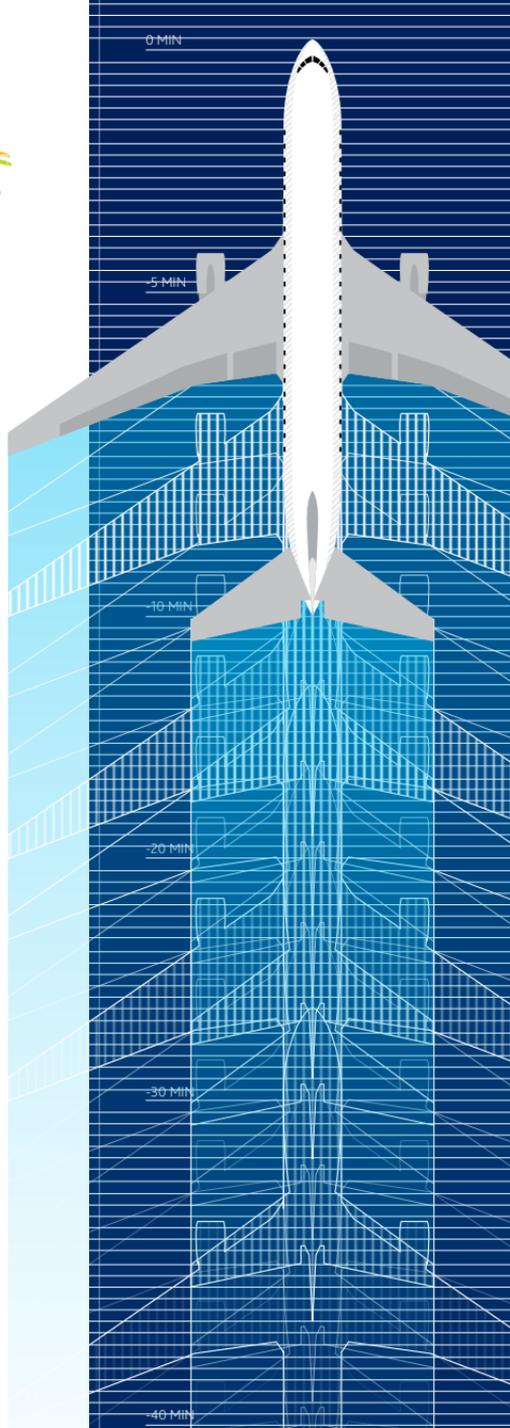




AIRPORT COLLABORATIVE
DECISION MAKING

REDEFINING
AVIATION
IN **YYZ**



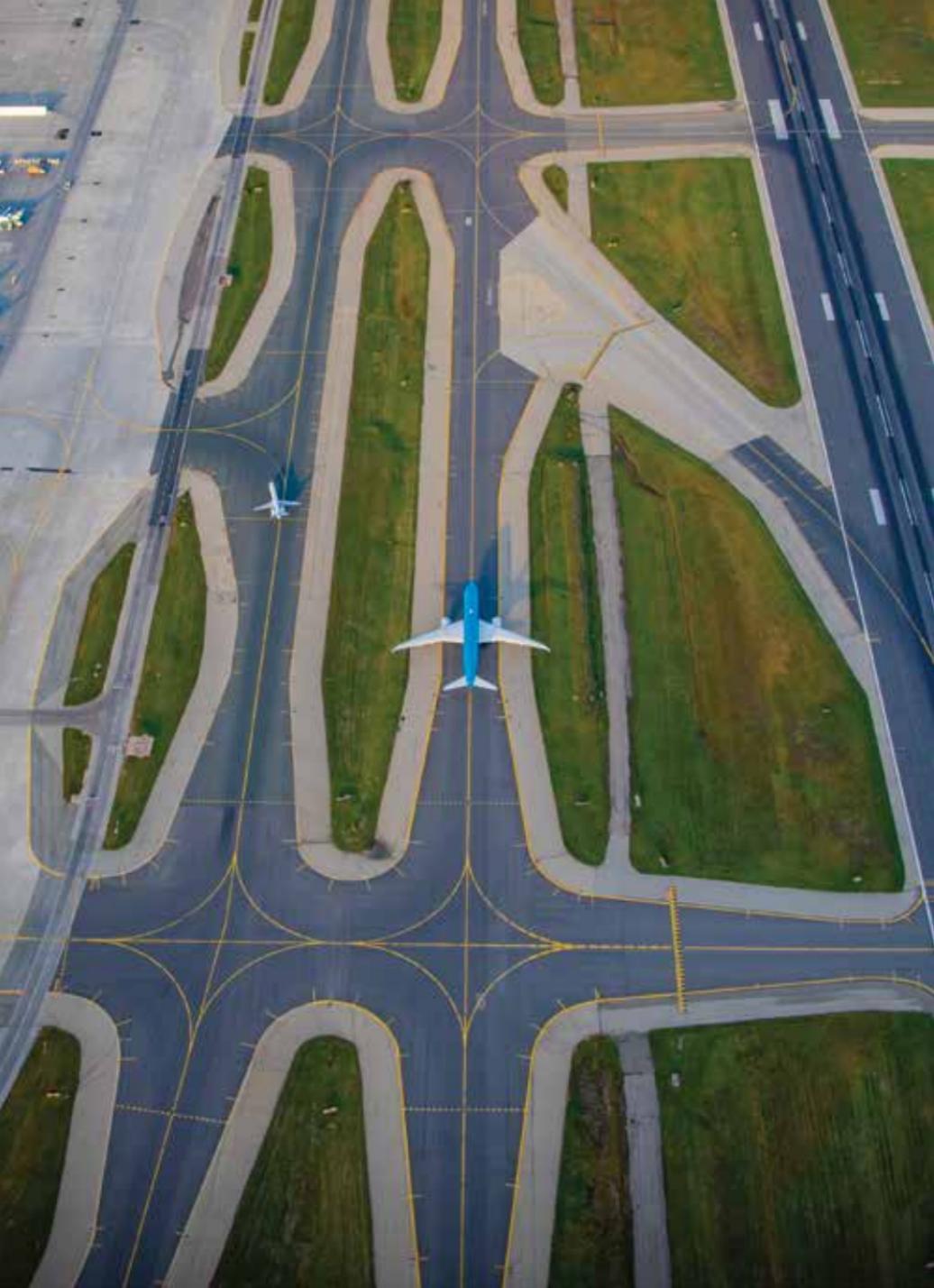




REDEFINING AVIATION IN YYZ

Toronto Pearson International Airport is adopting a new way of working called Airport Collaborative Decision Making or A-CDM. The aim is to increase the efficient use of airport resources for airline operators and passengers.

The A-CDM implementation is a GTAA-led initiative, in close collaboration with our principal carriers, the ground handling organizations, NAV Canada and all other airport partners. A-CDM is about collaborating and sharing the right information at the right time with the right people.



A-CDM

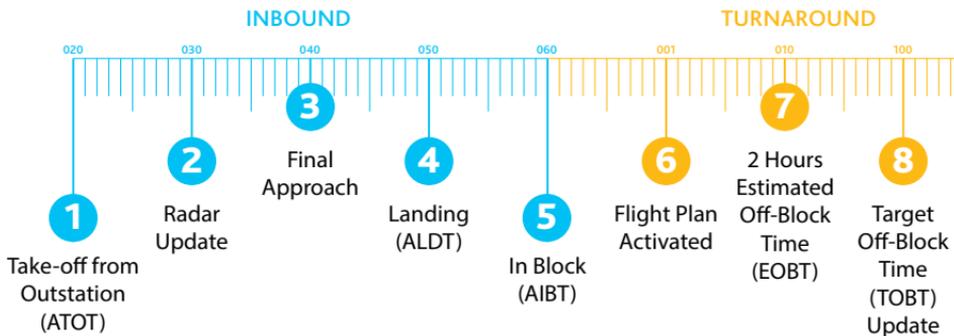
Airport Collaborative Decision Making

The goal of A-CDM is to help complex operations run smoothly while maximizing the efficiency of our existing facilities – especially with respect to aircraft turnaround time and our response to adverse conditions such as severe winter storms.

The success of A-CDM means:

- Reduced delays in ground movements
- Optimized use of resources, maximize capacity of assets
- Reduced apron and taxiway congestion
- Improved predictability
- Reduced slot wastage
- Flexible departure planning
- Improved safety
- Reduction in taxi times
- Reduction in aircraft emissions

A-CDM Significant Events and Times



Target Off Block Time (TOBT)

TOBT is a reference time which indicates when an aircraft is expected to be ready to leave its stand. It is kept up-to-date by the aircraft operator or ground handler to provide a reliable estimate of when the aircraft is ready to be off-blocks, and must be updated if it is different from the previous TOBT by 5 minutes or more. The TOBT is displayed on an Advanced Visual Docking Guidance System (A-VDGS) at the stand or it is communicated by the airline or ground handler where an A-VDGS is not present.

At 10 minutes before TSAT, the TOBT can only be updated two more times. If a third TOBT update is required, the aircraft operator or ground handler must contact the Manager of Operations, Airport Flow (MO-AF) for instructions at 416-776-2236.

