ORCI

Optimized Runway Centreline Interception

SESAR Walking Tours
28th May 2026

Designing and developing an AI-based tool that will support Air Traffic Controllers to manage arrival traffic in the most optimal manner regardless of the traffic load or complexity.

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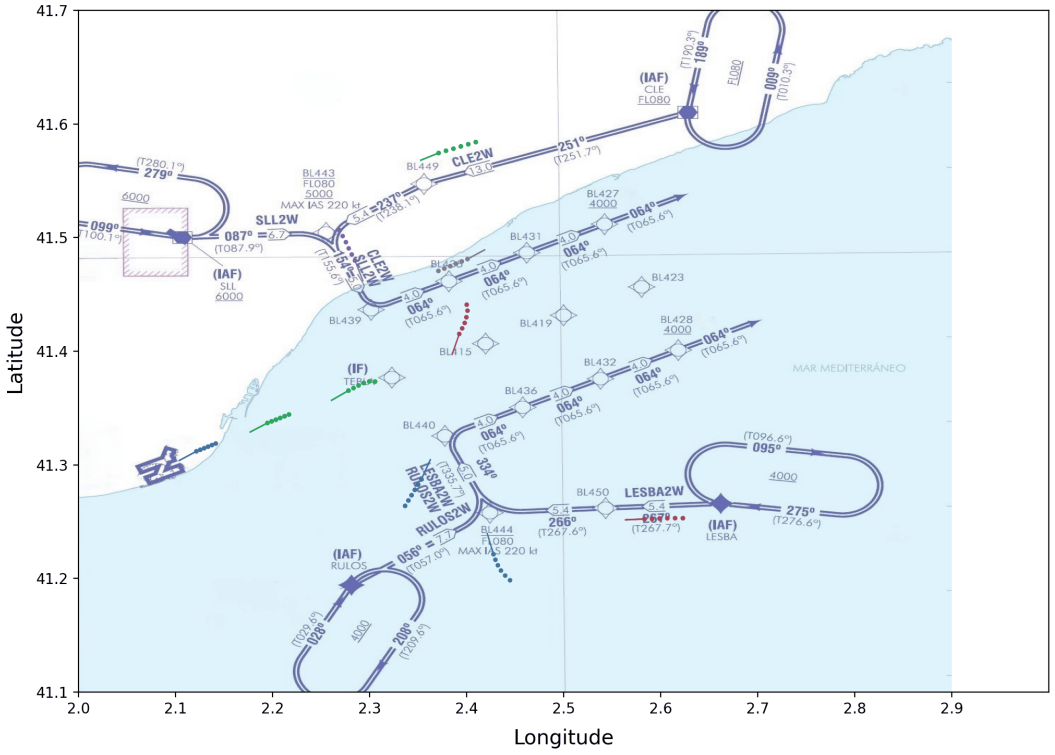
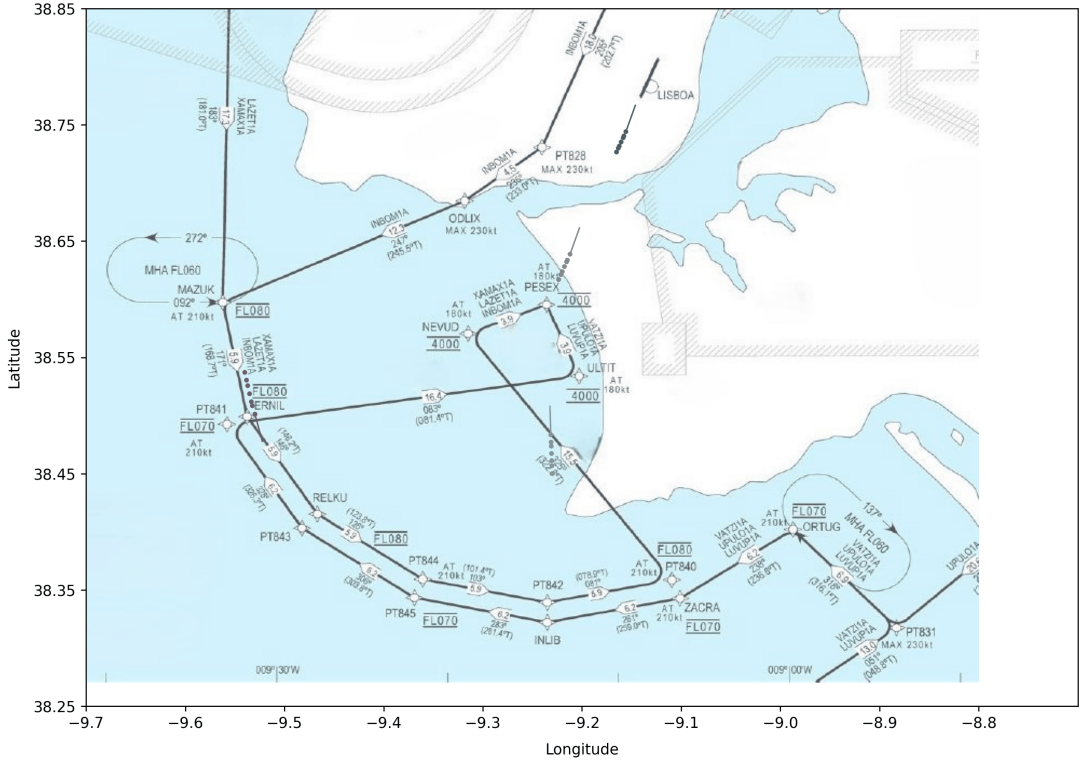
THE CHALLENGE





