

Supporting
European
Aviation



ICAO/ACAO A-CDM workshop

Introduction & Concept Elements

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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

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



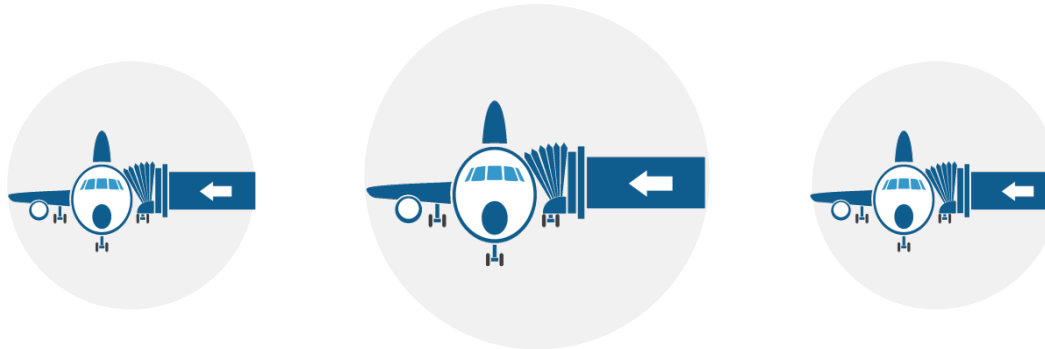
Improve common situational awareness
between the airport partners

Challenges for Airports Today



Enhance predictability
of airport operations

Challenges for Airports Today



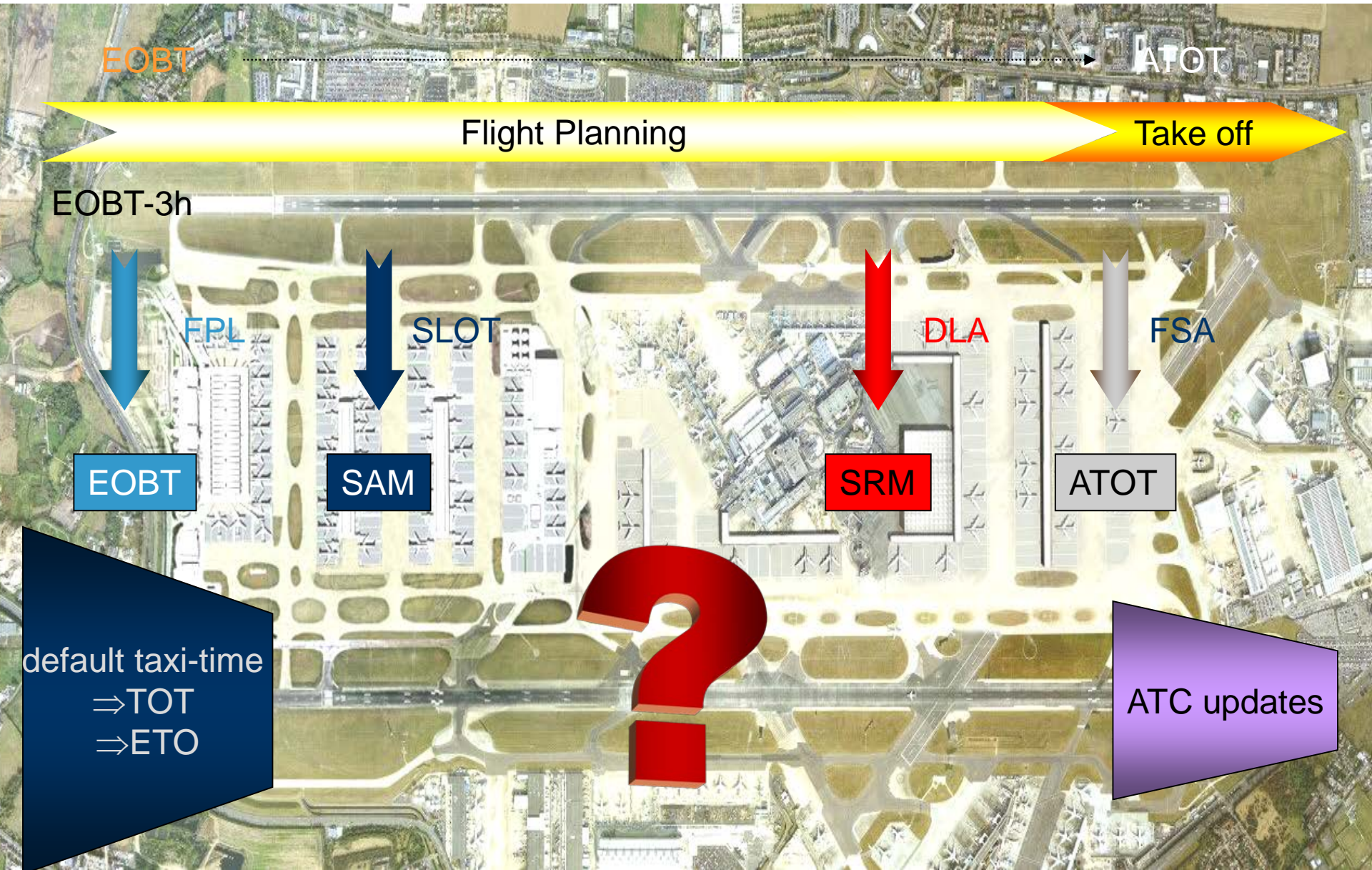
Optimise the utilisation
of airport resources

