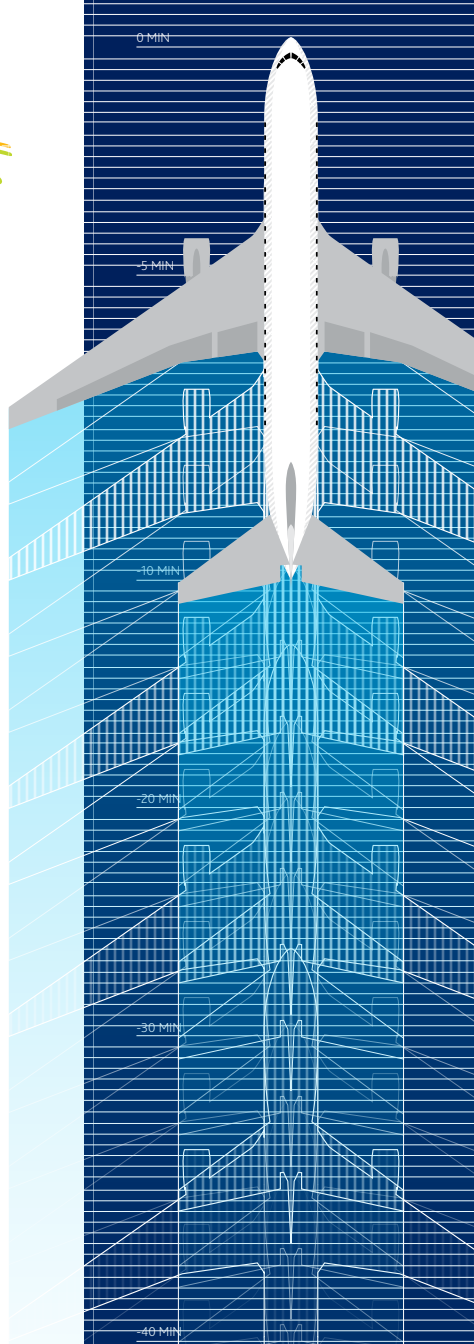




AIRPORT COLLABORATIVE  
DECISION MAKING

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 sharing the right information at the right time with the right people.



# A-CDM

## Airport Collaborative Decision Making

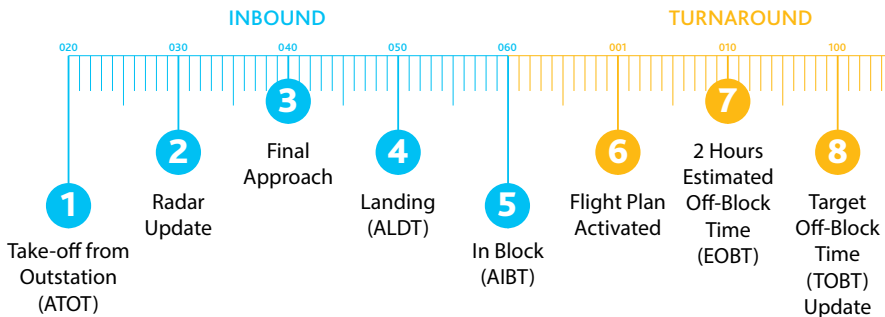
The goal of A-CDM is to help complex operations run smoothly while maximizing the efficiency of our existing facilities – especially with respect to aircraft turnaround time and our response to adverse conditions such as severe winter storms.

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### 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 (AVDGS) at the stand, or it is communicated by the airline or ground handler where an AVDGS isn't 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.

