Iris Service Provision Yearly Report 2025

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EXECUTIVE SUMMARY

This report presents the **IRIS services performance during 2025**. The report contains global results for the reported period, including maps, graphs and tables with the performance through different parameters.

Additional and more detailed information about IRIS performance can be found at the Iris User Support website Iris User Support Website.

Iris Service Availability

In 2025, the Iris Service Availability (whose target value is 99.6% according to the applicable SDD) was 99.86%.

Further details can be found in Section 1.

Iris ATN/OSI Service Level 1 (SL1)

This Service Level enables the following RCP specifications supporting CPDLC application for ATN B1 and ATS B2 data link services:

- RCP specified in the ED-120 as interpreted in the Eurocontrol guidelines.
- RCP130/A1 specified in the ED-228A / DO-350A and referred in the ED-242C / DO-343D

The overall observed SL1 performance values are:

- SL1 Nominal Transaction Time (≤10 seconds at 95%): 5.0s
- SL1 ATN B1 Expiration Time (≤18 seconds at 99%) 6.3s
- SL1 ATS B2 Expiration Time (≤24 seconds at 99.5%): 7.5s
- SL1 Technical Continuity (≥95%) was 99.38%
- SL1 ATN B1 Technical Continuity (≥99%) was 99.53%
- SL1 ATS B2 Technical Continuity (≥99.5%) was 99.68%

From above results, it can be observed that **the overall Iris performance during the reported period have been compliant for the latency and continuity parameters**.

Further details can be found in section 2.

Iris ATN/OSI Service Level 2 (SL2)

This Service Level 2 which enables the following RSP specification supporting ADS-C application for ATS B2 data link services:

- RSP160/A1 specified in the ED-228A / DO-350A and referred in the ED-242C / DO-343D

The overall observed SL2 performance values are:

- SL2 Nominal Delivery Time (≤9 seconds at 95%): 6.2s
- SL2 Overdue Delivery Time (≤17 seconds at 99.5%): 8.7s
- SL2 Technical Continuity (≥95%): 98.82%
- SL2 Technical Continuity (≥99.5%): 99.84%

From above results, it can be observed that **the overall Iris performance during the reported period have been compliant for the latency and continuity parameters.**

Further details can be found in section 3.

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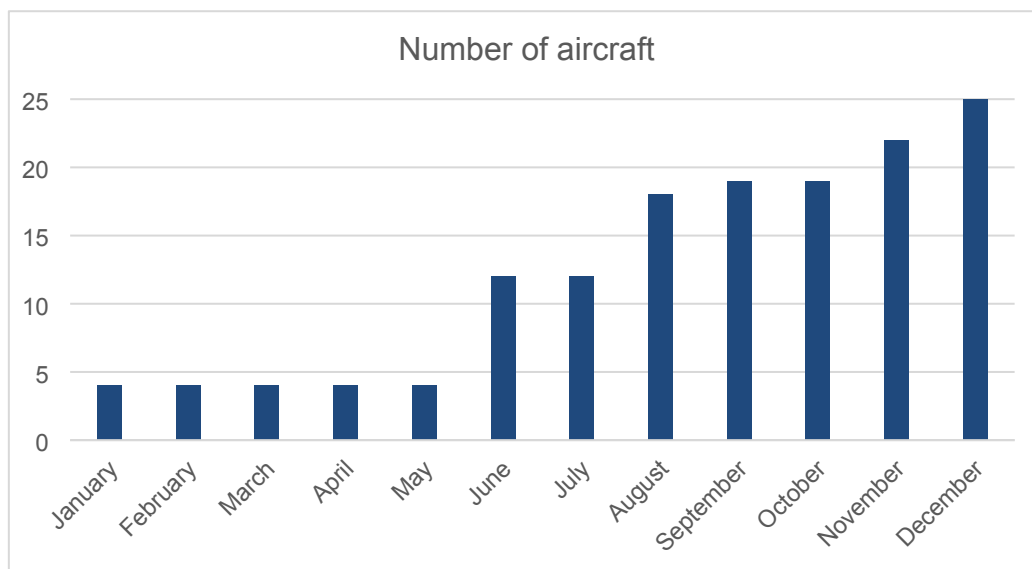During 2025, the monthly distribution of the aircraft that were connected and handled is shown in the following graph:

Figure 1: Number of aircraft connected per month

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1   IRIS SERVICE AVAILABILITY

The service availability is defined as the probability that the Iris service is available to provide the required level of communication service.

Operationally significant outages are considered where TP4 or CM, CPDLC / ADS-C messages are not exchanged anymore for more than 6 minutes and validated by taking into consideration the type of IDRP messages (e.g. IDRP error rate) sent or received by the Inmarsat Air/Ground Router during this period to avoid wrong measurements at low traffic periods.

The Iris Service Availability during 2025 was 99.86%.

