

EGNOS Workshop - AIRBUS presentation

Dublin, 13th of March 2024

Engineering | Support to Sales & Marketing

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AIRBUS

Agenda

SLS function to fly LPV approaches

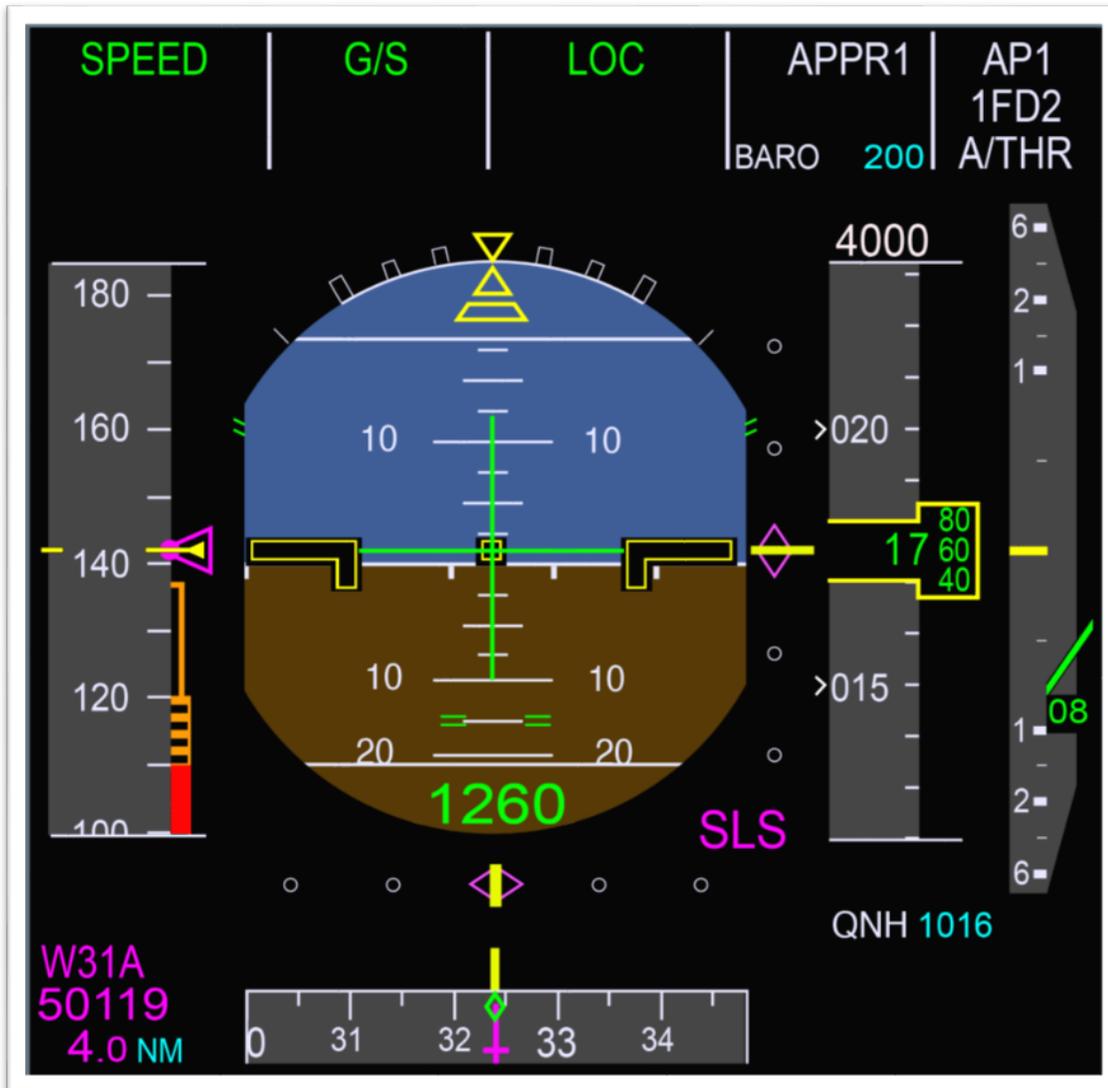
SLS selection on Airbus program

SLS autoland

Conclusion



SLS function



Airbus function to fly LPV approaches

- Provides geometrical lateral and vertical guidance
- Common HMI based on ILS
- Performance equivalent to CAT I ILS : DH down to 200ft
- Extends precision approach service to more airports

AIRBUS

Airbus Fleet Readiness review for A220/A320/A330/A350/A380

SLS function in Forward Fit



2016 ✓

A220

2016: LPV capability
(different from xLS concept)



A320

2021 ✓

2021: SLS CAT I



2014 ✓

A350

Since 2014: SLS CAT I
Selected by 75% of the fleet



A330

2022: SLS CAT I

Nov 2022 ✓



A380

Oct 2022 ✓

2022: SLS CAT I

Airbus Ready for SLS-LPV!

