Supporting
European
Aviation

EUROCONTROL

ICAO SAM A-CDM workshop

Introduction & Concept Elements

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FOUNDING MEMBER SESAR JOINT UNDERTAKING

NETWORK MANAGER

Network Concept

Consist of 2 or more Airports, Units, Sectors – not necessarily adjacent.
All have a Network

European Network

41 Member States
+ 2 - comprehensive
+16 – bilateral

1988 - ECAC decision

1996 - CFMU

2011 - Network Manager

Airport Challenges for the Network

EUROCONTROL

Airports:

1. nodes of a Network
2. bottlenecks to a Network
3. new/expansion very difficult

Airport Challenges for the Network

INFLUENCES

Airports performance **influences** Network performance

IMPACTS

Network performance **impacts** Airport performance

Challenges for Airports Today

- No complete & common picture on the flight progress
- Partners are dealing with the flight independently from each other
- Conflicting decisions

Challenges for Airports Today

Improve common situational awareness

between the airport partners

Challenges for Airports Today

Enhance predictability

of airport operations

Challenges for Airports Today

Optimise the utilisation

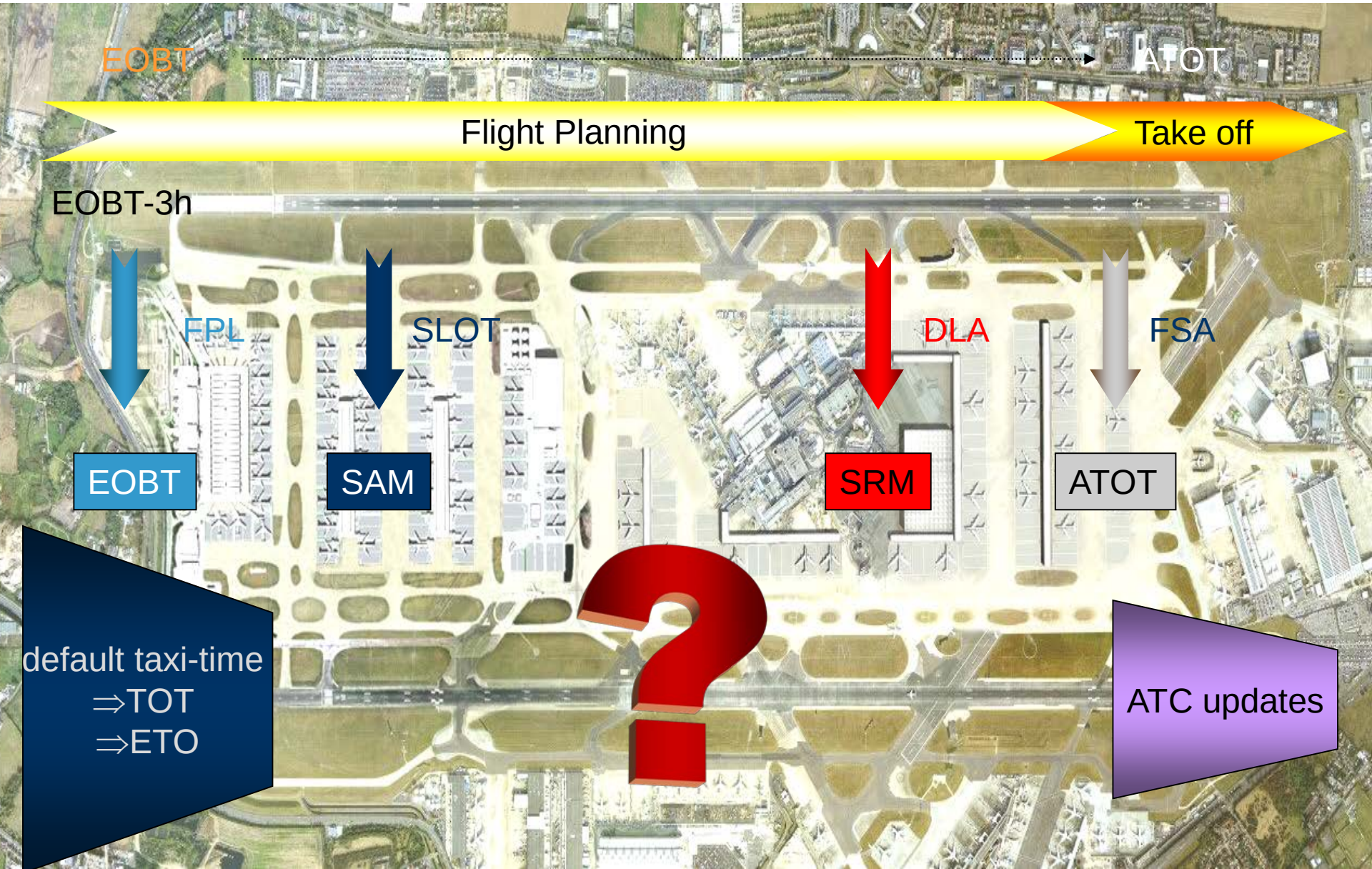
of airport resources

Challenges for Airports Today

Limit the environmental impact

of airport operations

Current - Departure Planning



A-CDM – What is it?

Operational Airside process

Follows the aircraft turnaround

Involves all partners

Brings more transparency

Improves overall efficiency

Information Sharing - Principle

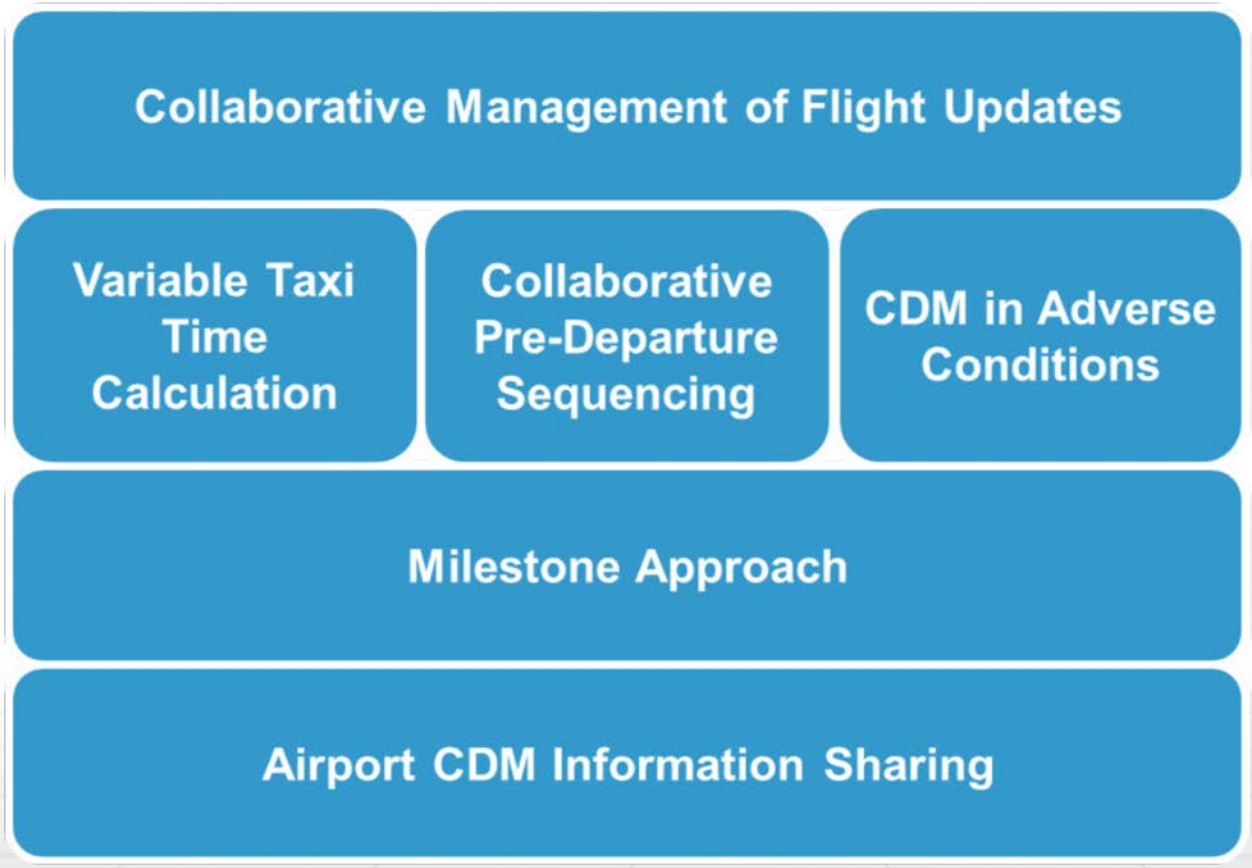
Foundation for Airport CDM

The **right** information

To the **right** people

At the **right** time

A-CDM -Elements



A-CDM –Information Sharing

Airport Operator

- Airport slot data
- Stand & gate allocation
- Special events
- Reduction in airport capacity