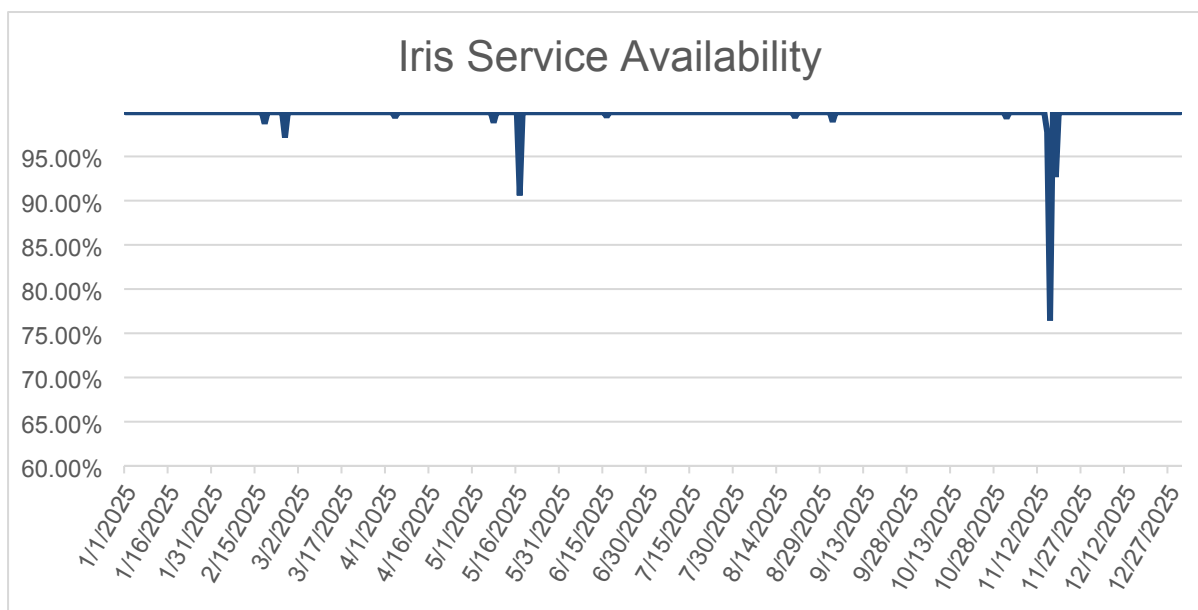The monthly distribution of Iris Service Availability is shown in the following graph:

Figure 2: Monthly Iris Service Availability

The Iris Service Availability was above the target every day, except for some days throughout the year. The most important underperformances are summarized below:

- 17th of May (90.59%).
- 16th of November (76.45%).
- 18th of November (92.66%).

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2   IRIS ATN/OSI SERVICE LEVEL 1 (SL1)

Iris ATN/OSI Service Level 1 corresponds to the Controller Pilot Data Link Communications (CPDLC), which is the application that allows ATC data communications between controllers and pilots.

2.1   Latency

SL1 Nominal Transaction Time (TT) is defined as the maximum time at which 95 percent of all transactions, that are initiated, are completed.
It is computed as the time from when the uplink message is sent by the end-user ground system (as time-stamped by the ground system in the uplink message) and the time when the downlink LACK is received by the end-user ground system for the 95 percent.

SL1 ATN B1 and ATS B2 Expiration Time (ET) is defined as the maximum time at which 99 (for ATN B1) or 99.5 (for ATS B2) percent of all transactions, that are initiated, are completed, after which the initiator is required to revert to an alternative procedure.
It is computed as the time from when the uplink message is sent by the end-user ground system (as time-stamped by the ground system in the uplink message) and the time when the downlink LACK is received by the end-user ground system for the 99 or 99.5 percent.

The achieved performance values for the reported period are:

Parameter	Value	Target
TT	5.0 seconds	≤9 seconds
ET (RCP as ED-120)	6.3 seconds	≤17 seconds
ET (RCP130/A1)	7.5 seconds	≤23 seconds

Table 1: Iris SL1 latency

2.2   Technical Continuity

SL1 Technical Continuity and SL1 ATN B1/SL1 ATS B2 Technical Continuity is defined as probability that a transaction completes before the Transaction Time (TT) (for SL1 Technical Continuity), or the Expiration Time (ET) (for SL1 ATN B1/SL1 ATS B2 Technical Continuity) expires.
It is computed as the number of uplink messages requiring a LACK (ACK = 1) for which a DM100 LACK or a DM62 ERROR response is received within the ET target value (as per the Iris SDD) or less / total number of uplinks requiring a LACK (ACK = 1).

The achieved performance values for the reported period are:

Parameter	Value	Target
C [TT]	99.38%	≥95%
C [ET (RCP as ED-120)]	99.53%	≥99%
C [ET (RCP130/A1)]	99.68%	≥99.5%

Table 2: Iris SL1 Technical Continuity

The following figure presents the delays of the messages for Service level 1, both RCP as ED-120 and RCP130/A1, for the percentile between 90% and 100%.
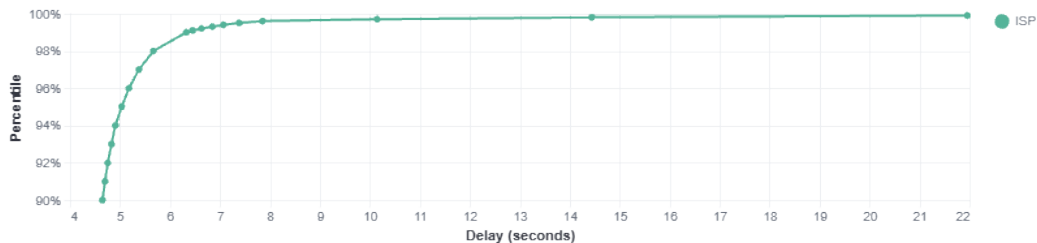
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Figure 3: Cumulative performance distribution for ISP (SL1), for 2025

