

AIRPORT - COLLABORATIVE DECISION MAKING (A-CDM) PROJECT AT LONDON HEATHROW AIRPORT.

1 Background

1.1 The Airport - Collaborative Decision Making (A-CDM) project at Heathrow Airport Limited (HAL) is a joint initiative between all airport partners - Aircraft Operators (AO), Ground Handlers (GH), air traffic control (ATC - NATS are the Air Navigation Service Provider at Heathrow) and the airport (HAL). Airline operators have been working closely with HAL and NATS in many different working groups to ensure there is AO inclusion in the project and overall buy in to A-CDM.

1.2 The A-CDM programme is supported by EUROCONTROL activities have been carried out in line with the European A-CDM concept. A-CDM is being implemented at many large airports around Europe.

2 Key Components of A-CDM

2.1 Target Off Blocks Time (TOBT)

2.1.1 This is the time that an aircraft expects to be ready to leave its stand. The TOBT provides a timely, accurate and reliable estimate to the community of an aircraft's off blocks time. Accurate TOBTs enhance operations on the ground as they provide all airport partners with a clear picture of the intentions of aircraft on the ground.

- a. TOBTs must be updated to an accuracy of +/- 5 minutes;
- b. TOBTs should be updated through the usual channels eg. standard IATA (ED) estimated departure message.

2.2 Communication of TOBT

2.2.1 AO/GH shall update their TOBTs via their usual channels. TOBTs only need to be updated if the time that the aircraft will be ready to leave stand changes.

2.2.2 If no TOBT update is sent the flight will then be considered to adhere to its departure time in the flight plan, Estimated Off Blocks Time (EOBT), but the window remains -5 to +5 minutes.

2.2.3 Only updates of +/-5 minutes or more should be sent. Any changes less than this will be ignored as they are not considered significant.

2.2.4 For a delay of 15 minutes or more a DLA message must be sent by the AO/GH. This will update the EOBT and result in an automatic update of the TOBT locally.

2.3 Target Start Up Approval Time (TSAT)

2.3.1 A TSAT is the time provided by ATC that an aircraft can reasonably expect to receive start up approval, taking into account the TOBT and overall traffic situation.

2.3.2 When looked at in overview, TSATs provide an optimised start up sequence.

2.3.3 Pilots will be notified of their TSAT and any subsequent changes to it by their AO/GH or from Heathrow Delivery when they call ready

Note: That it is not possible for ATC to issue TSATs with the PDC. This development is planned for a later release.

2.3.4 TSATs should reduce queuing times at the runway hold while maintaining a high runway utilisation. The TSAT is calculated by taking into account TOBT, Calculated Take Off Time (CTOT), wake vortex, Standard Instrument Departure (SID) routing, variable taxi times, cul-de-sac demand and any capacity constraints such as Low Visibility procedures. ATC will continue to maximise departure rates and the departure order by creating the right mix of traffic.

2.4 Sequence change

2.4.1 In certain situations ATC may have to re-sequence a flight. In these circumstances ATC will calculate a new TSAT and the pilot will be notified by ATC.

2.4.2 The factors that may cause a revision of TSAT include:

- change in runway;
- change in taxi time;
- revised TOBT;
- change of route (SID);
- change of aircraft type;
- application of ATFM regulation or ATC restriction resulting in new CTOT or start up delay.

2.5 Coordination with the Central Flow Management Unit (CFMU)

2.5.1 A permanent and fully automatic data exchange with the CFMU has been established. This data transfer enables highly accurate early predictions of landing and departure times.