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



Foundation for Airport CDM



The **right** information

To the **right** people

At the **right** time

Collaborative Management of Flight Updates

**Variable Taxi
Time
Calculation**

**Collaborative
Pre-Departure
Sequencing**

**CDM in Adverse
Conditions**

Milestone Approach

Airport 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

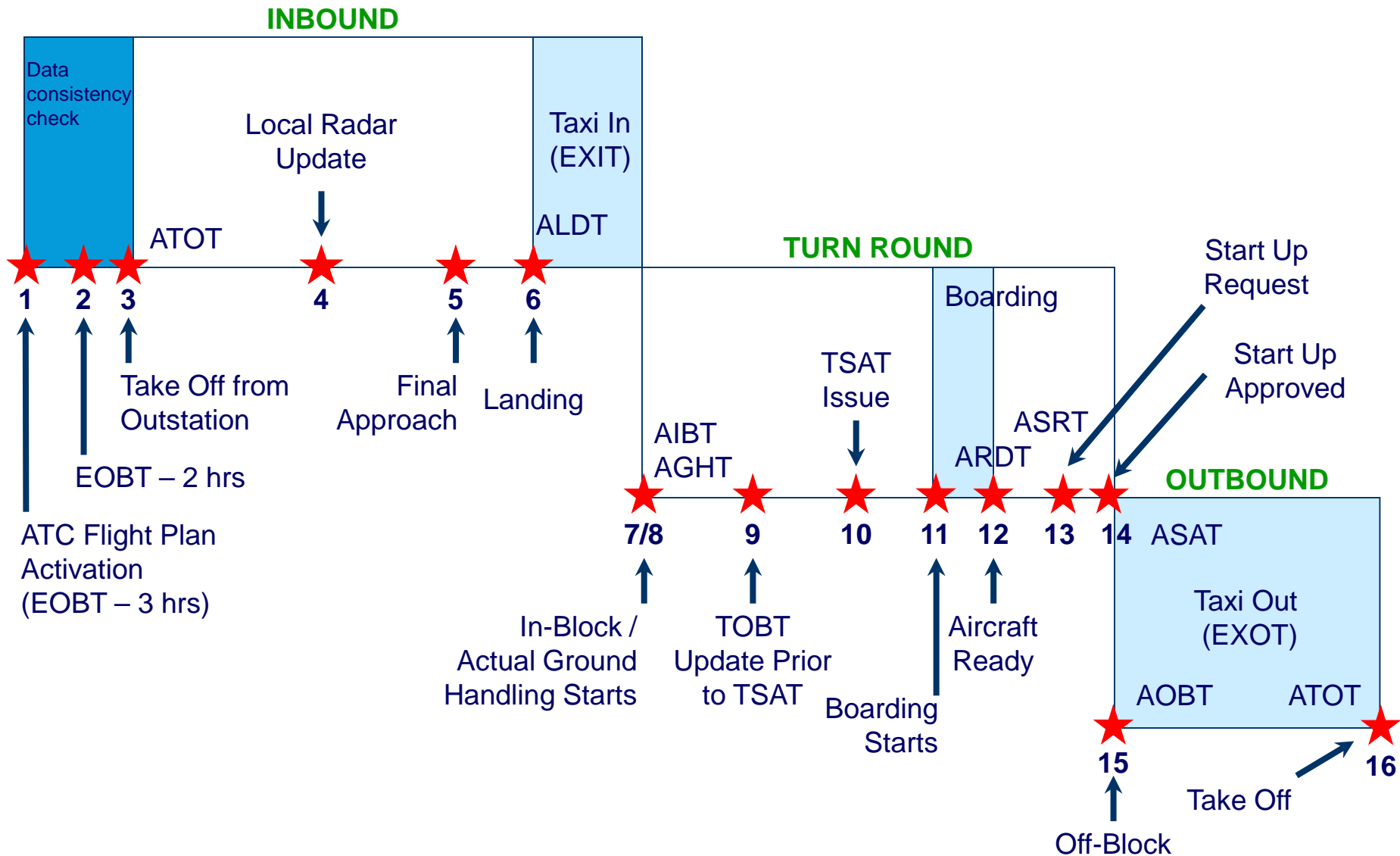
- Flight plans
- Turn-round times
- Priority of flights
- Aircraft registration
- Aircraft movement data

