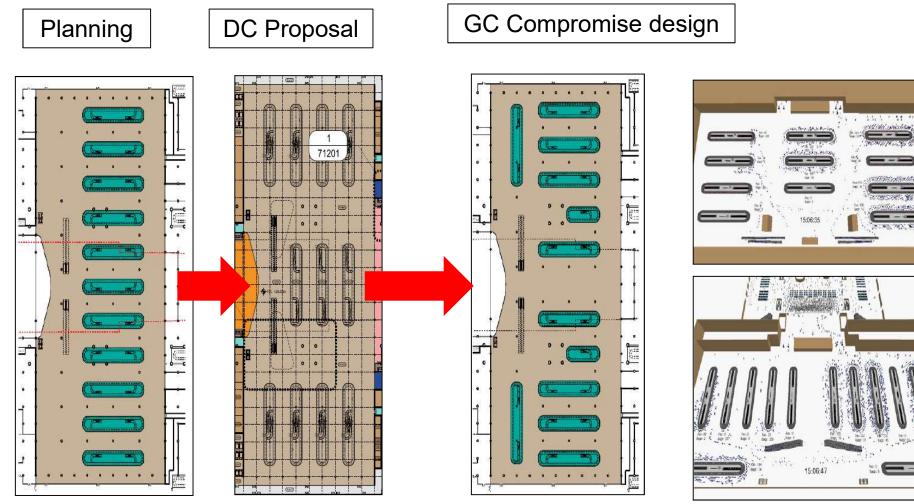


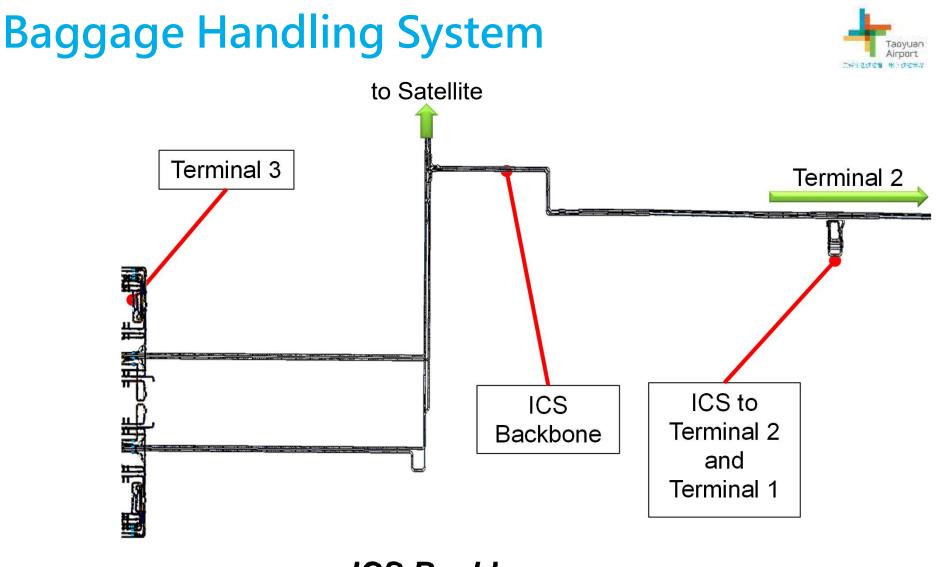


3rd Floor – Departure Hall

Arrival System



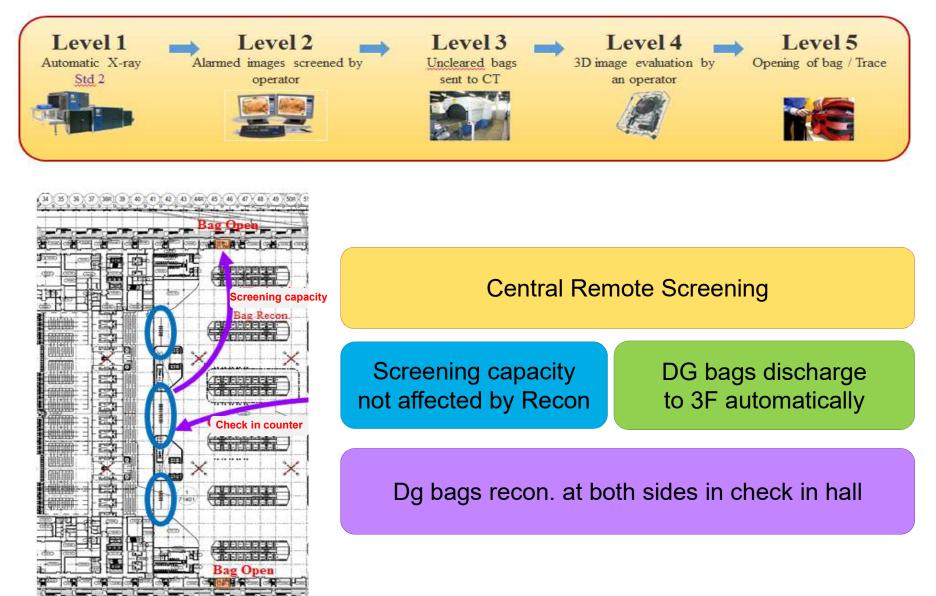




ICS Backbone

HBS (Hold Baggage Screening)