Network Operations

- Flight plan data
- ATFM departure slots
- Arrival information (Flight Status/ELDT)

ATC

- Real-time updates of LDG
- Taxi times & SIDs
- Runway operational capacity
- A-SMGCS data/radar information

AO/GH

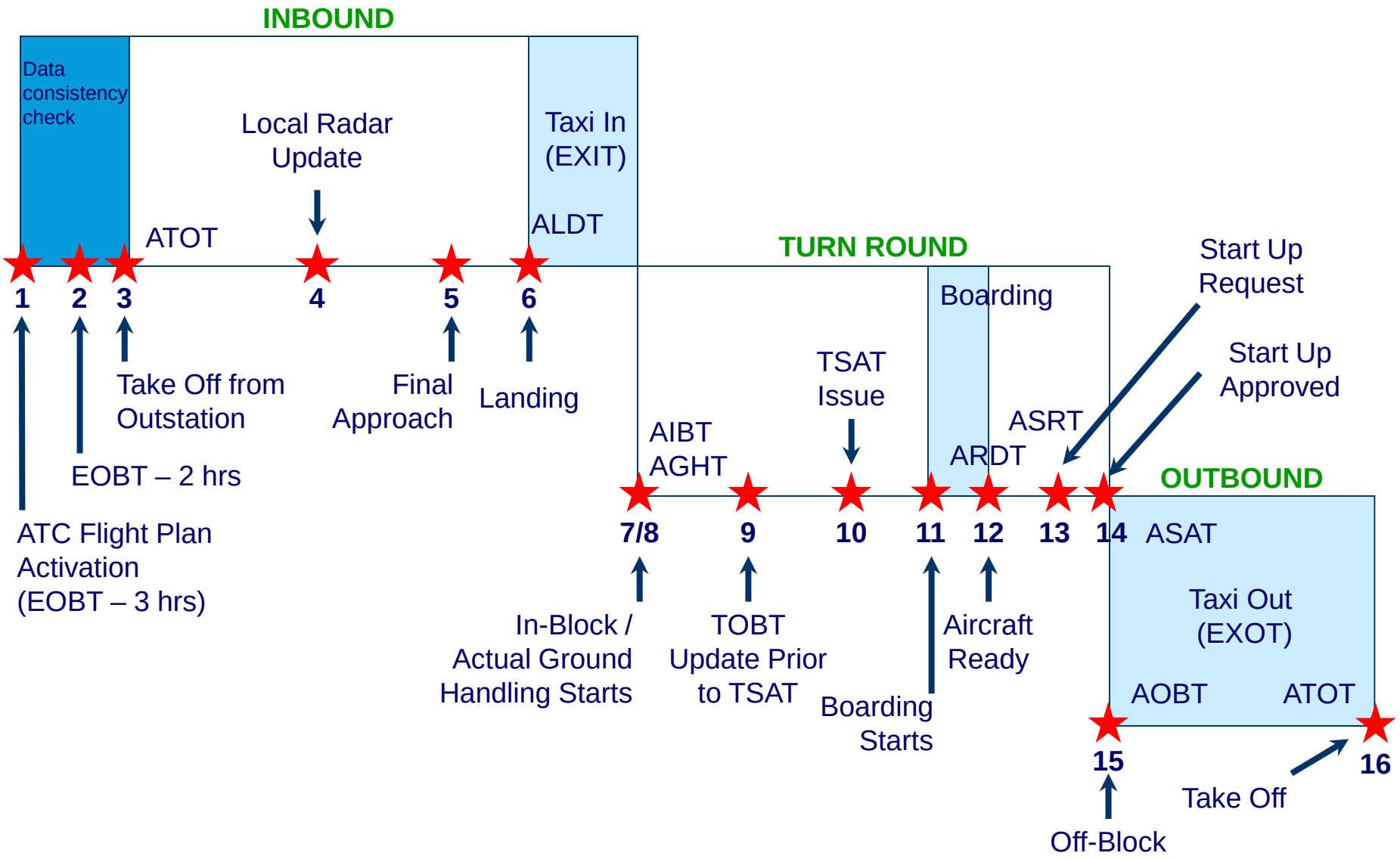
- Flight plans
- Turn-round times
- Priority of flights
- Aircraft registration
- Aircraft movement data