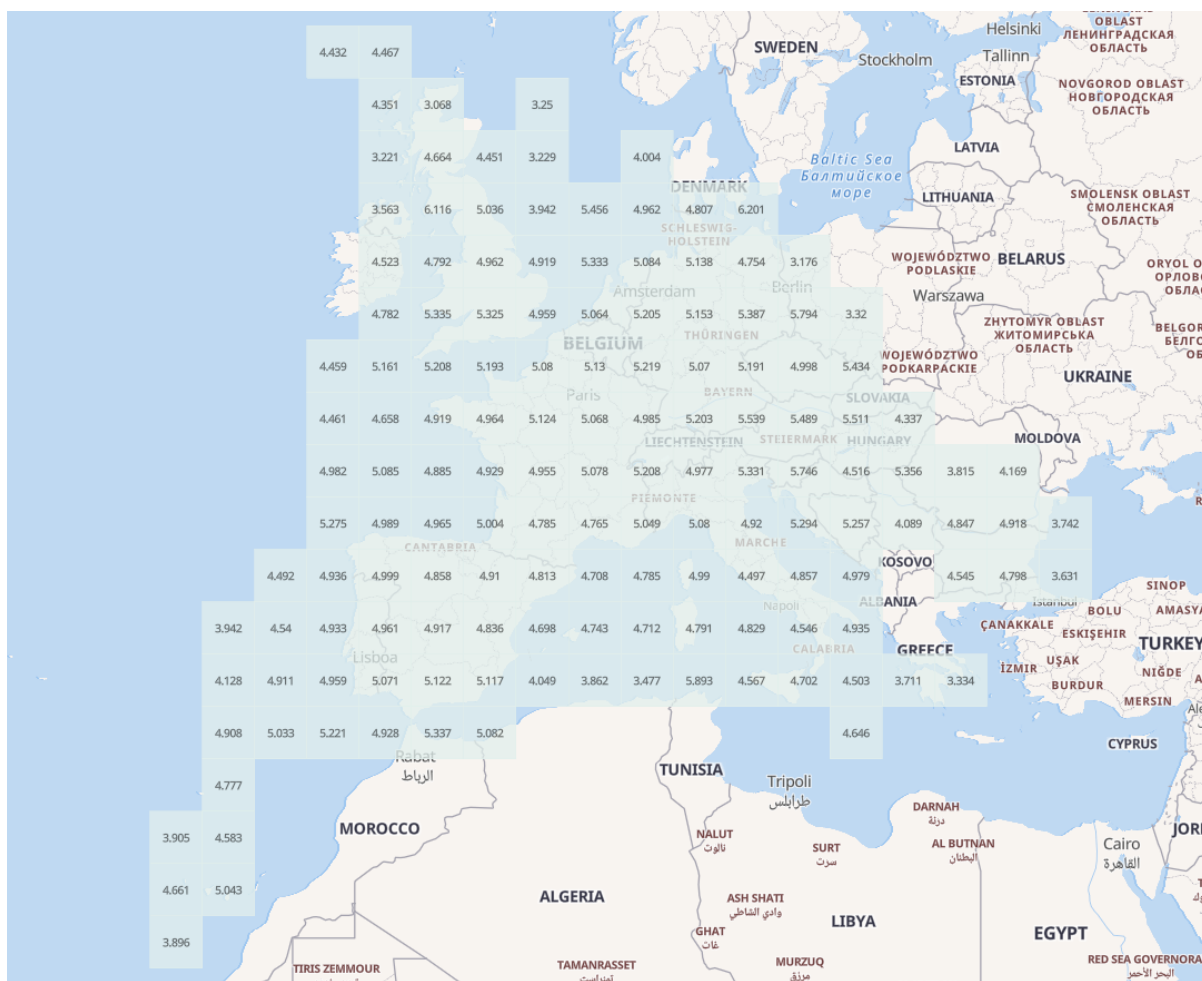The following maps present the delays displayed over the service area.