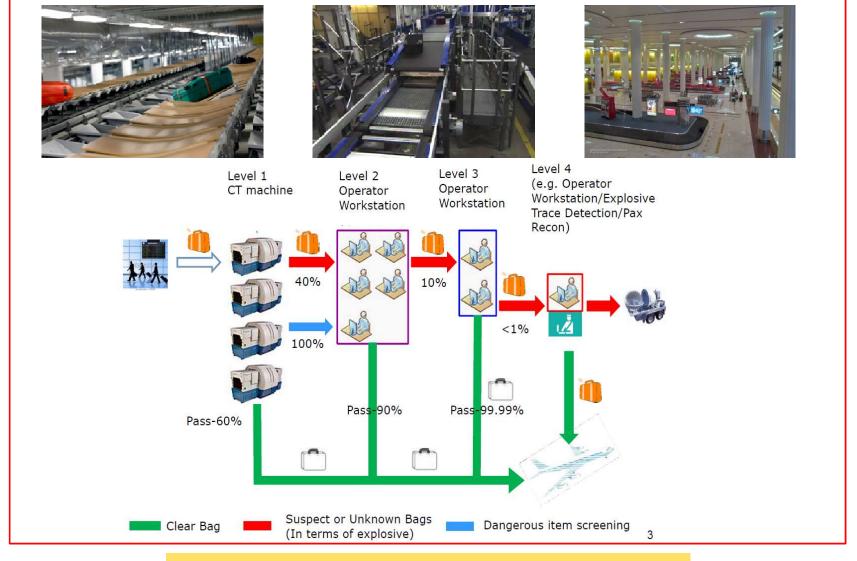




Baggage Handing System



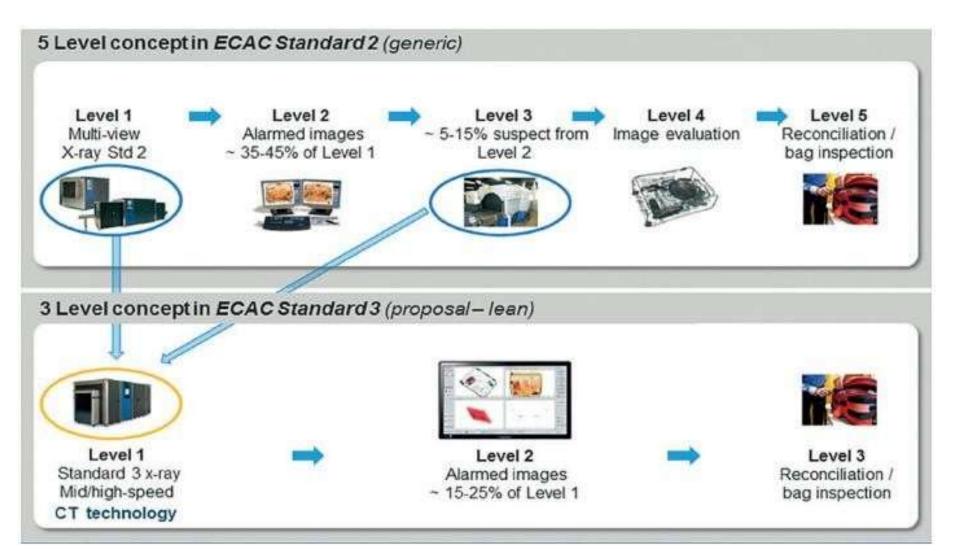
BHS sortation Technology Trend



Screening for dangerous and explosive item

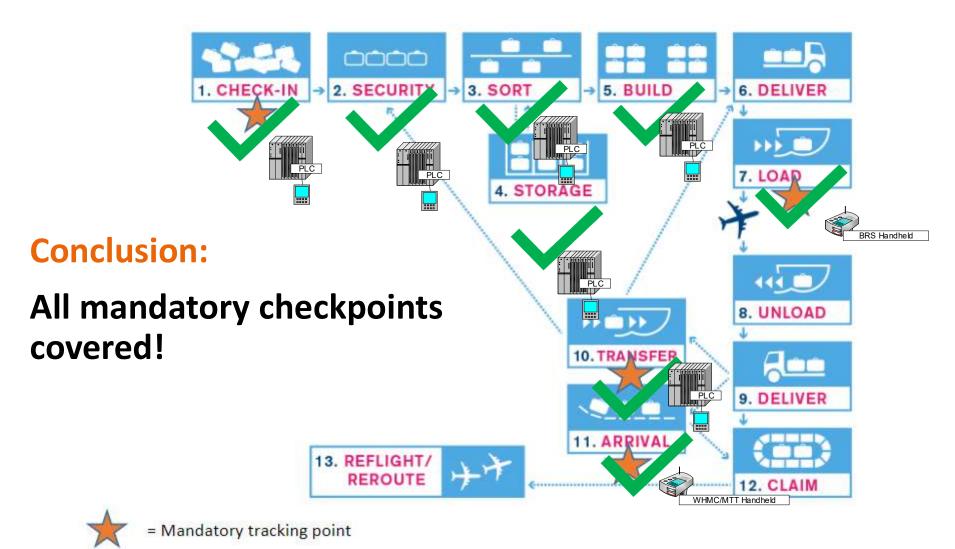
Assessment on 3-Level HBS System





Implementation of IATA753 for TPE T3



