

Continuous adoption of EGNOS by Aviation community

- In anticipation to the application of EU regulation (EU) 2021/116, SBAS is being proposed on an increasing numbers of platforms, either as forward- or retro- fit
- In May 2022 Airbus added the availability of its SBAS Landing System to the Single Aisle flagship A320 family, on top of the A350 and A330 families
- This solution already convinced major european airlines, such as EasyJet, for their commercial operations

AIRBUS

Press Release

Airbus extends Satellite Based Landing System (SLS) capability to A320 Family and delivers first aircraft to easyJet

[@Airbus](#) [@easyJet](#) [#A320](#) [#SLS](#) [#Navigation](#) [#EGNOS](#) [@EU4Space](#)

Toulouse 03 June 2022 – Airbus has delivered the first Airbus A320neo equipped with the latest Satellite Based Landing System (SLS) technology to long standing customer easyJet. SLS enables pilots to perform 'straight-in' approaches using satellite precision when coming into land at airports, without the need for additional ground-based systems such as ILS, even in low-visibility conditions, while saving fuel and reducing emissions.

SLS first entered service in Europe with the A350 in 2015 after Airbus had successfully pioneered its development and introduction for "CAT1 approaches with support of the EU Agency for the Space Programme (EUSPA) – formerly known as the GSA – and the European Commission. An SLS function is also available on A220 and A330 aircraft families and in progress for the A380.

"By using SLS, airlines benefit from improved operational capabilities and operational are very Family, nology." Airbus' e world ly it to EUSPA