Other service providers

- De-icing companies (de-icing times)
- Met office (met info)

Single Platform

A-CDM – Generic Milestones



A-CDM – Variable Taxi Time

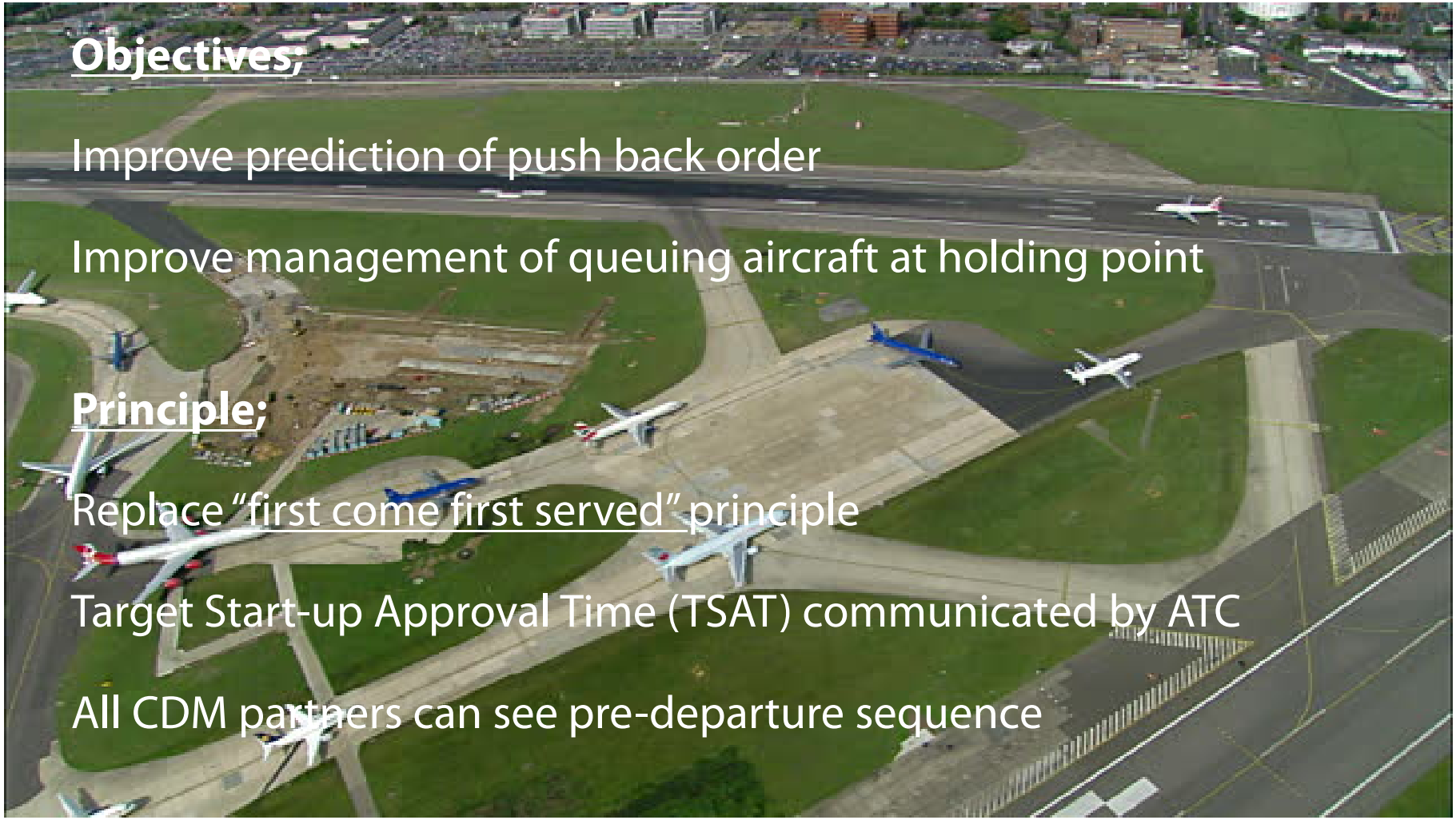
Factors that are considered -

Replace default times

Individual Times based on RWY and target stand

Improvement of Estimated In Block & Target Take Off Times

A-CDM - Pre-Departure Sequencing



Objectives;