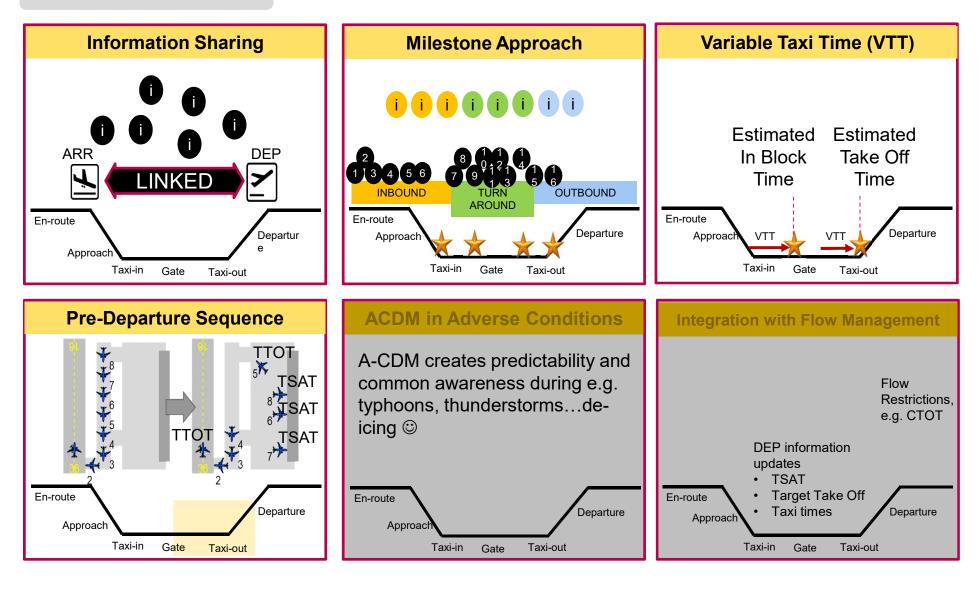


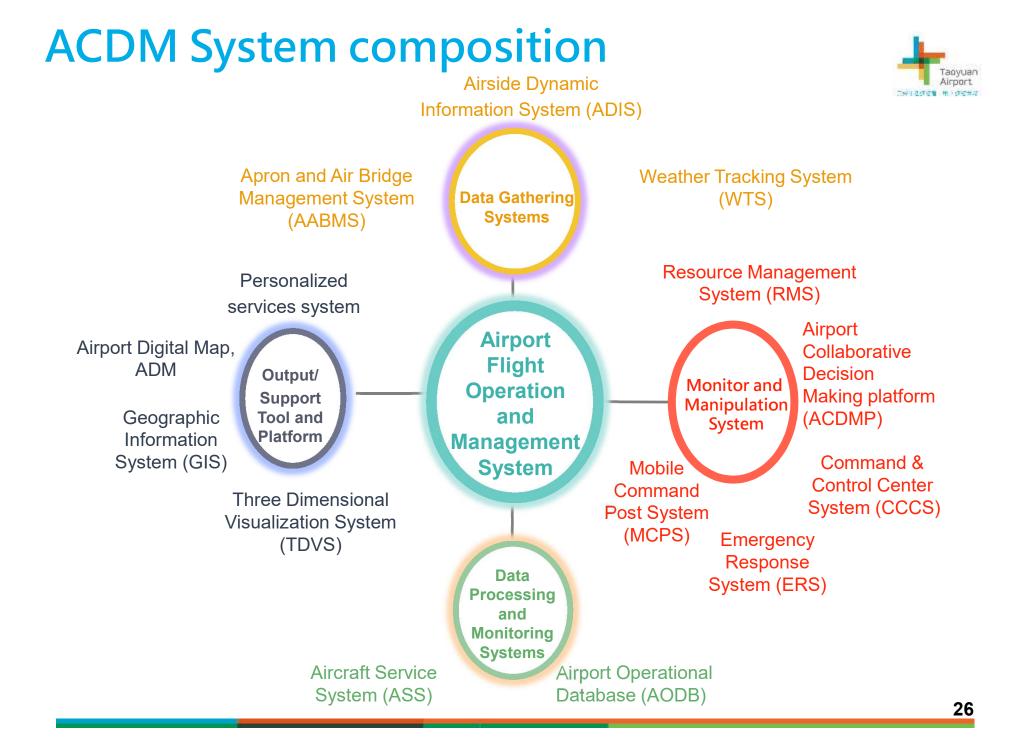
Source: Baggage Tracking | IATA 753/A4A 30.53 | Implementation Guide Issue 2.0

Working Scope of T3 ACDM



The Six Function Phases





Working Scope of T3 ACDM



Information Sharing