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ORCI – Main Objectives

1 IMPROVE ARRIVAL-SPACING PREDICTABILITY

Real-time prediction of aircraft spacing when issuing vectoring instructions towards final approach.

2 SUPPORT ATCOS IN HIGH-WORKLOAD OPERATIONS

Enhance situational awareness and tactical decision-making during complex arrival management.

3 IMPROVE RUNWAY THROUGHPUT AND OPERATIONAL EFFICIENCY

Enable more stable arrival flows and operations closer to target separation minima.

HUMAN-CENTRIC • AI-POWERED • SAFE • EFFICIENT

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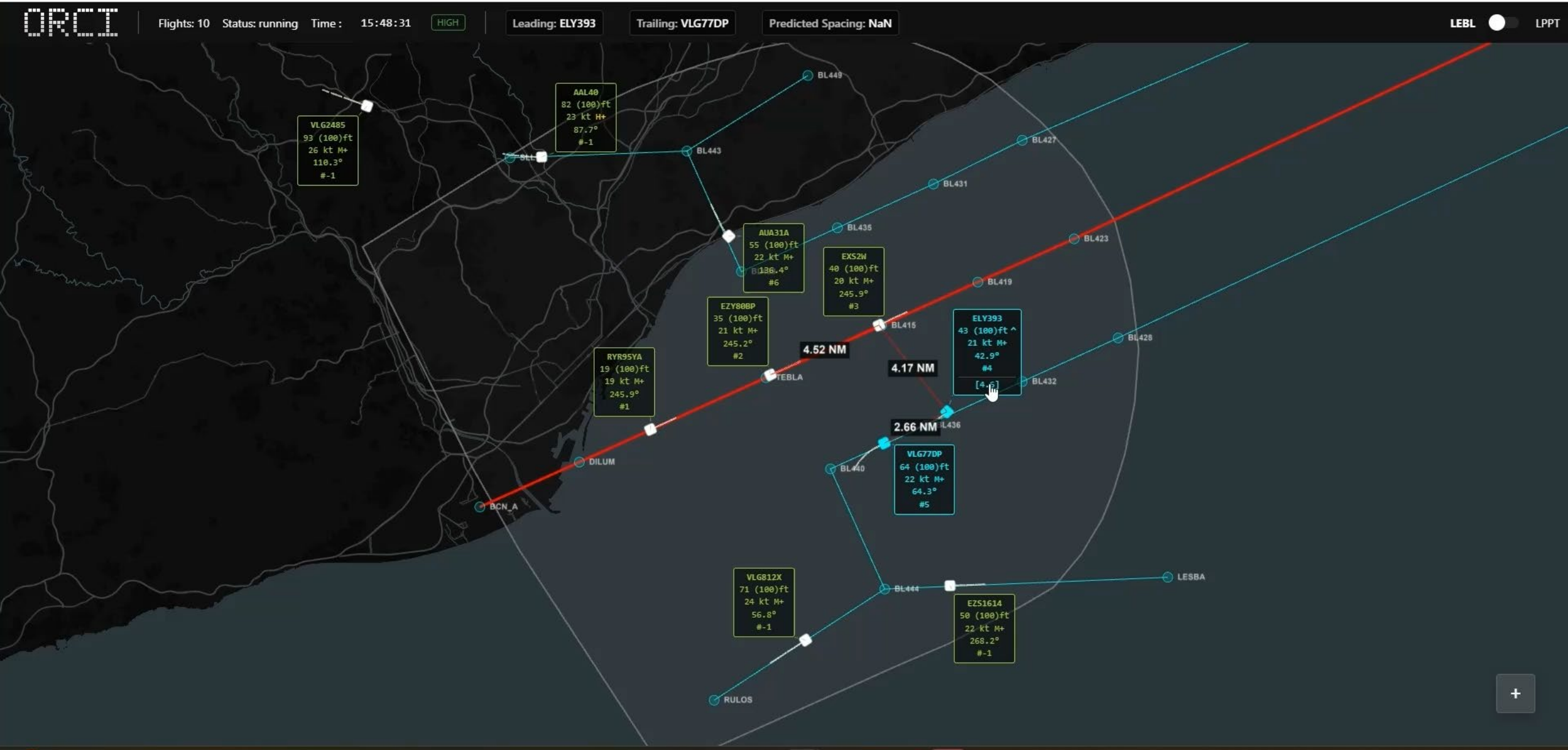
ORCI
Flights: 10
Status: running
Time : 15:48:31
HIGH
Leading: ELY393
Trailing: VLG77DP
Predicted Spacing: NaN
LEBL
LPPT
VLG2485
93 (100)ft
26 kt M+
110.3°
#-1
AAL40
82 (100)ft
23 kt H+
87.7°
#-1
AUA31A
55 (100)ft
22 kt M+
136.4°
#6
EXS2W
40 (100)ft
20 kt M+
245.9°
#3
EZY80BP
35 (100)ft
21 kt M+
245.2°
#2
RYR95YA
19 (100)ft
19 kt M+
245.9°
#1
ELY393
43 (100)ft
21 kt M+
42.9°
#4
VLG77DP
64 (100)ft
22 kt M+
64.3°
#5
VLG812X
71 (100)ft
24 kt M+
56.8°
#-1
EZS1614
50 (100)ft
22 kt M+
268.2°
#-1
4.52 NM
4.17 NM
2.66 NM
BL449
BL443
BL427
BL431
BL435
BL423
BL419
BL415
BL428
BL432
BL436
BL440
BL444
TEBLA
DILUM
BCN_A
LESBA
RULOS

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KEY RESULTS

Spacing Accuracy Improvements

+57%
Barcelona

+39%
Lisbon

Runway Arrival Throughput

+4.2 to 12.3%
Barcelona

+3%
Lisbon

Safety Maintained

No increase in separation issues

Operational Efficiency (*NM flown*)

-7.4%
Barcelona

-3.4%
Lisbon

Reduced Fuel Burn

-48Kg/Arr
Barcelona

-21Kg/Arr
Lisbon

High Controller Acceptance

Reduced Workload & Stress

-15.8%

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Optimised Runway Centreline Interception - Grant n° 101167539

THANK YOU FOR YOUR ATTENTION

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Questions ?