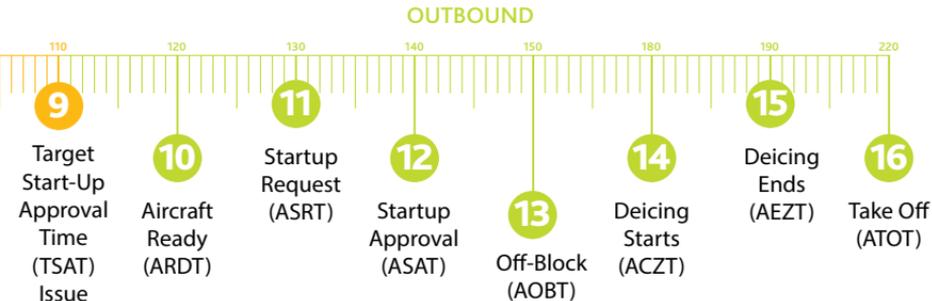
Target Take Off Time (TTOT)

TTOT is the time at which an aircraft is expected to be on the runway. It is based on the TOBT plus the estimated taxi time to the assigned runway and deicing time if in snow conditions.

Call Ready

Call Ready is an indication from the flight crew to the Apron Coordinator to signify that the aircraft is ready for pushback. All doors must be closed with boarding bridges removed and all ground handling activities must be concluded. The tow bar and tractor must be connected to the aircraft.

Call Ready must be made within +/- 5 minutes of TOBT. If the aircraft is not ready at this time, the flight crew must contact the airline to update TOBT.



Calculated Take Off Time (CTOT)

CTOT is a planned departure time assigned to a trajectory by the ATC (NAV Canada) when certain restrictions exist. The aircraft must depart from the runway at this time, or the flight crew must contact the airline if this time cannot be met.

Target Start-Up Approval Time (TSAT)

TSAT represents the time an aircraft can expect to receive start-up and pushback approval. The TSAT takes into account the TOBT, variable taxi times to the runway, expected deicing time, applicable CTOT and other real-time capacity and demand constraints at the airport. The TSAT is displayed on an A-VDGS at the stand, or it is communicated by the airline or ground handler where an A-VDGS is not present.

Pushback / Startup Approval

The Pre-departure sequence for aircraft is determined by the TSAT. Start-up approval will only be issued if the TSAT is valid.

Pushback/taxi instructions are transmitted to the flight crew from North or South Apron. The flight crew must ensure that the flight is ready to depart within +/- 5 minutes of TSAT.

A-CDM Roles

Ground Handler / Aircraft Operator

- Provides flight plan to NAV Canada to establish an Estimated Off Block Time (EOBT)
- Keeps the TOBT updated to reflect the time the aircraft will be ready to leave its stand
- Ensures the aircraft is ready to depart at +/- 5 minutes of TOBT

NAV Canada

- Provides clearance and runway assignment upon clearance delivery request from the flight crew
- Maximizes runway throughput
- Indicates deicing request received from flight crew in the EXCDS system

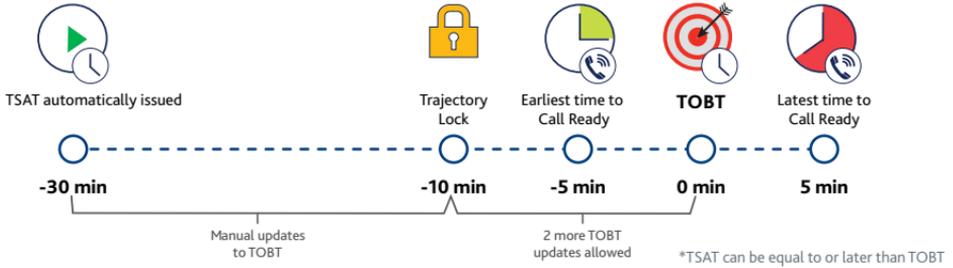
Pilot

- Contacts the Apron Coordinator once the aircraft is ready for pushback (Call Ready)
- Monitors for instructions from the Apron Coordinator and for pushback and taxi clearance
- Contacts company if TOBT cannot be adhered to or if unable to pushback at TSAT