Saab A-CDM Aeroban is provided the information sharing for each stakeholder by using unified portal.

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Recommendation for A-CDM development Procedure of T3

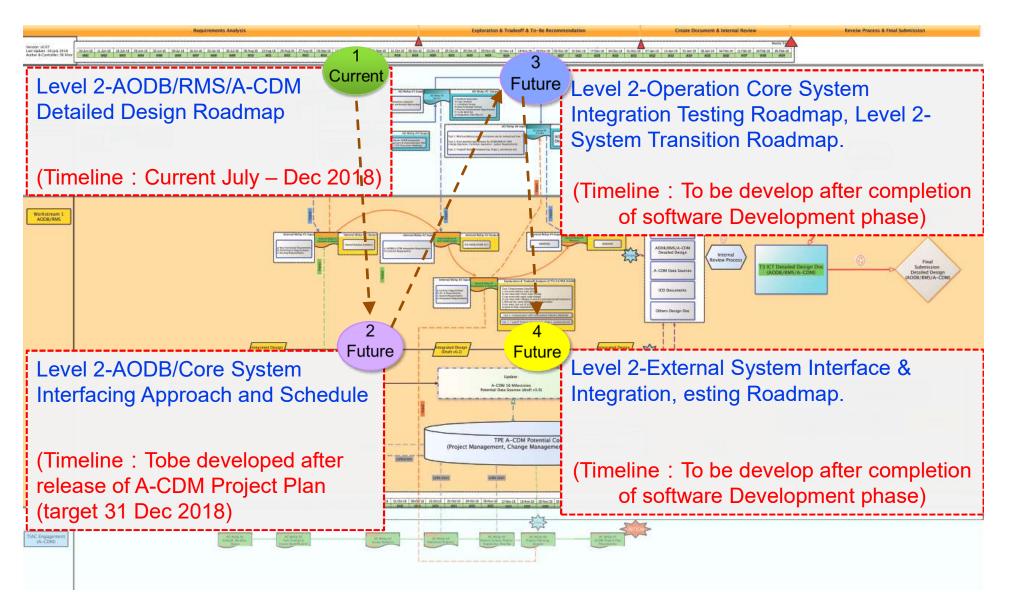
Analysis of Gap to Target for T1/T2 A-CDM





T3 ICT AODB/RMS/ACDM Design Roadmap







Q&A