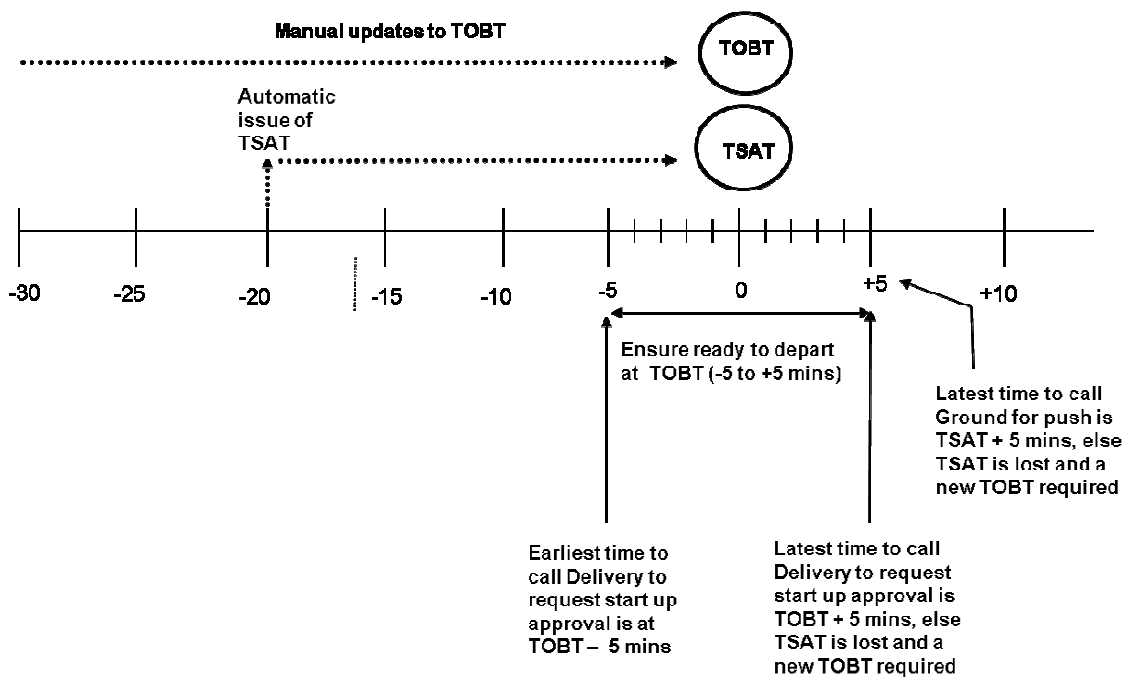
2.5.2 Furthermore, it allows for more accurate and efficient CTOT calculations due to the use of more accurate local target take-off times.

2.5.3 The following messages are sent:

DPI TYPE	DPI STATUS	Comment
E-DPI	EARLY	Based on Flight Plan data
T-DPI-t	TARGET	Based on TOBT
T-DPI-s	SEQ	Based on TSAT
A-DPI	ATC	Based on Actual Departure
C-DPI	CNL	Cancels DPI Information

2.5.4 The existing CFMU procedures continue to apply and they take the local target take-off times into consideration wherever possible.

3 ATC Procedures



It is vital that Pilots still call Delivery at TOBT +/- 5 minutes even if TSAT is outside this window

3.1 TOBT/TSAT

- a. Pilots should ensure that their flight is ready to depart at **TOBT (window of -5 to +5 minutes)**;
- b. If the flight is not ready within this window then your AO/GH must update the TOBT;
- c. Pilots should take note of the **TOBT** and **TSAT** and comply with them.

3.2 Start Request - Heathrow Delivery

- a. Pilot must report ready to Heathrow Delivery at **TOBT (window of -5 to +5 minutes)** regardless of the TSAT;
- b. Heathrow Delivery will then either **approve start** or **advise the TSAT**;
- c. In the case of a delay Delivery will call the Pilot at TSAT;
- d. Delivery will inform the Pilot of changes to the TSAT in excess of 5 minutes;
- e. If the Pilot has called ready but is then delayed by ATC there is no requirement for TOBT to be updated;
- f. If at **TOBT + 5 minutes** Delivery has not received a start up request the aircraft will lose its TSAT:
 - i. Heathrow Delivery will advise the Pilot that a new TOBT is required;
 - ii. Once a new TOBT is entered the flight will be re-sequenced with a new TSAT;
 - iii. Aircraft will not be allowed to depart until a valid TOBT is entered and revised TSAT given and complied with.

3.3 Pushback Request - Heathrow Ground

- a. Pushback/Start clearance must be requested from Ground no later than 5 minutes after being transferred from Delivery;
- b. If unable to meet this constraint, the aircraft will not be allowed to pushback. A valid TOBT must then be entered by the AO/GH and Delivery will then issue a revised TSAT.

3.4 Remote Holding Request

- a. If an AO is aware of a CTOT and wishes to take the delay on a taxiway rather than on the stand, then they should contact the Tower Supervisor by telephone to arrange it;
- b. In this instance, the TSAT will be adjusted to allow the aircraft to be transferred to GMC earlier for the remote hold.

3.5 De-Icing Requests

3.5.1 Procedures for de-icing conditions have not yet been implemented and will be dealt with on a tactical basis. There are plans to create appropriate procedures once experience is gained with the system in an operational state.

4 Contacts

4.1 Please e-mail ACDMLHR@baa.com with any questions or comments or refer to www.heathrowairport.com/airside for further information.

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