Figure 4: SL1 TT – 2025

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Figure 5: SL1 ET – 2025 (RCP as ED-120)

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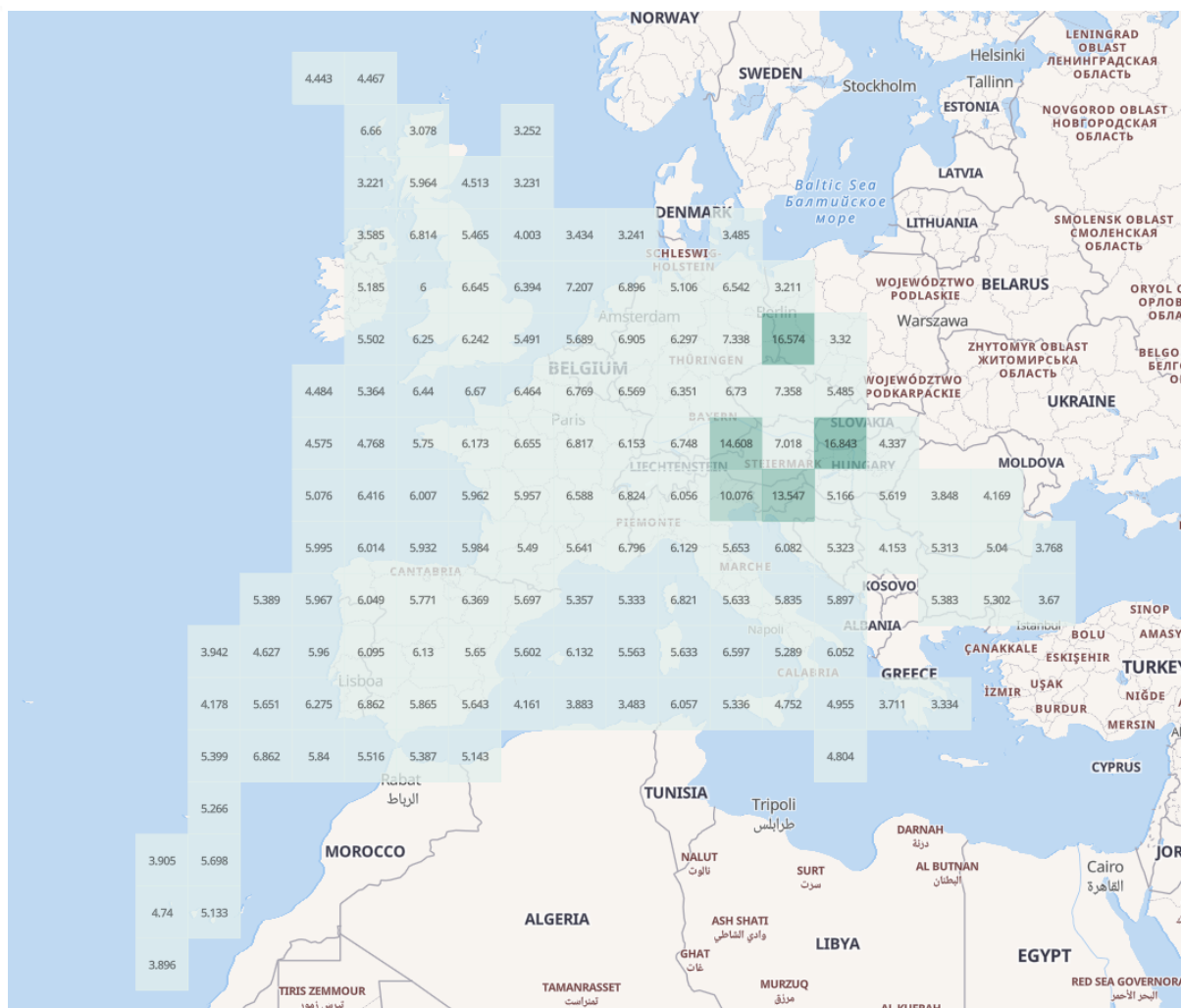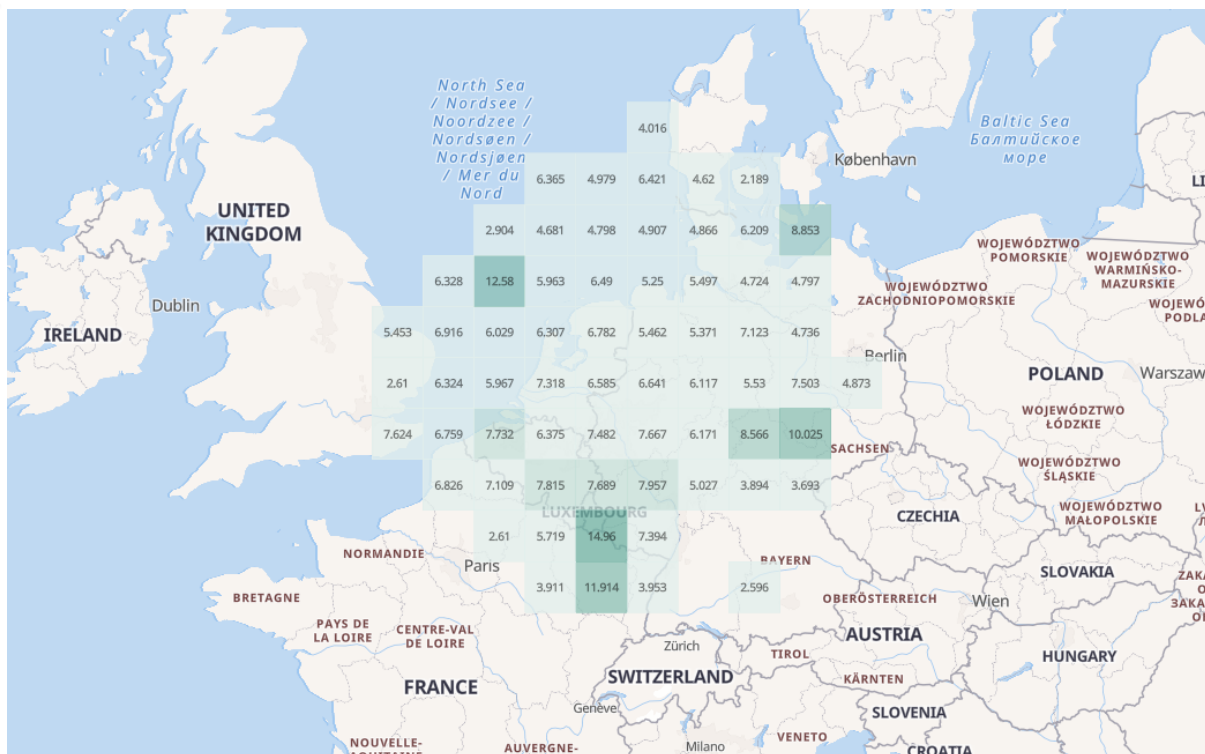
Figure 6: SL1 ET – 2025 (RCP130/A1)