EGNOS for Rail

EGNSS service for railway safety-relevant applications

EU SPACE WEEK 2022
SESSION : EGNOS Status



EGNSS-R

DEFENCE AND SPACE

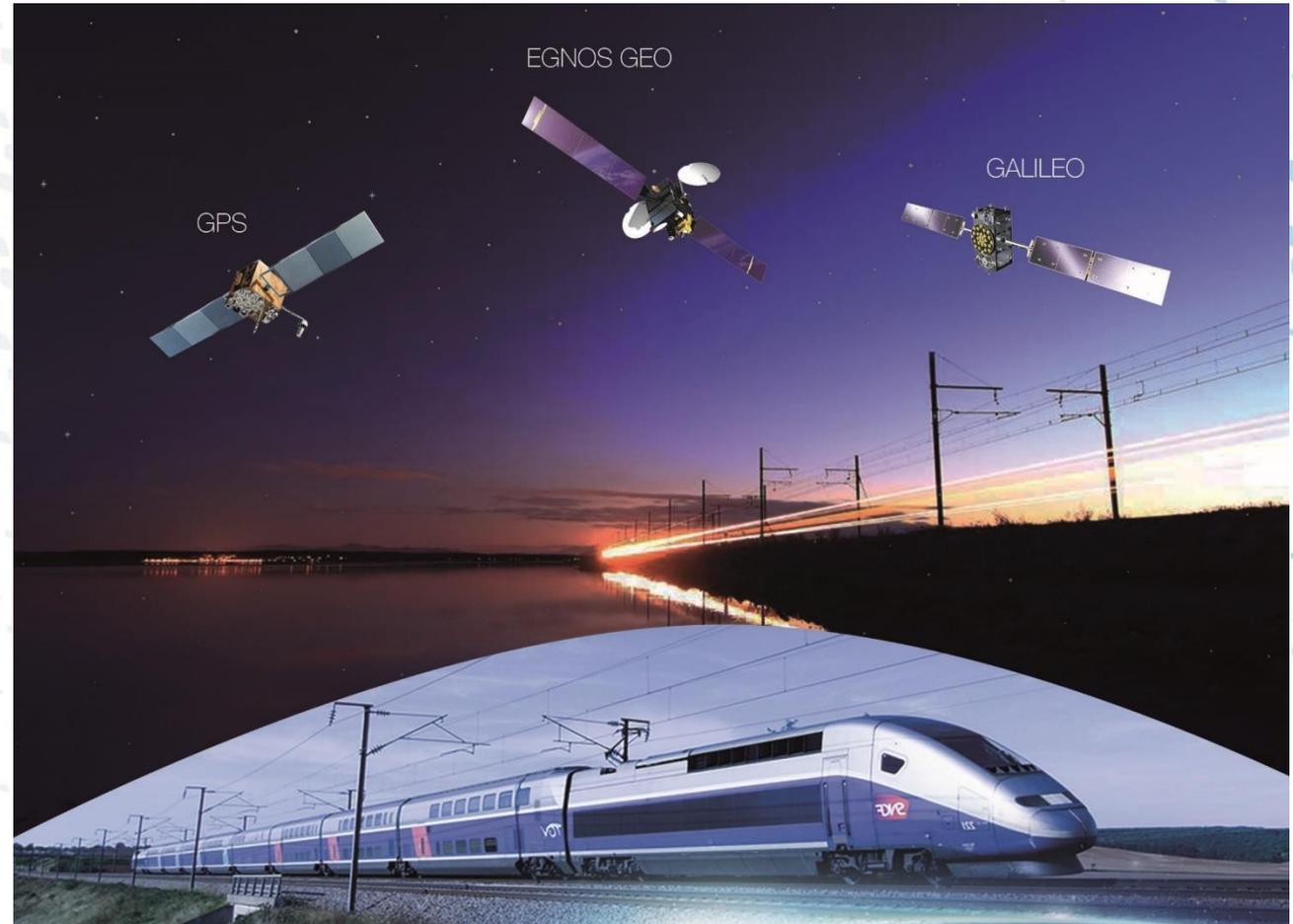


Keerthi NARAYANA, Future Projects and Proposals Navigation France (AIRBUS)
05 October 2022

AIRBUS

Agenda

- EGNSS-R/CLUG approach
- EGNOS benefits
- Roadmap / Way forward



Train On-Board Localization Unit

EGNSS-based Rail Safety Service

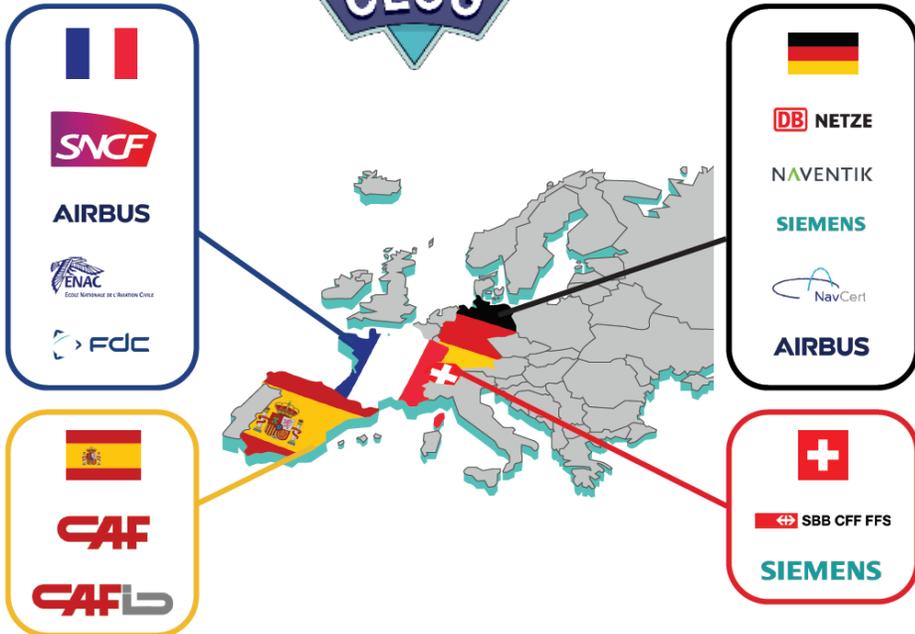


EGNSS-R

EGNSS-R / CLUG approach

European interoperability, sustainability and digitalization

Decrease the cost of the ERTMS signaling system (less trackside equipment)