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SLS selection for A320 program

❑ 1st customer **easyJet**

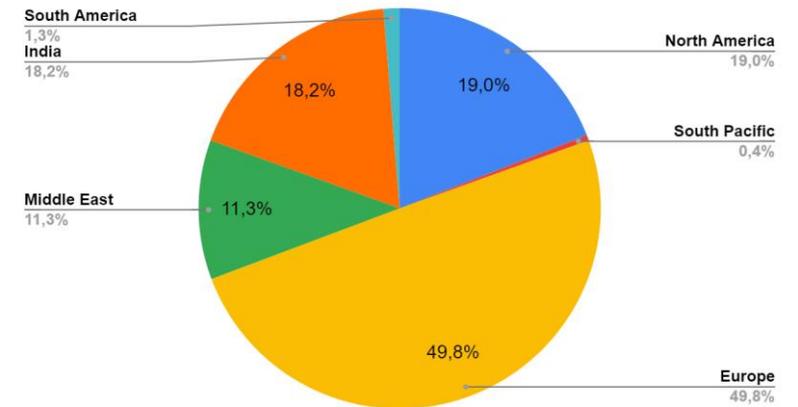
❑ Aircraft equipped with SLS delivered already to 6 additional airlines



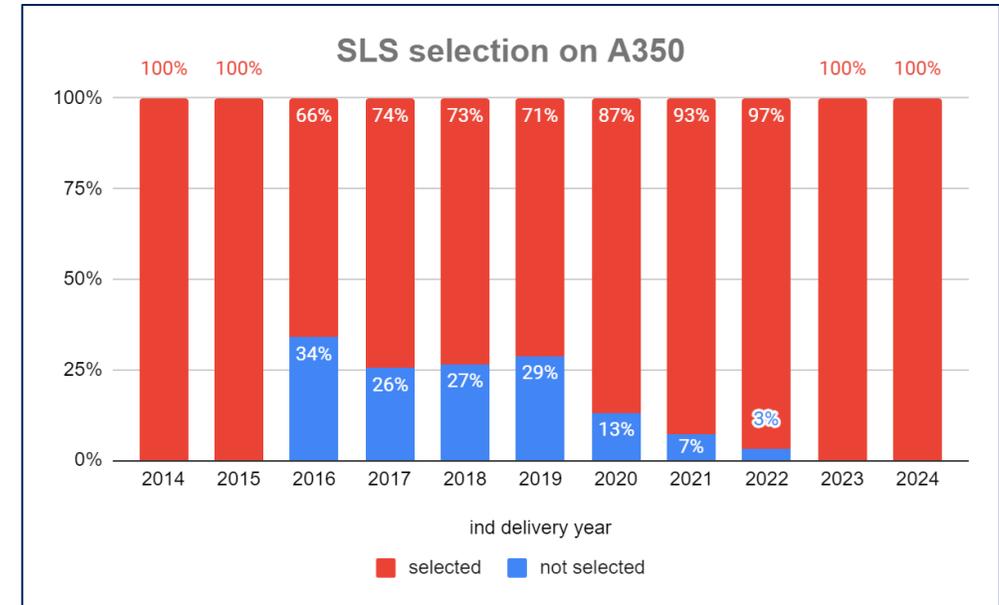
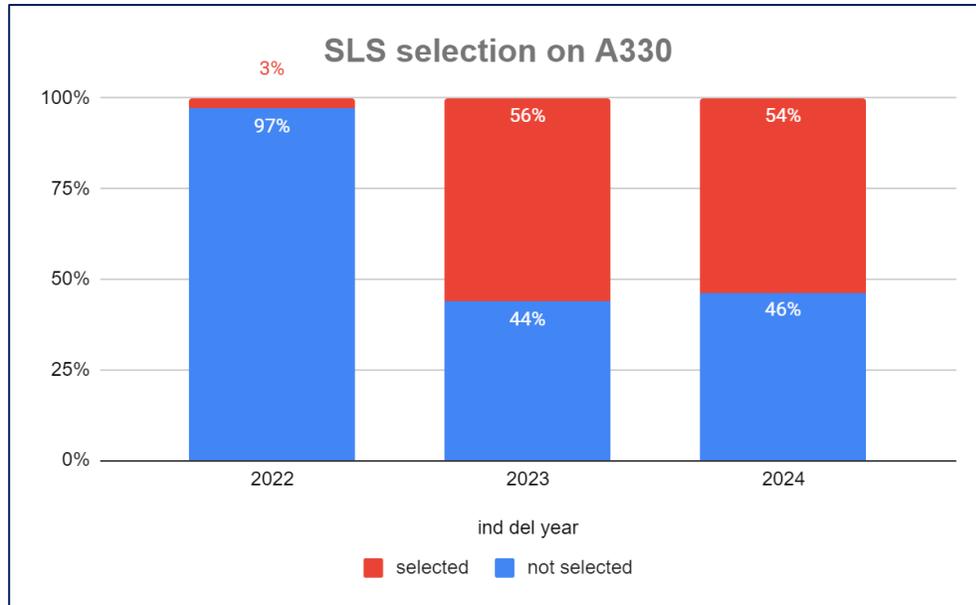
❑ 12 additional airlines have also selected SLS option