2.3 Performance evolution

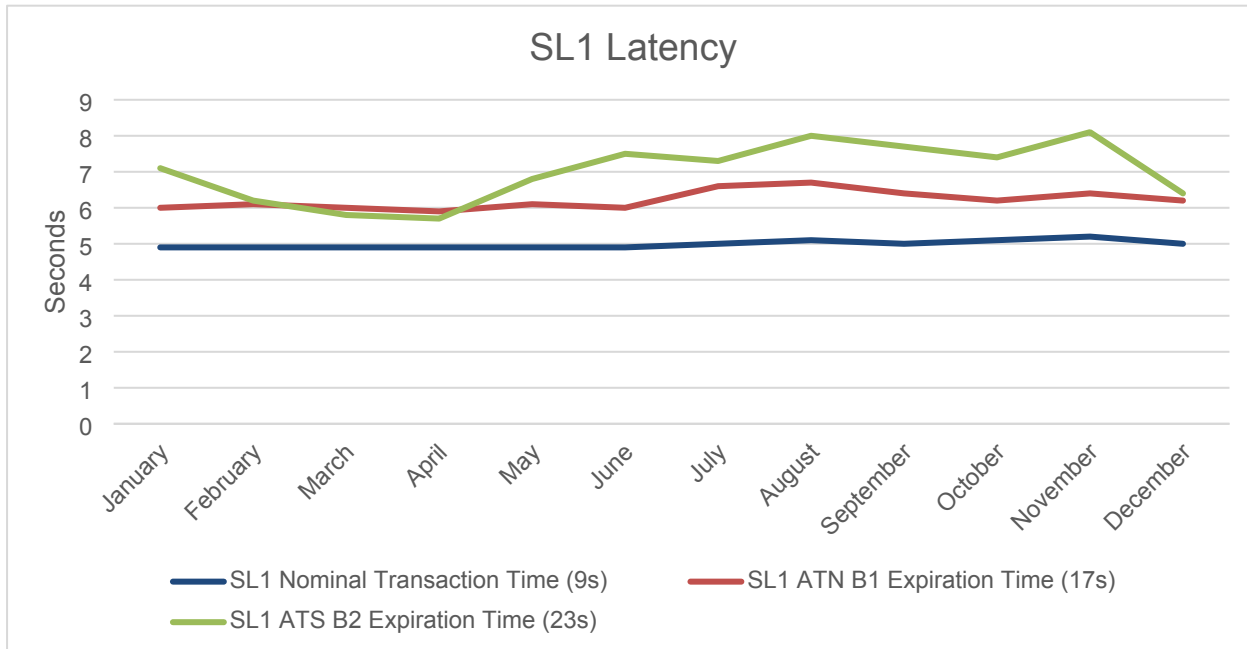The following graphs show the evolution of the previously presented performance parameters during all 2025.
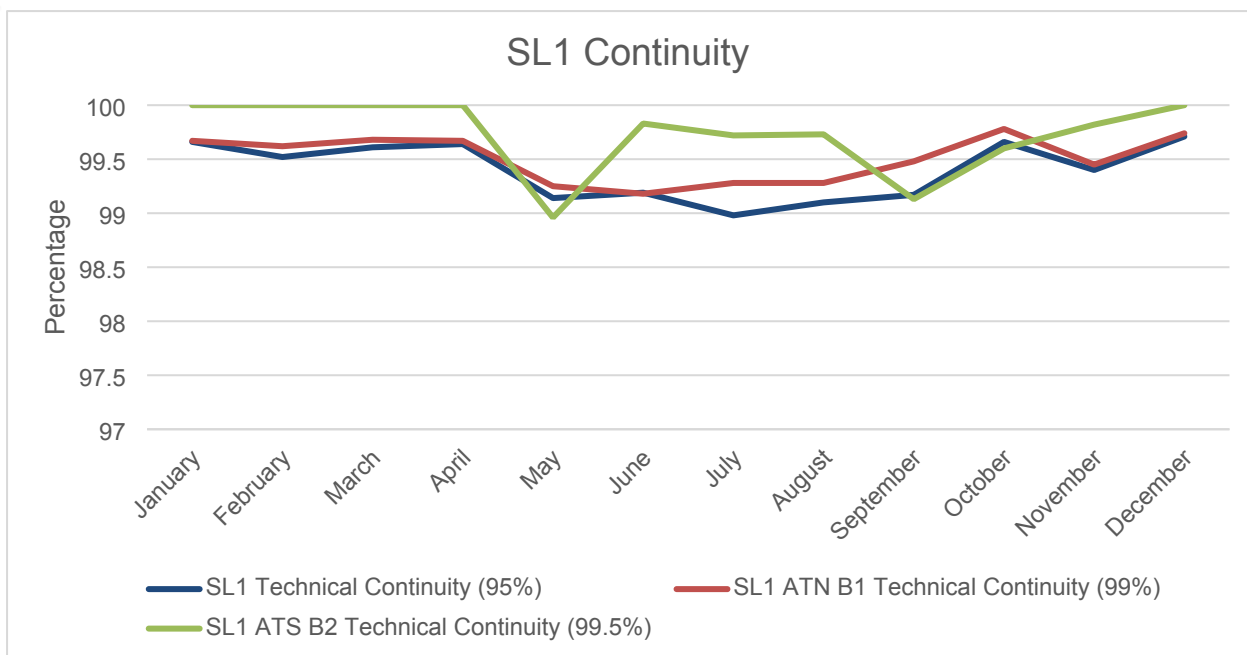