Dec 2021 – May 2022



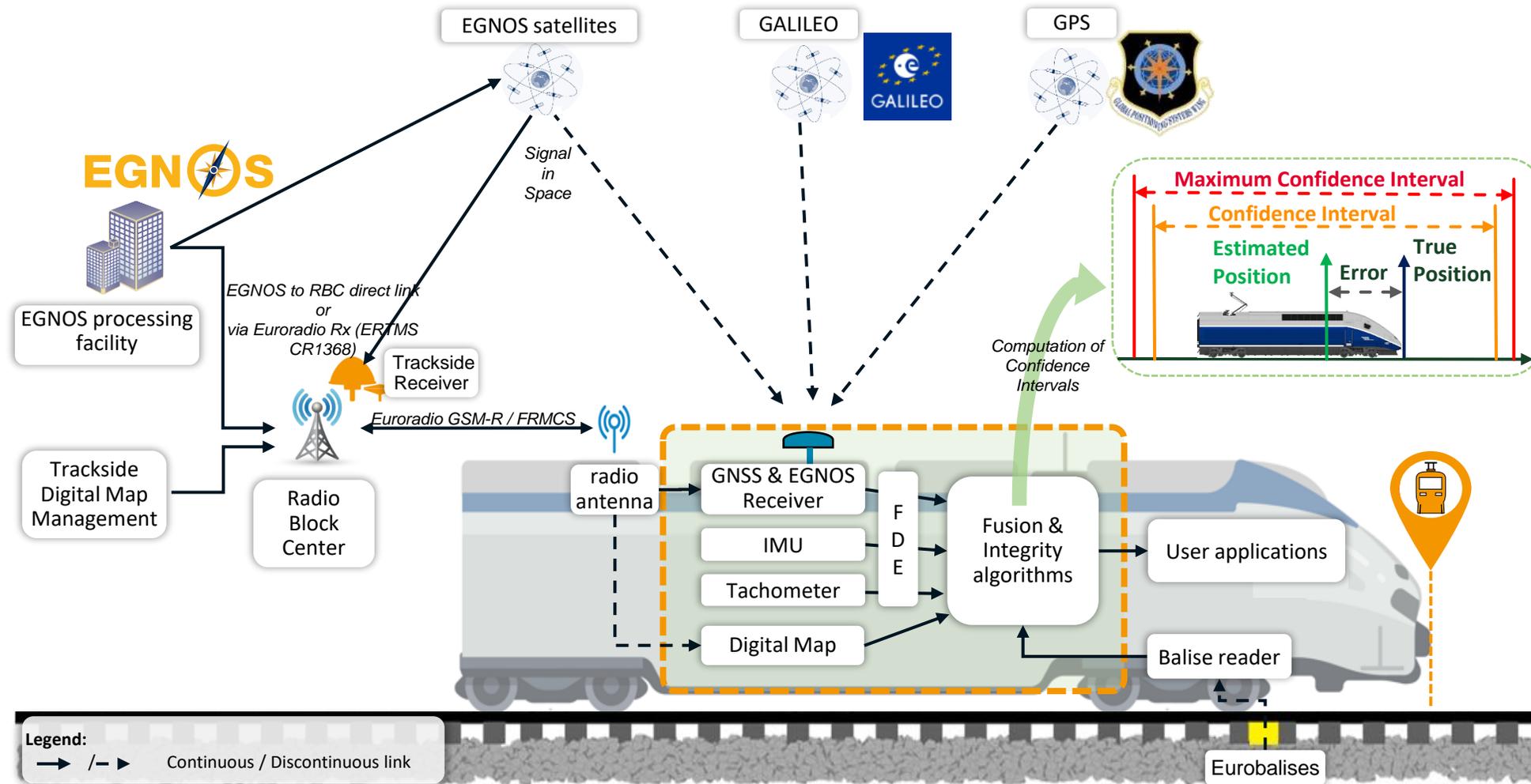
Oct 2020 – Sept 2022

Functional Architecture of the EGNSS based Train Localization System

EGNSS-R / CLUG approach

EGNOS needs and services for rail

Safe train localization based on multi-sensor fusion using GPS, Galileo, EGNOS and digital maps



EGNOS: a Safe Solution for Rail Signaling Modernization



Reduction of trackside equipment (balise)

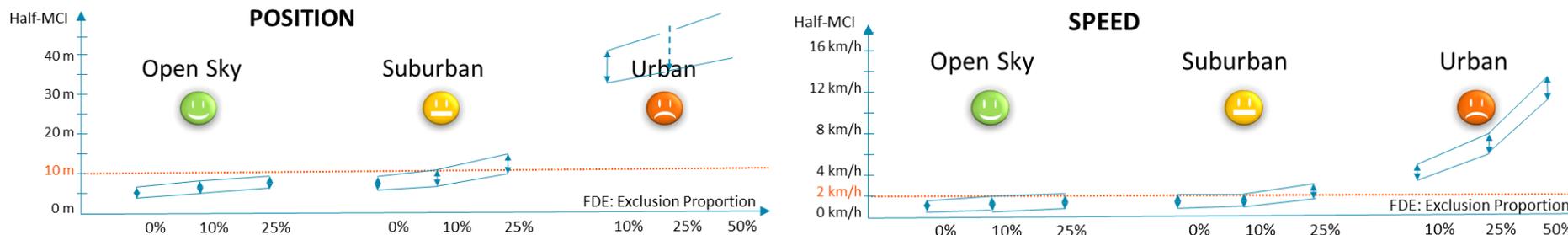
Less expensive On-board equipment (removing odometer)

Rail operational improvement (capacity, punctuality...)

