

LINKING CDM AIRPORTS TO THE ATM NETWORK

“Airport CDM Completeness Criteria”

1. FOREWORD

Airport CDM is about airport partners working together more efficiently and transparently in how they share data and act upon them. Airport CDM is seen as the driver and mechanism to efficiently integrate airports with the Air Traffic Management Network by dynamically sharing highly accurate operational data with the CFMU.

It is of importance that local Airport CDM implementation is based on harmonised and commonly agreed Airport CDM procedures. Lack of harmonisation between airports can have strong negative impact on airline operations and their ground handlers, as well as through a negative effect due to inaccurate data being provided to the ATM network.

1.1 The process

Implementation of Airport CDM is a complex process.

Such a complex process requires clear guidelines so that it will be implemented efficiently and in a cost affective manner for both the CDM airport and EUROCONTROL.

It starts with a local CDM implementation e.g. TOBT and TSAT and is followed by the integration of the Airport into the ATM network by starting data provision to the CFMU via DPI messages.

The preparations for the integration of an airport into the network can start as soon as the airport is ready to commence Airport CDM implementation. These preparations consist e.g. of information provision, establishment of an implementation plan, development of a DPI ICD document. However, it is important that the Airport CDM procedures and processes are in place at the airport in order to integrate the Airport into the network.

The first step of the actual integration of an airport into the network is the start of the DPI Operational Evaluations (tests). Integration finishes after mutual agreement (CFMU and local CDM Airport) with taking the DPI messages into operations.

It is important to have clear and transparent “Airport CDM Completeness Criteria” in order to be able to evaluate if the local CDM implementation is sufficiently advanced before the actual integration of the airport into the network starts (in the form of tests).

The CDM Airport shall demonstrate by documented assessment that the below described “Airport CDM Completeness Criteria” have been met.

Airports that are ready will agree with the CFMU a planning for the Operational Evaluation as described in par. 3.2 “DPI Operational Evaluation Phases”.

1.2 The Objectives

The objectives of having a clear process and clear requirements are to:

Provide future CDM airports with the necessary information:

- The requirements are needed so that they can be taken into account in the planning of the CDM implementation project.

Ensure that the provided data is of sufficient accuracy

- It is important that the CDM airport has sufficiently evaluated the TOT predictions locally before the Operational Evaluations (tests) with CFMU start.
- It is important that the CDM airport provides reliable TOT predictions before the integration into the network takes place.

Prevent that the data provision with the CFMU commencing too early and the testing phase taking too long

- It is important that CDM is actually in operation for all flights (with local exceptions e.g. VFR) before more reliable TOT predictions than those obtained from flights plans can be expected.

Achieving these objectives will prevent disappointments at the CDM Airport and will reduce workload for CDM implementation at the CDM Airport and at the CFMU.

2. AIRPORT CDM COMPLETENESS CRITERIA

The completeness criteria listed below apply for the readiness to start transmission and operational evaluation of DPI message to the CFMU.

All below high level criteria should be met supported by factual data. However more specific implementation criteria shall be implemented with the degree of flexibility foreseen in EUROCONTROL and EUROCAE related documents, and the Community Specifications by the European Commission.

2.1 Airport CDM Concept Elements

In general it can be stated that the basic requirement for readiness is that all five Airport CDM concept elements (reference Airport CDM Implementation Manual V3 Dec 2008) need to be implemented with the accuracy requirements as described in section 2.3 in order to prevent that the network suffers from the "learning curve".

The following major events should be included in the CDM process:

- A. Verification of the flight plan with the airport slot (when coordinated)
- B. Establishment/Issue of the TOBT
- C. Issue of the TSAT
- D. Actual Off-Block

These four events are the main trigger events for the E-DPI, T-DPI-c, T-DPI-s and the A-DPI respectively. The four events are also described in the agreed milestone approach as milestones 1, 2, 10 and 15 respectively.

2.2 Adherence to Operational Procedures

It is important that the procedure for the provision of TOBT/TSAT/TTOT in the CDM platform is formally agreed, covered by official arrangements and is well documented e.g. published in the National AIP and Airport Operating instructions. The transmission of DPI messages to CFMU has an impact on the flight (e.g. CTOT) and this must be covered by the above mentioned official documents.

2.3 Accuracy & Coverage of the provided Data

The airport partners should demonstrate the accuracy level of the prediction data. Specifically this concerns the following parameters:

- Taxi-time accuracy (+/- 5 min)
- TOT based upon TOBT accuracy equal/better than TOT based on EOBT and default taxi-times accuracy
- TOT based upon TSAT accuracy / tolerance (+/- 10 min)
- TOT based upon AOBT accuracy / tolerance (+/- 5 min)

These accuracy requirements should be obtained for 70% of the DPI messages during normal circumstances i.e. operations without disruptions such as deicing, operating at reduced capacity, for the last / current month of A-CDM Operations.

To indicate that all partners (AOs in particular) are participating to the A-CDM process, the CDM Airport shall provide DPI messages for 95% of the flights (with local exceptions e.g. VFR) during normal operational circumstances, i.e. operations without disruptions such as deicing, operating at reduced capacity,...

2.4 Adherence to ATFM Slots

The Airport partners should demonstrate an adherence of ATFM CTOT slots of 80% in the previous or current month of Airport CDM Operations.

2.5 Agreements

The Airport CDM partners and CFMU shall prepare:

- A) The Interface Control Document (ICD) with CFMU which will describe in detail the transmission of Departure Planning Information (DPI) messages.
- B) A Letter of Agreement (LoA) (or annex to an existing LoA) with CFMU and the ANSP for the transmission of Departure Planning Information (DPI) messages.

The agreements with CFMU will be prepared before the transmission of DPI messages starts but will be signed after the DPI Operational Evaluation has been finalised, i.e. just before the DPI messages are used operationally by CFMU.

These documents shall eventually be signed by CFMU and the CDM airport through the ANSP.

It is important that the CDM Airports appoint one contact person from the management of the A-CDM project side and one single contact person from the operations side to act as focal points with CFMU.

3. DPI OPERATIONAL EVALUATION

3.1 Timing

The Evaluation of the DPI messages from the initial technical tests until the transfer into operation must follow an agreed planning in accordance with the Operational Evaluation Plan and must take place in a limited period of time around 6 month in order to avoid waste of resources and avoid penalizing other Airports in the queue.

3.2 DPI Operational Evaluation Phases

A standard Operational Evaluation plan shall be prepared by CFMU for the inclusion of the Airport in the DPI procedure.

Operational trials shall be performed to confirm operational suitability followed by a Go/No Go meeting before operational implementation in CFMU/ETFMS.

The DPI Operational Evaluation process is documented in the "DPI & FUM Implementation Road Map". URB/USD/DPI_FUM_Impl_RM by CFMU.