- ❑ **SLS mainly chosen by european operators on A320 family**
- ❑ **SLS expected to be available on Thales FMGC for Entry Into Service of A321 XLR aircraft**

Single Aisle aircraft equipped with SLS per region



SLS selection for A330/A350 programs



- ❑ **SLS selected by 75% of total A350 fleet**
- ❑ **SLS already selected on A330 by more than 50% of aircraft delivered in 2023, same trend expected for 2024**

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Improves Safety - Autoland Generalisation

- ❑ When used, autoland is a capability provided to airlines which contributes to **safety enhancement** :
 - ❑ Reduce Lateral runway excursions
 - ❑ Reduce Go-arounds
 - ❑ Avoid any risk of Hard landings
- ❑ Autoland as a tool to be used **when deemed appropriate** and **not limited to LVO**

Crew fatigue



Cross Wind



Difficult visibility



Heavy failures



- ❑ SLS Autoland characteristics wrt ILS:



- No need for specific airport ground infrastructure
- No multipath due to perturbation when sensitive areas are not protected



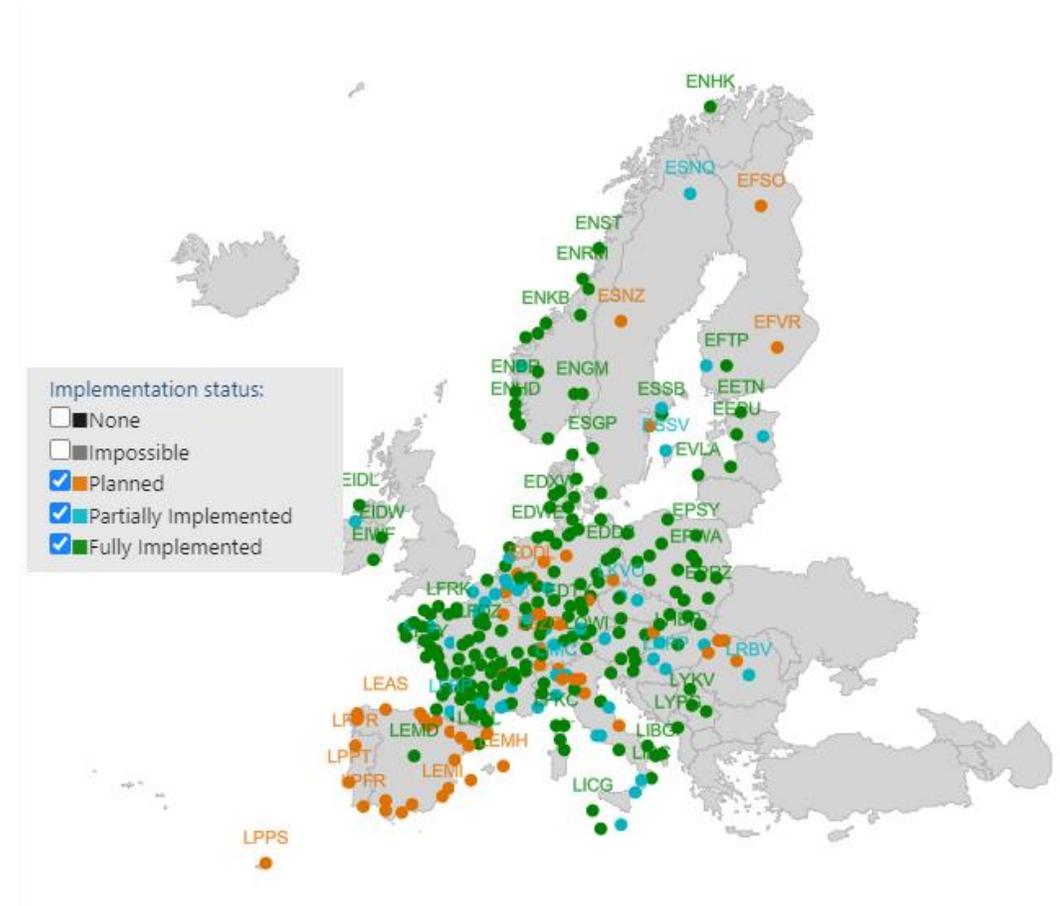
- Is sensible to GNSS perturbations
- Is currently limited to Europe and North America