Improve prediction of push back order

Improve management of queuing aircraft at holding point

Principle;

Replace "first come first served" principle

Target Start-up Approval Time (TSAT) communicated by ATC

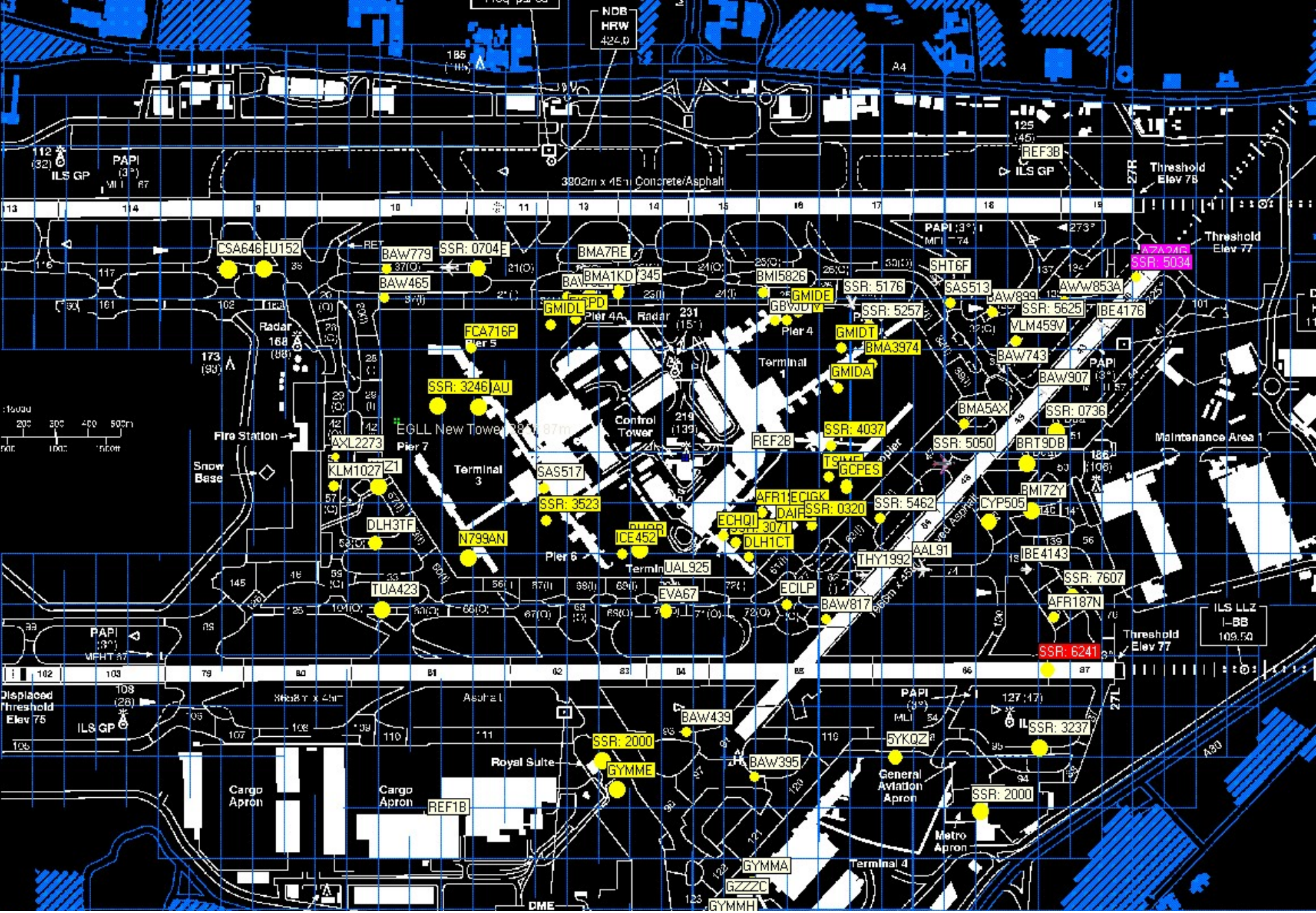
All CDM partners can see pre-departure sequence

A-CDM - “Adverse Conditions”

