An aerial photograph of an airport tarmac. A large white airplane with a red tail is the central focus. Ground service equipment, including a mobile staircases and a cargo loader with a 'max' logo, is positioned around the aircraft. In the background, there are airport buildings and other tarmac areas.

A CORE  
COMPONENT  
FOR A-CDM

# OSYRIS Pre-Departure Sequencer (PDS)

**HARRIS**® | Orthogon

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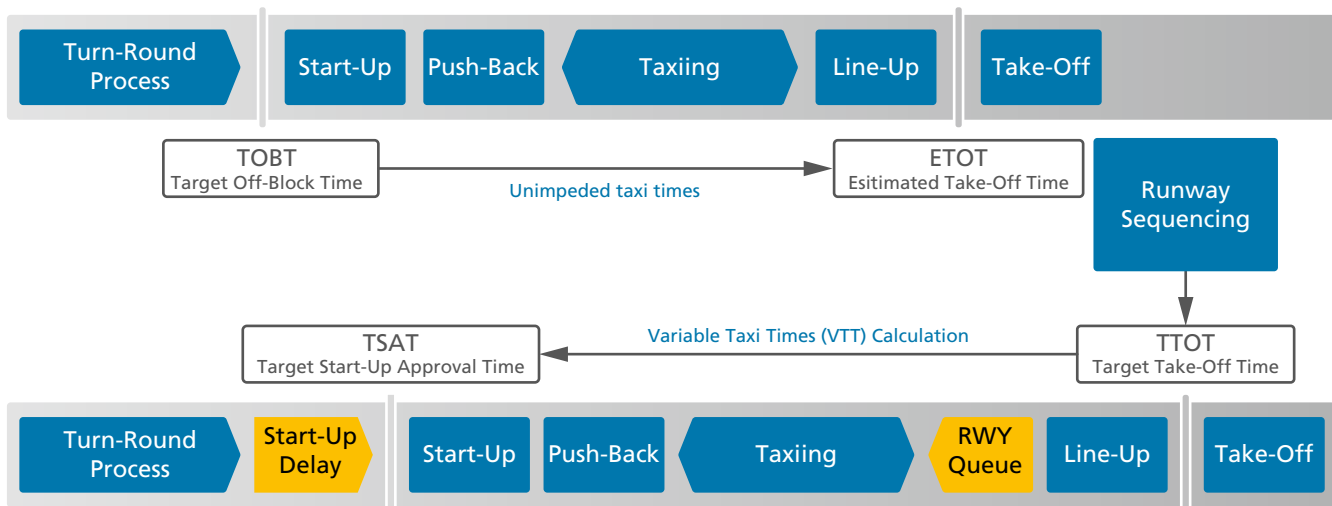
# Core component for Airport-CDM

The OSYRIS Pre-Departure Sequencer (PDS) provides all capabilities required for Airport-CDM. Optimizing push back times allows for reduced taxi times, enhanced sequence and departure time predictability and reduced queues.

OSYRIS PDS automatically calculates Estimated Take-off Times (ETOT) for each outbound flight, leading to an initial departure sequence, representing the earliest possible take-off time without any capacity constraints at the runway. Basis for the calculation are the Target Off-Block Times (TOBT) and Variable Taxi Times.

The continuous take-off sequencing process results in Target Take-off Times (TTOTs) and Target Start-up Approval Times (TSATs) which can be shared among all stakeholders according to local requirements. Airports and ground handling companies are supported in efficiently allocating their available resources.

User preferences and multiple constraints such as TOBTs, Variable Taxi Times, runway strategies, stand contentions and runway queue buffer times enable the user to reduce taxi and runway holding times, and save fuel while maintaining maximum runway throughput.



- TSAT calculation process

## DEPARTURE MANAGEMENT AS AN EXTENSION OF PDS

OSYRIS Departure Manager (DMAN) provides a large number of advanced functions - Most of them are unique in the market. They can optionally be used to adapt each DMAN installation to

further improve the predictability and efficiency of airport airside operations. These advanced functions go beyond Pre-Departure Sequencing, which supports the management of departure traffic in

capacity constrained airports. In particular, improvements are achieved for the runway capacity utilization and the on-time performance.

*“Harris Orthogon has delivered an excellent tool for departure management which has enabled Gatwick to run under A-CDM operational procedures. Using the Harris Orthogon DMAN, we look forward to continue to improve our operational performance.”*

Erik Einset, ACDM55 Program Leader at Gatwick Airport



## BENEFITS OF OSYRIS PRE-DEPARTURE SEQUENCER

<b>AIRPORTS</b>	<ul style="list-style-type: none"> <li>&gt; Better on time performance</li> <li>&gt; Increased slot capacity</li> <li>&gt; Improved overall service quality to airlines</li> <li>&gt; Improved passenger experience</li> </ul>	
<b>ANSPs</b>	<ul style="list-style-type: none"> <li>&gt; Improved departure time</li> <li>&gt; Improved network predictability</li> <li>&gt; Improved slot adherence</li> </ul>	
<b>AIRLINES</b>	<ul style="list-style-type: none"> <li>&gt; Reduced taxi times, leading to decreased fuel burn, greenhouse gas &amp; noise emissions</li> <li>&gt; Reduced buffer times in flight schedules</li> <li>&gt; More stability in airline network operations</li> <li>&gt; Better recovery from existing delays</li> </ul>	
<b>SERVICE PARTNERS</b>	<ul style="list-style-type: none"> <li>&gt; More efficient resource planning</li> <li>&gt; Improved service level agreement compliance</li> </ul>	
<b>PERFORMANCE METRICS</b>	<b>WITH PDS</b>	<b>WITHOUT PDS</b>
<b>Efficiency</b>	Reduction of Taxi Time <b>1 minute on average per flights</b>	
<b>Predictability</b>	<b>58-80 %</b> of all Take-Off Times can be predicted correctly (± 5 minutes window)	40-50 %
<b>Flexibility</b>	<b>Best Planned – Best Served</b> with consideration of airline intentions and preferences	First Come – First Serve

■ Source: ACI, EUROCONTROL, IATA: "Airport CDM – Steps to boost efficiency", 2009



Harris is dedicated to developing  
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**HARRIS**®



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