Improves Safety - Benefits of Autoland in SLS

SLS allows autoland generalisation

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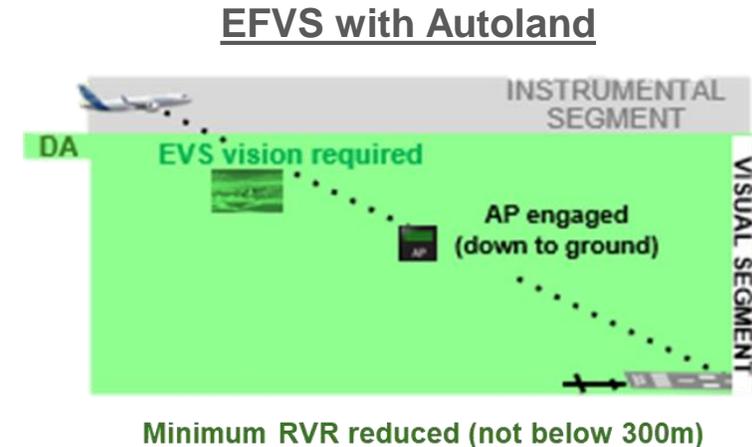
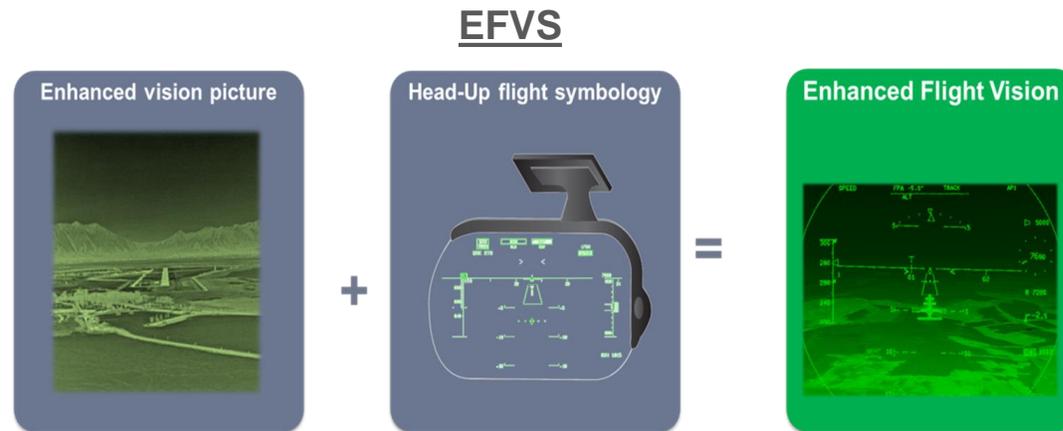
- ❑ **In any weather conditions (Not limited to LVO) to support the pilot**
- ❑ **Largely where SBAS is available** (no need of specific airport ground infrastructure)



Source : Eurocontrol PBN Map: Deployment monitoring - LPV200 only

New Operations - EVFS with Autoland concept

- ❑ When visibility is below authorized minima, **use of EFVS**, in lieu of natural vision, **to descend below the DA/DH down to touchdown with autoland engaged**
- ❑ Operational benefits: **Reduction of RVR** (Runway Visual Range)
- ❑ **!! No change of DH !!**



SLS Autoland preferred technology for EFVS with Autoland concept as no xLS ground infrastructure is needed

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Conclusion

- ❑ **SLS available since 2022 for all Airbus programs**
- ❑ **SLS Autoland not limited to low visibility operations**
- ❑ **Additional operational benefit if combined with EFVS**



Thank you