Figure 7: SL1 Latency

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Figure 8: SL1 Continuity

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3 IRIS ATN/OSI SERVICE LEVEL 2 (SL2)

Iris ATN/OSI Service Level 2 corresponds to the Automatic Dependent Surveillance – Contract (ADS-C). A mean by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.

3.1 Delivery time

SL2 Surveillance nominal delivery time (DT) is defined as the maximum nominal time within which 95% of surveillance data deliveries are required to be successfully delivered.

It is computed as the time from when the downlink message is sent by the aircraft (as time-stamped by the aircraft system in the Basic Group downlink message) and the time when the downlink message is received by the Organization ground system for the 95 percent.

SL2 overdue delivery time of surveillance data (OT) is defined as maximum time for the overdue delivery time of surveillance data at which 99.5 percent of all transactions, that are initiated, are completed, after which the initiator is required to revert to an alternative procedure.

It is computed as the time from when the downlink message is sent by the aircraft (as time-stamped by the aircraft system in the Basic Group downlink message) and the time when the downlink message is received by the Organization ground system for the 99.5 percent.

The achieved performance values for the reported period are:

Parameter	Value	Target
DT	6.2 seconds	≤8 seconds
OT	8.7 seconds	≤16 seconds

Table 3: Iris SL2 Delivery time

3.2 Technical Continuity

SL2 Technical Continuity is defined as probability that a transition completes before the Delivery Time, or the Surveillance overdue delivery time (OT) expires.

It is computed as the number of ADS-C downlink messages which are forwarded to the Organization within the target value (as per the Iris SDD) or less / total number of ADS-C downlink messages.

The achieved performance values for the reported period are:

Parameter	Value	Target
C [DT]	98.82%	≥95%
C [OT]	99.84%	≥99.5%

Table 4: Iris SL2 Technical Continuity

The following figure presents the delivery time of the messages for the Service level 2, for the percentile between 90% and 100%.
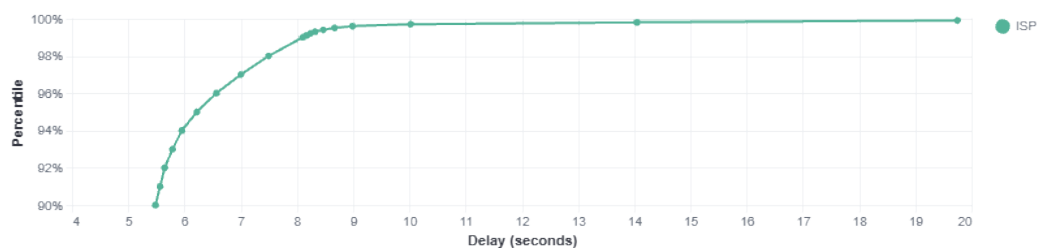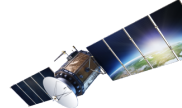
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Figure 9: Cumulative performance distribution for ISP (SL2), for 2025

The following maps present the delivery time displayed over the service area.