Improve the management of predicted and unpredicted disruptions

Anticipate strong capacity reductions

Facilitate recovery after disruptions



Ground Situation Heathrow August 2005 following severe thunderstorms

A-CDM - Linking Airports into the Network

- Non optimal traffic demand picture
  - *(EOBT+ Default Taxi Time)*
- Results in unnecessary restrictions applied
- Wasted ATFM slots
- Overload and traffic bunching

A-CDM - Linking Airports into a Network

Objective

To share dynamic Airport CDM Information with an ATM Network

Network – Airport – Network

Flight Update Message (FUM)

Flight Status, Time over & landing times

Departure Planning Information (DPI) Message

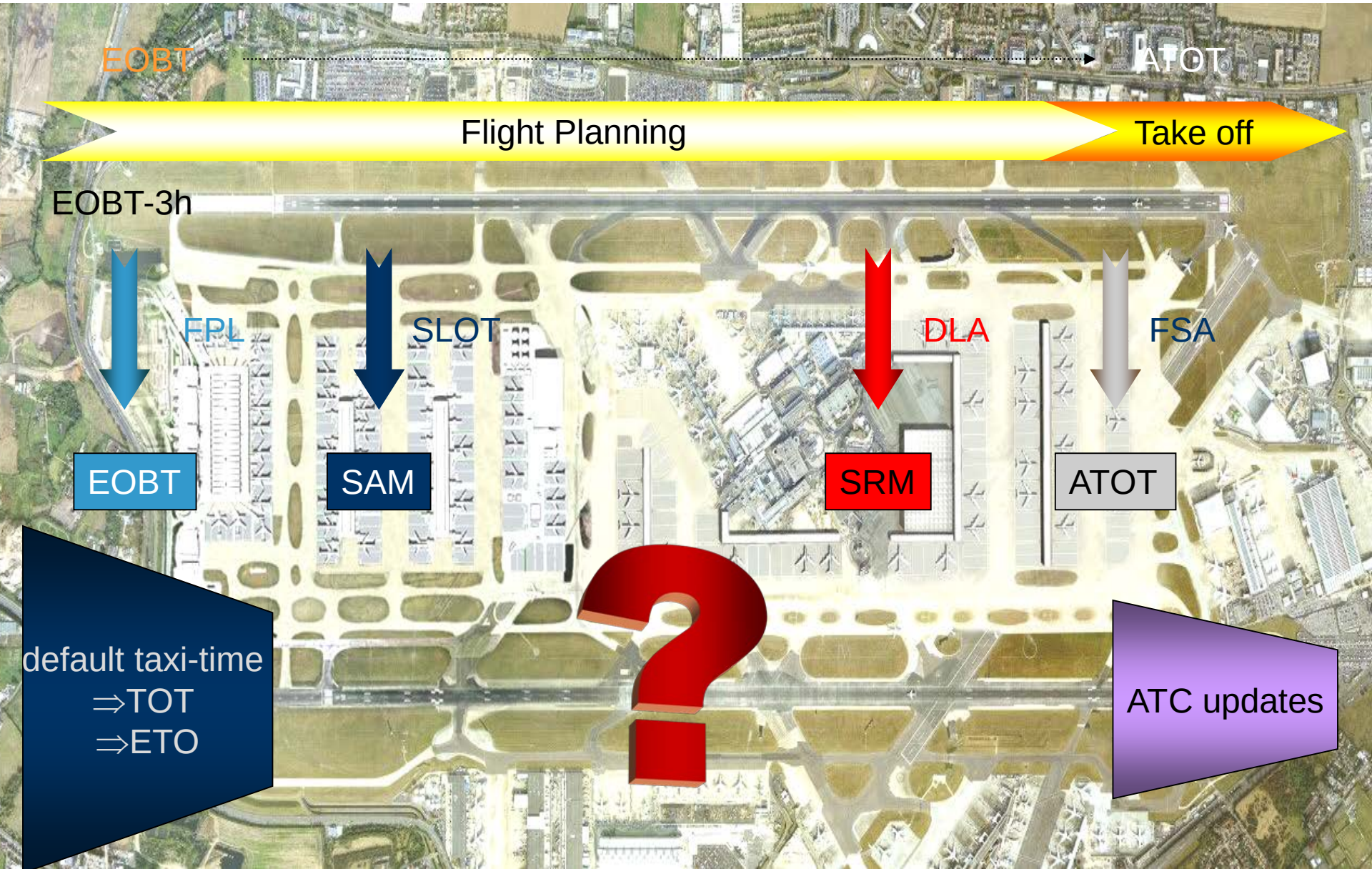
Off-Blocks & Estimated Take-Off Times
Aircraft type, Taxi times & SID

