# **Major Milestones**

### 2. TSAT (Target Start-Up Approval Time)

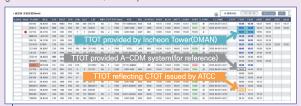
The estimated time when Incheon Aport is expected to approve engine start-up and pushback for departure



- System TSAT
- calculated by A-CDM system based on TOBT
- TSAT reflecting CTOT calculated by reflecting CTOT provided by ATCC which is expressed in or
- Incheon Tower TSAT provided by ATC(DMAN) based on TOBT which is expressed in blue

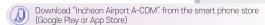
### **3. TTOT** (Target Take-OffTime)

The estimated time of take-off from the runway. Incheon Tower calculates TTOT, taking into account TOBT, CTOT, ATFM limiteations, ground movement time, ATC separation and traffic conditions



- System TTOT
- Take-Off time calculated by A-CDM system based on TOBT and TSAT(for reference)
- TTOT reflecting CTOT Take-off time calculated by A-CDM system reflecting CTOT which is expressed in orange
- **3** Incheon Tower TTOT Take-Off time provided by ATC(DMAN)

# How to use A-CDM Portal & A-CDM APP





Fill out the application form after agreeing to information collection and information protection agreement.

Initial temporary password will be sent to the mobile phone after the account is successfully approved.

# **A-CDM System**

Information sharing and management by integrating systems of Air Traffic Services, Airport Operators, Ground handlers, etc.



## **Role of A-CDM Partners**

Partner	Main Role	
Air Traffic Command center	1 Provide ATFM situation and CTOT	
Incheon Tower	Provide TTOT/TSAT with DMAN Coordinate Take-off sequence considering TOBT, CTOT, ATFM, routes, altitude and traffic flow	
Incheon Apron	Control Pushback considering TTOT and TSAT     Share information of de-icing	
Apron Management Unit	Adjust parking stands if necessary	
Aircraft Operator	Monitor and input TOBT     Change EOBT if necessary	
Ground Handler	Monitor ground service information and input TOBT     Input ACZT, EEZT, AEZT (in winter)	



Operational Process 032-741-2854 Available 24/7 **System** 032-741-6320 Available 24/7 Additional info www.airport.kr/acdm





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### Collaborative

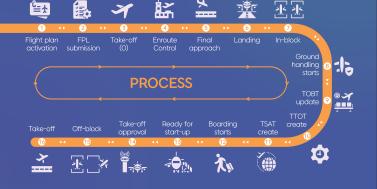
## Definition of A-CDM \_ Airport Collaborative Decision Making

A-CDM is a process that allows air traffic controllers, airport operators, aircraft operators(AO), ground handlers(GH), and air traffic flow managers to exchange operational information and work together to efficiently manage operations at aerodrome.



### Airport

### **A-CDM Milestones and Process**



### Makino

## Comparisons of A-CDM Phase 1 vs Phase 2

	A-CDM 1st phase	A-CDM 2nd Phase
TSAT Calculation	Manually calculated by the controller	Automatically calculated by DMAN
TAST issuance time	After departure readiness	-30min TOBT
TSAT Recipients	Flights with CTOT	All departure flights
De-icing flights	Exempt from target time management	Subject to manage target time management

### Airport

# **Major Milestone**

### 1. TOBT (Target off-Block Time)

The time when an aircraft is expected to be fully ready to move immediately upon reception of push-back clearance from the Apron Control Tower



All Doors Closed



**Boarding Bridges removed** 





Pilot ready to depart

### AO/GH input TOBT(Target off Block time)

Target confidence level +/- 5mins

If defers from EOBT for more than 15 mins, modify EOBT



Before TSAT issuance by incheon Tower, Input/modify without limitation

0

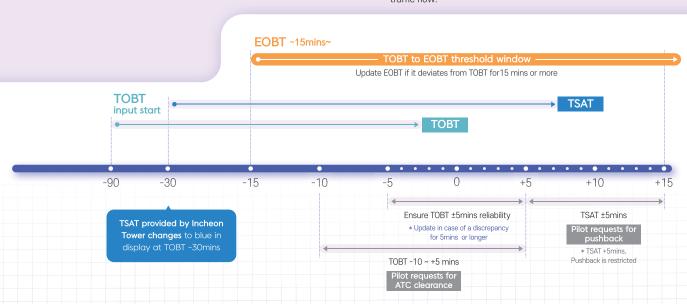
After TSAT issuance by Incheon Tower(DMAN), Modification is restricted to 3 times.

To modify over 3 times, delete TOBT and Enter revised TOBT.

### Decision

## **TOBT & TSAT Flow Chart**

Based on TOBT entered by AO/GH, Incheon Tower(DMAN) issues TSAT and TTOT considering ATFM, route, altitude, and ground traffic flow.



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