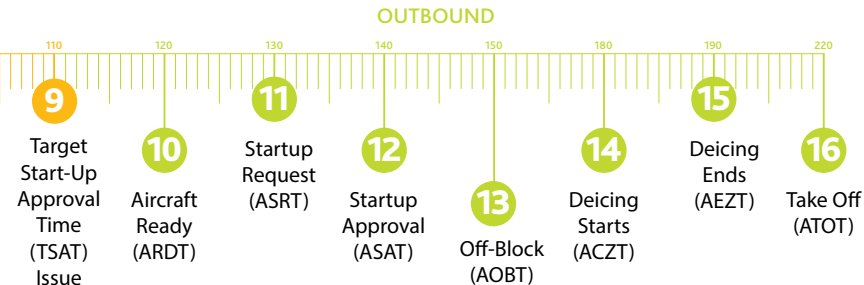
## Target Take Off Time (TTOT)

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.

## 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 actual 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 AVDGS at the stand, or it is communicated by the airline or ground handler where an AVDGS isn't 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

## Pilot

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

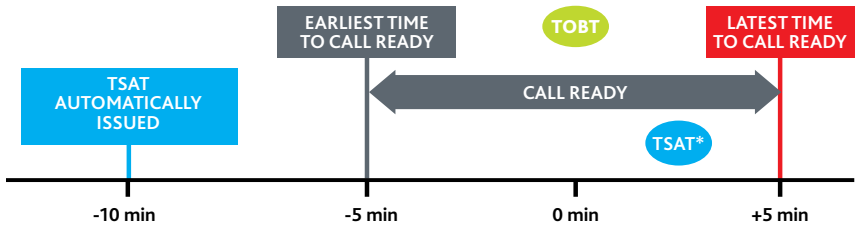
## GTAA Operations

- 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, passenger, and baggage





## Procedures for Flight Crew



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



ACA2383	MIA	12:15		900	Pier F	160	12Dec18 12:15	12:30	7BW						
ACA7503	BW	11:32		900	Pier F	160	12Dec18 11:32	11:47	E75						
ACA7647	EWR	10:00		06L 395	Pier F	167A	12Dec18 10:17	10:15	7BS						
									75F	MAL7051	YYC				
	MAL7082	YMX	22:22	22:23	23	900		11Dec18 21:58	22:38	752	MAL7079	YVR			
	MAL8070	YVR	02:28	02:33	24R	900		12Dec18 02:37	02:48	752	MAL8082	YMX			
										DH4	JZA8865	YQG			
										CR1	ACA7327	MKE			
	ACA7375	IAD	08:15	08:04	06L	423	191 EXT	246	12Dec18 08:15	08:22	08:10	CR2	ACA7370	IAD	191 EXT
										320	ACA0942	BDA			

# 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 aircraft. The TOBTs, TSATs, and all milestones are displayed in this portal, providing all partners with a real-time awareness of each trajectory.

## Acronyms in A-CDM

<b>A-CDM</b>	Airport Collaborative Decision Making
<b>ACZT</b>	Actual Commencement of Deicing Time
<b>AEZT</b>	Actual End of Deicing Time
<b>AIBT</b>	Actual In-Block Time
<b>ALDT</b>	Actual Landing Time
<b>AOBT</b>	Actual Off-Block Time
<b>ARDT</b>	Actual Ready Time
<b>ASAT</b>	Actual Start-Up Approval Time
<b>ASRT</b>	Actual Start-Up Request Time
<b>ATOT</b>	Actual Take Off Time
<b>AVDGS</b>	Advanced Visual Docking Guidance System
<b>CTOT</b>	Calculated Take Off Time
<b>EOBT</b>	Estimated Off-Block Time
<b>EXOT</b>	Estimated Taxi-Out Time
<b>SOBT</b>	Scheduled Off-Block Time
<b>TOBT</b>	Target Off-Block Time
<b>TSAT</b>	Target Start-Up Approval Time
<b>TTOT</b>	Target Take Off Time
<b>VTT</b>	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 the partners, and in being aware of all the outcomes the decisions will have—ensuring the best outcome for the overall airport operation can be sought and implemented.

## 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 that will not depart on time.

## What happens if TOBT isn't 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](mailto:a-cdm@gtaa.com)

For the latest information and documentation on A-CDM at Toronto Pearson International Airport visit [torontopearson/acdm](http://torontopearson/acdm)



Toronto Pearson