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 -



- Airport layout
- Infrastructure availability
- Runway(s) in use
- Stands and parking positions
- Aircraft type and operator
- Push-back method
- Remote de-icing
- Traffic density

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”

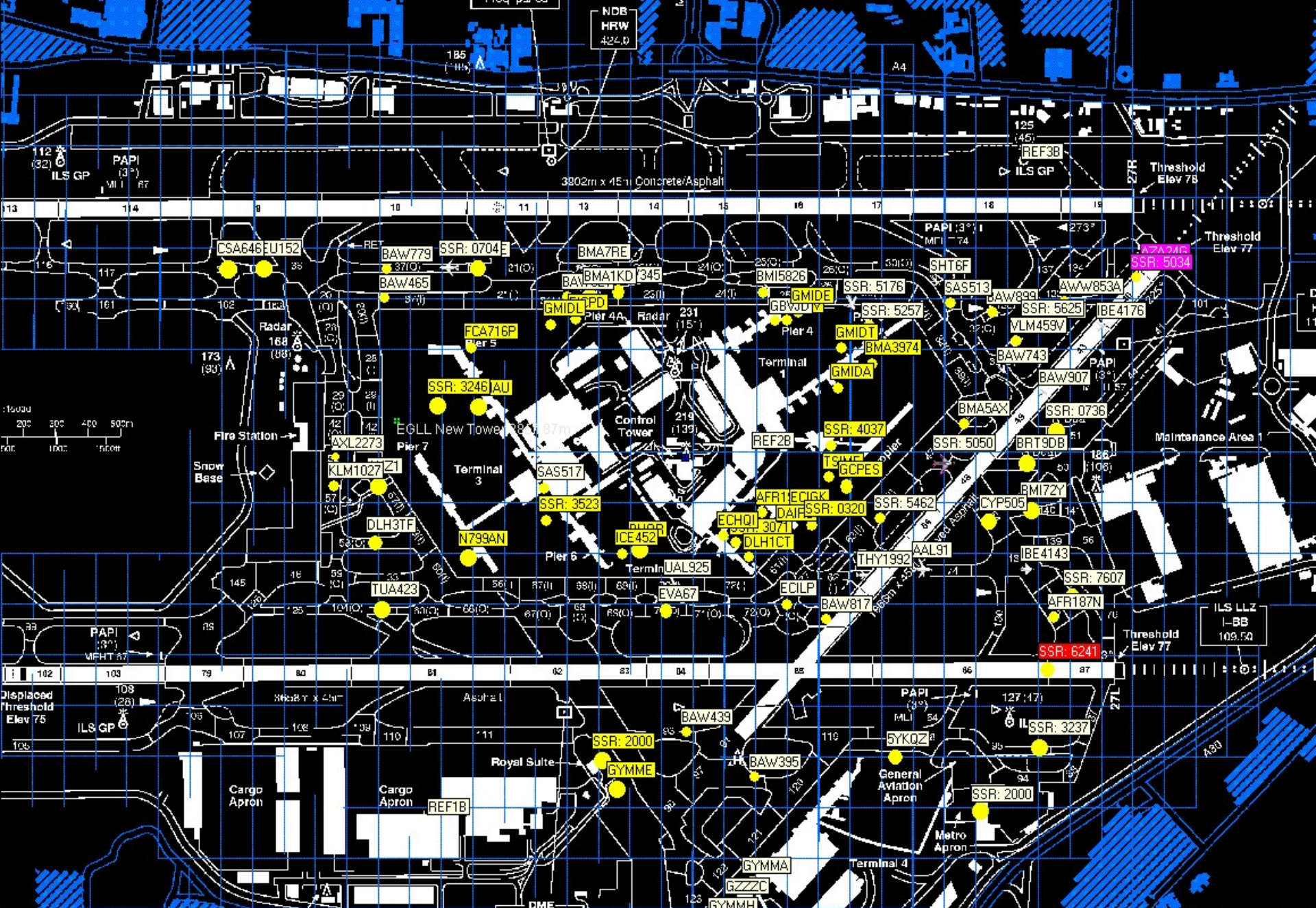
Improve the management of predicted and unpredicted disruptions