Benefits

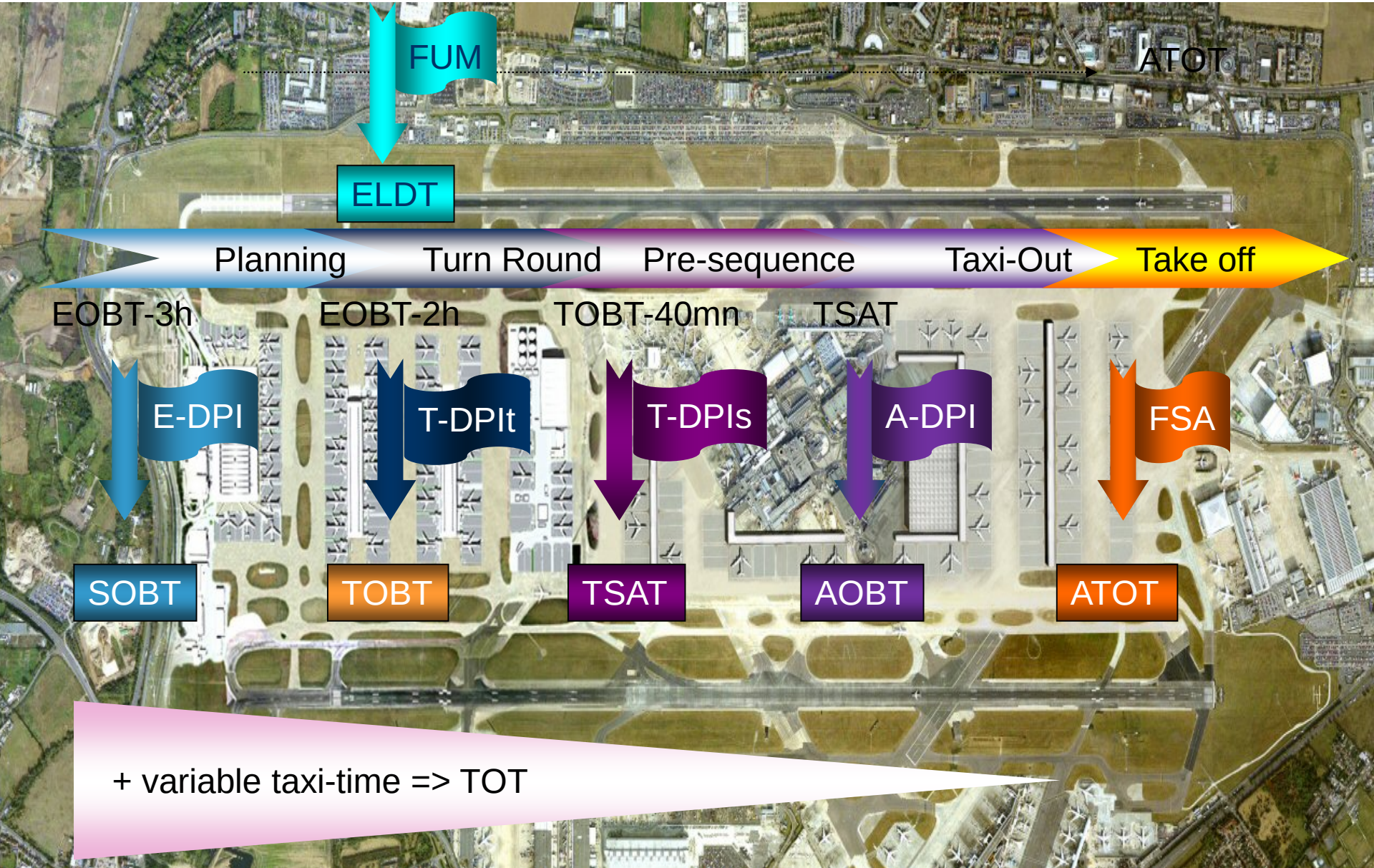
Airports - Accurate Arrival & Departure estimates

Network – Accurate Take-Off estimates (improve en-route sector planning)

Current - Departure Planning



CDM Airport – Departure Planning



Thank you