Figure 10: SL2 DT – 2025

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Figure 11: SL2 OT - 2025

3.3 Performance evolution

The following graphs show the evolution of the previously presented performance parameters during all 2025.
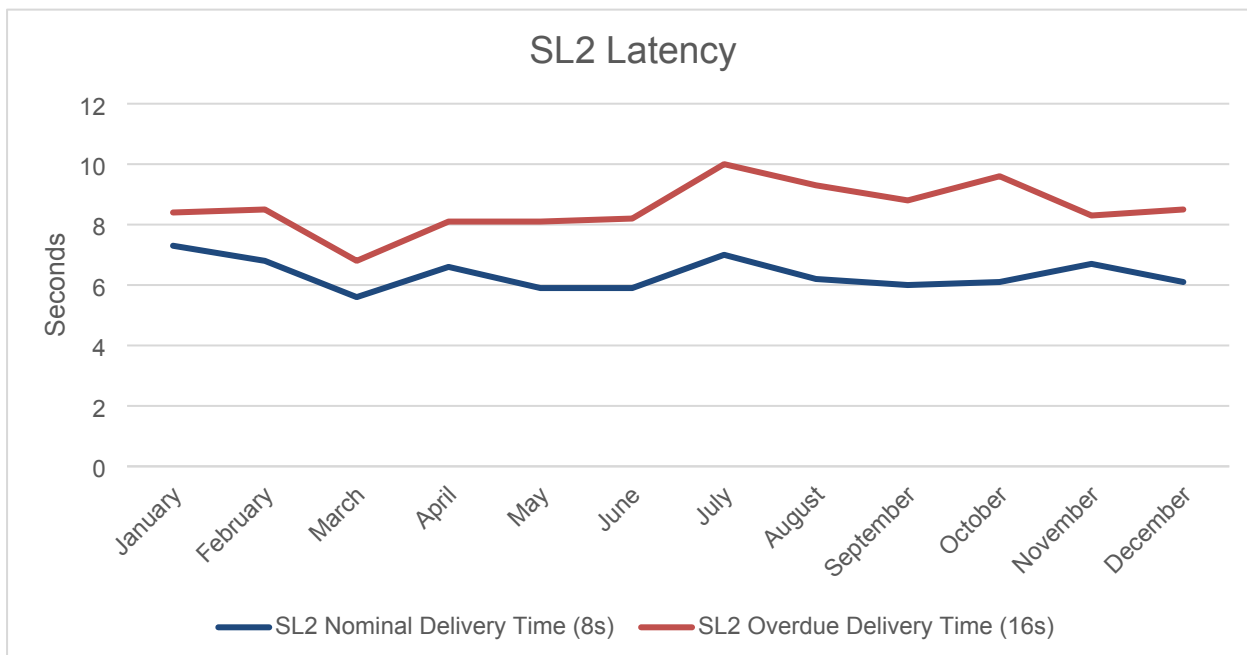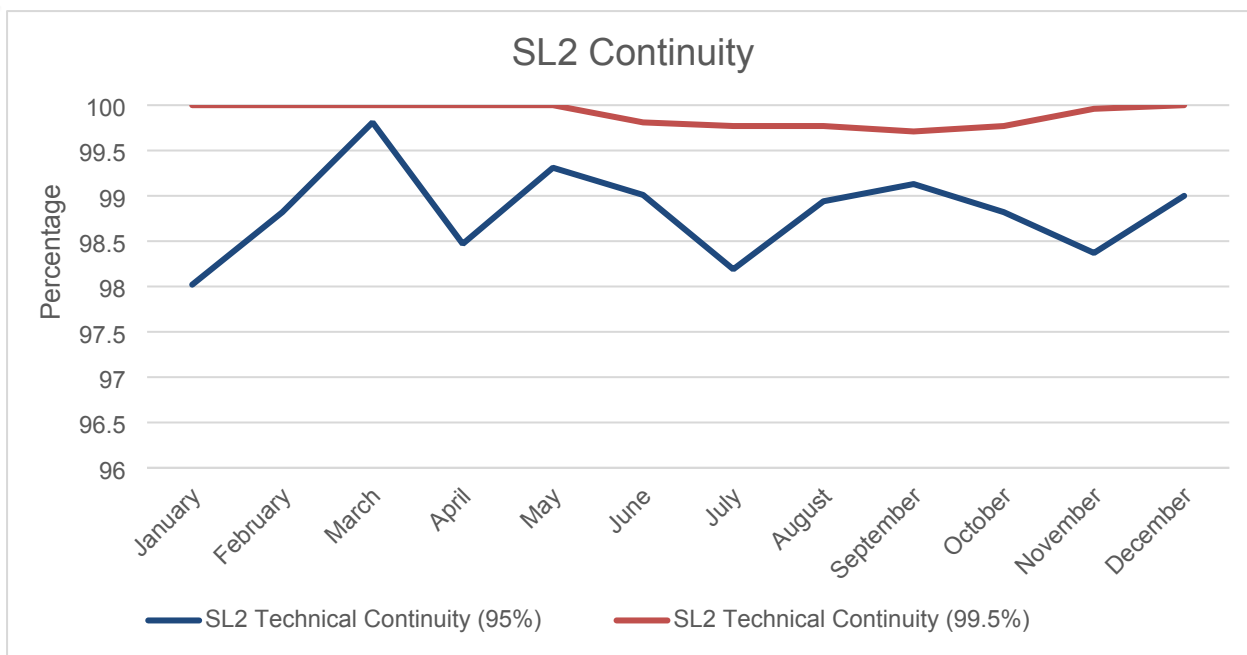

Figure 12: SL2 Latency

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Figure 13: SL2 Continuity

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APPENDIX A   IRIS USER SATISFACTION SURVEY AND IMPROVEMENTS ACTIONS

The European Satellite Services Provider (ESSP), as the Iris Service Provider (ISP), launches on a yearly basis the Iris User Satisfaction Survey. In conducting this survey, the ISP aims to gain a better understanding of Iris value to users, with a view to providing better user-oriented service. The survey collects feedback on experiences with Iris services, including support services, performance, and areas for improvement.