Anticipate strong capacity reductions

Facilitate recovery after disruptions





Ground Situation Heathrow August 2005 following severe thunderstorms

- 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

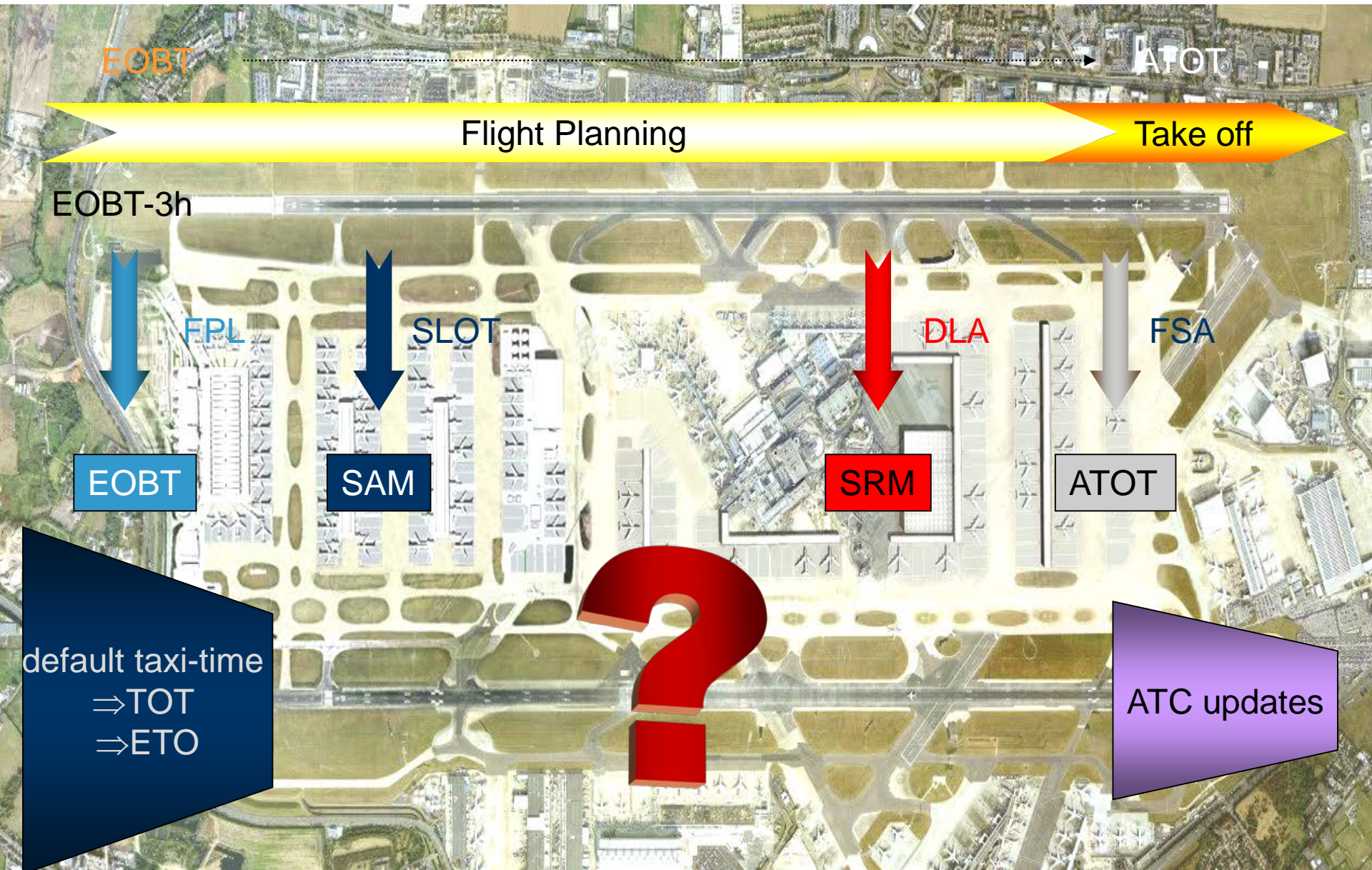