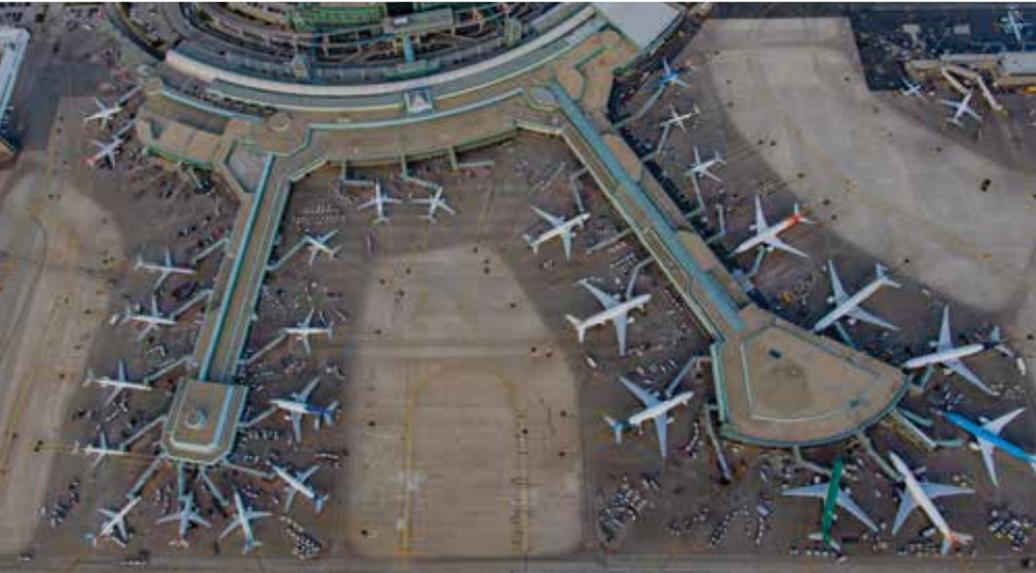
GTAA Operations

- Manages safe and expeditious flow of aircraft traffic on the apron
- Allocates resources at the airport and relies on accurate information provided by the partners to minimize gate holds and maximize airport resources
- Ensures the consistent and efficient flow of aircraft, passengers and baggage
- Advise Clearance Delivery of requirement for deicing

Procedures for Flight Crew



It is vital that the Pilot contacts the Apron Coordinator at TOBT +/- 5 minutes, even if TSAT is outside this window



A-CDM Portal

The A-CDM Portal presents a tracking grid to assist in operational decision making.

One of the main aspects of the Portal is a Tracking Grid that tracks the movement of trajectory. The TOBT, TSAT and all other milestones are displayed in this portal, providing all partners with a real-time situational awareness of each trajectory.

Acronyms in A-CDM

A-CDM	Airport Collaborative Decision Making
ACZT	Actual Commencement of Deicing Time
AEZT	Actual End of Deicing Time
AIBT	Actual In-Block Time
ALDT	Actual Landing Time
AOBT	Actual Off-Block Time
ARDT	Actual Ready Time
ASAT	Actual Start-Up Approval Time
ASRT	Actual Start-Up Request Time
ATOT	Actual Take Off Time
A-VDGS	Advanced Visual Docking Guidance System
CTOT	Calculated Take Off Time
EOBT	Estimated Off-Block Time
EXOT	Estimated Taxi-Out Time
SIBT	Scheduled In-Block Time
SOBT	Scheduled Off-Block Time
TOBT	Target Off-Block Time
TSAT	Target Start-Up Approval Time
TTOT	Target Take Off Time
VTT	Variable Taxi Time

A-CDM FAQs

What does A-CDM stand for?

A-CDM stands for Airport Collaborative Decision Making.

What does it mean?

Airport Collaborative Decision Making is a working method based on common situational awareness of all airport operational departments and other airport partners, achieved via sharing of information.

What is my role in A-CDM?

Each partner provides critical information on each trajectory, which enables A-CDM to give visibility to overall airport operations.

Is A-CDM an IT system?

A-CDM is more than an IT system. It is a new working method which is supported by IT solutions that deliver the shared information in ways that promote the common situational awareness. This helps in making timely decisions involving all partners and provides awareness of the outcomes of those decisions.

What should Aircraft Operators / Ground Handlers be doing to support A-CDM?

Aircraft Operators and Ground Handlers should be updating TOBTs to within 5 minutes (via their usual channels for updating ETD) for any aircraft trajectory that will not be able to meet the TOBT.

What happens if TOBT is not updated?

The TSAT is calculated based on the most current TOBT in the A-CDM system. An incorrect TOBT will result in an incorrect TSAT being calculated. This can result in a delay between the time the aircraft is ready to pushback and the time pushback clearance is granted. This can also result in the loss of a runway slot and decreased efficiency. It is important to keep the TOBT as accurate as possible.

How do I get access to the A-CDM portal?

For those with an operational need, A-CDM Portal access can be requested by contacting the GTAA I.T. Service Desk at

1-416-776-HELP (4357) or it.servicedesk@gtaa.com.

Contacts

With general queries or requests for information please contact the Toronto Pearson International Airport A-CDM Project Team by e-mail at a-cdm@gtaa.com

For the latest information and documentation on A-CDM at Toronto Pearson International Airport visit torontopearson.com/acdm



Toronto Pearson