The 2024-2025 Iris User Satisfaction Survey was launched using a specific online platform in January 2025 and was widely disseminated; it closed six months later after collecting enough respondents to assess overall user opinion. The results and the proposed actions to be implemented based on this feedback are published on the Iris Website (section Resources & Tools / Iris Satisfaction Survey).

In the figure 14 below, the results of the 2024-2025 Iris User Satisfaction Survey are presented.
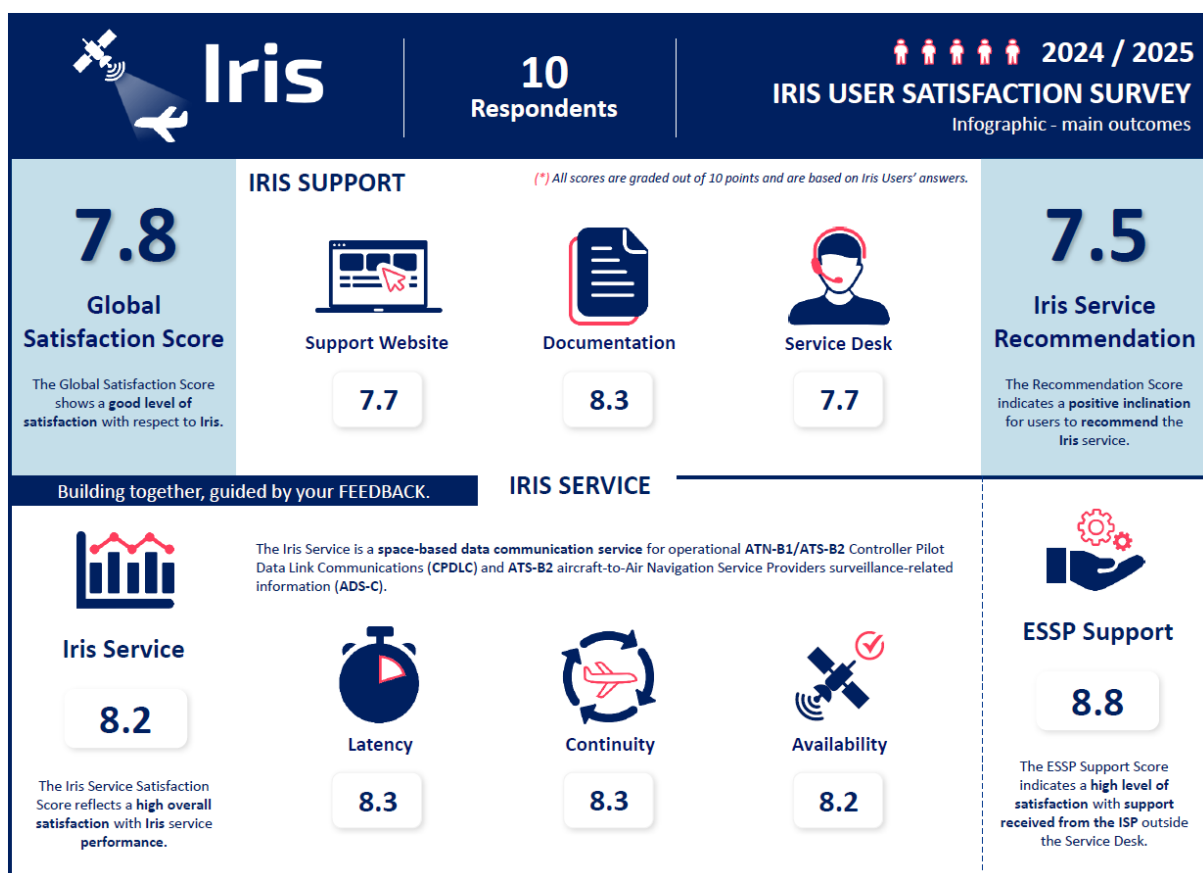

Figure 14: 2024-2025 Iris User Satisfaction Survey results

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APPENDIX B   LIST OF ACRONYMS

The following table provides the definition of the acronyms used in this document.

Acronym	Definition
ACC	Air Control Center
ADS-C	Automated Dependent Surveillance- Contract
ATC	Air Traffic Control
ATN	Aeronautical Telecommunication Network
ATS	Application Transport Service
B1	Baseline 1
B2	Baseline 2
CM	Context Management
CPDLC	Controller Pilot Data Link Communications
DM	Downlink Message
DT	Delivery Time
ESSP	European Satellite Services Provider
ET	Expiration Time
IDRP	Inter-Domain Routing Protocol
ISP	Iris Service Provider
OSI	Open System Interconnection
OT	Overdue Time
RCP	Required Communications Performance
RSP	Required Surveillance Performance
SDD	Service Definition Document
SL	Service Level
TP	Transport Protocol
TT	Transaction Time

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