GHG/CO2 and Energy Savings

EGNOS benefits

Performance prediction using EGNOS DFMC (CLUG Project)



Reachable MCI @ 99.9% availability **without any trackside balise**

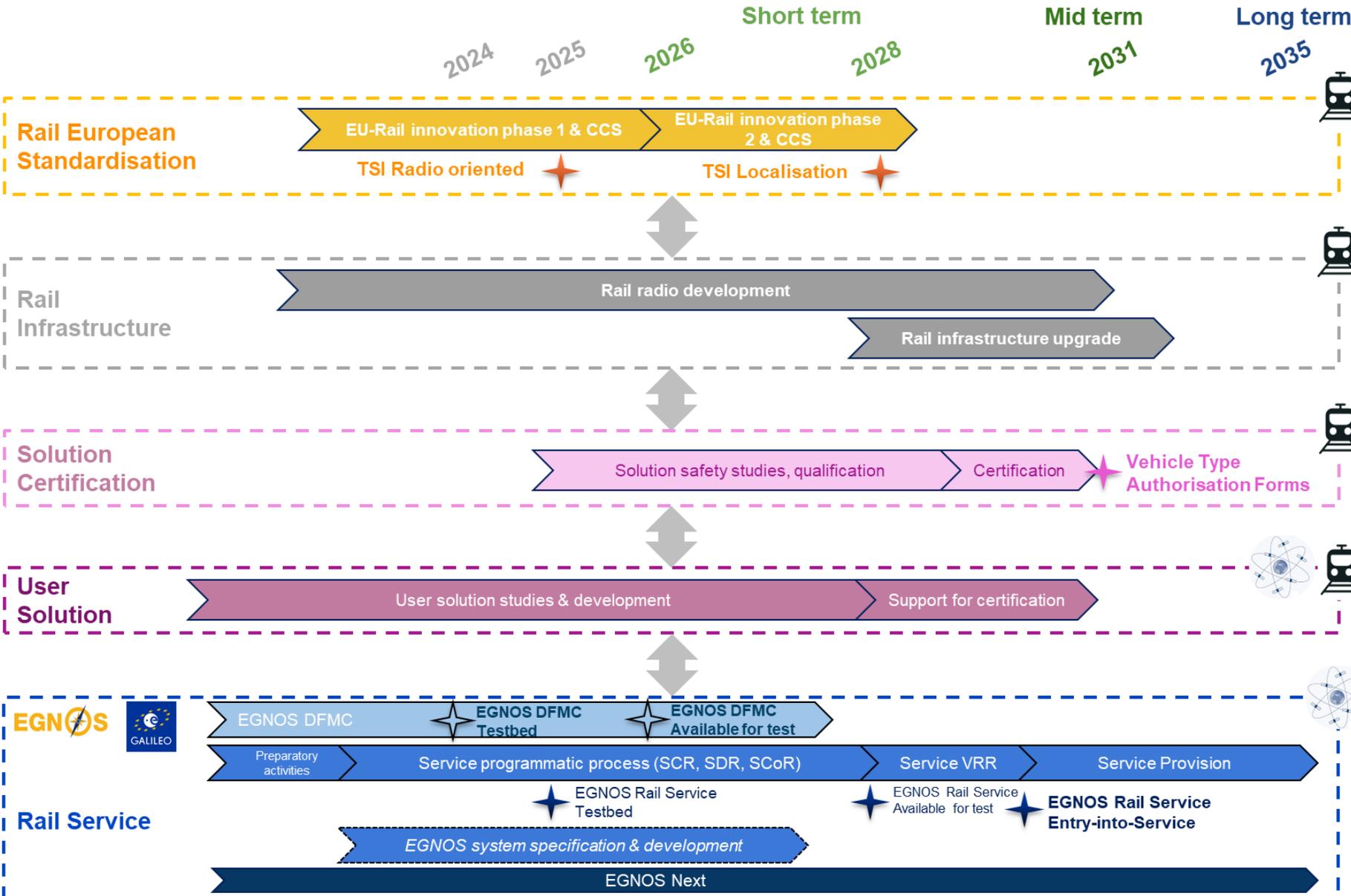
Performance improvements in Sub-urban and Urban environments expected thank to future EGNOS for Rail

Safe and accurate Position and Speed for rail

Cost reduction for rail operator

Improved EGNOS for Rail, further enhances the Safe Rail Localization Performance

Rail / EGNSS coordinated roadmaps



Rail service roadmap & way forward

Need coordination between roadmaps to achieve usage of EGNSS Rail Safety service

Driven by rail standardisation / certification

New EGNOS release for enhanced SoL service for Rail

EGNOS DFMC for helping rail standards maturity on EGNSS

Any questions ?

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<https://www.linkedin.com/company/european-gnss-navigation-safety-service-for-rail-egnss-r>



<http://clugproject.eu/>



<https://www.linkedin.com/company/the-clug-project>



https://youtu.be/gC_cJWV82u4

Thank you

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