Aircraft type, Taxi times & SID

Benefits

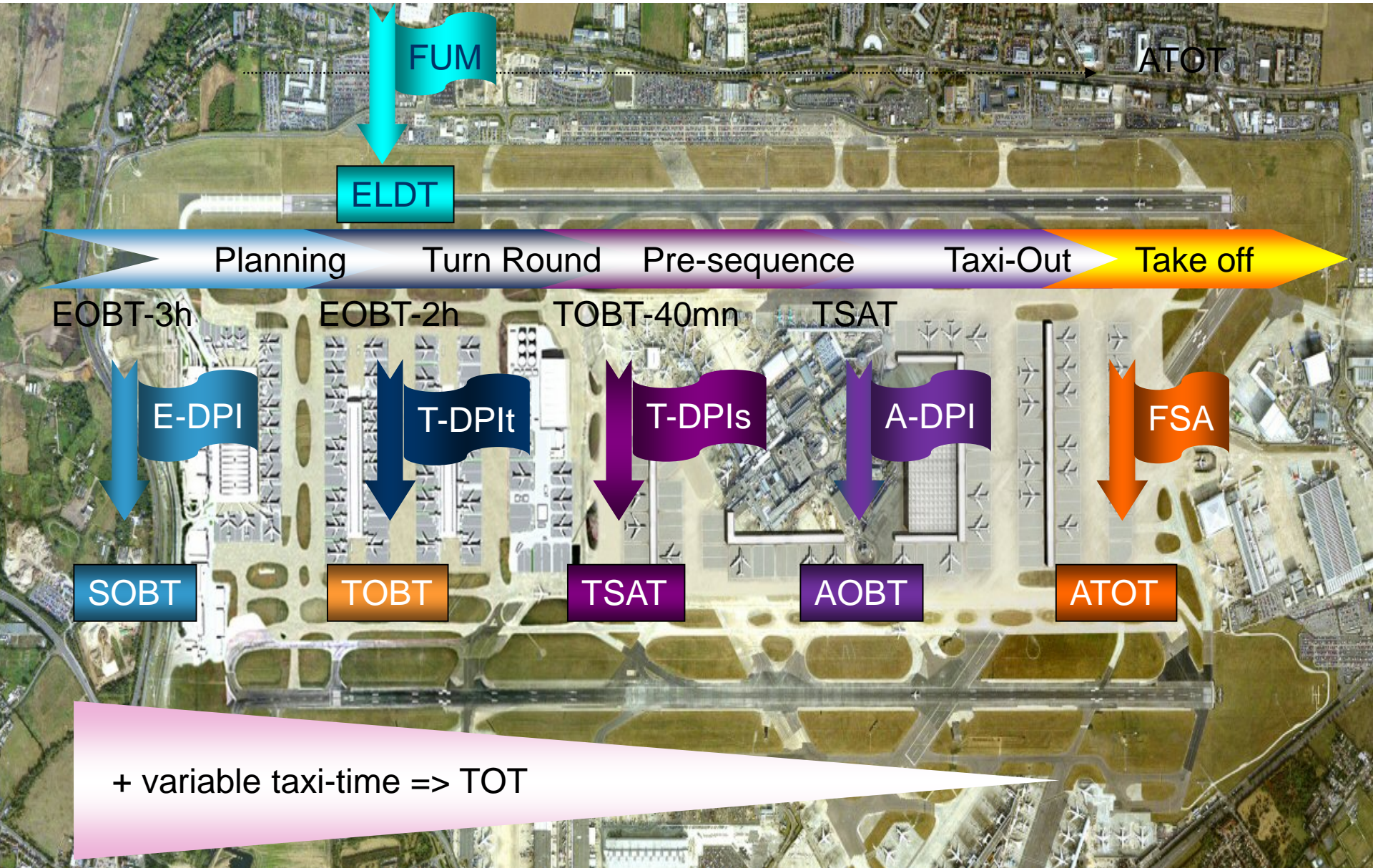
Airports - Accurate Arrival & Departure estimates

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

Current - Departure Planning



CDM Airport – Departure Planning



Thank you

