How GNSS Contributes to CO2 Reduction

ICG-17
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GNSS a key enabler to efficient, safe and environmentally friendly mobility solutions

Across all transport modes: Aviation, Drones, Maritime and Inland Waterways, Rail, Automotive
Towards European Green Deal Objective: reduction in transport-related greenhouse gas emissions.
In the air: Building the future Urban Air Mobility (UAM) with Galileo

Why UAM?
• Solutions to respond to transport needs in cities
• Safe, quiet, sustainable and eco-friendly
• Opens new business opportunities

Why Galileo?
• Increases availability in Urban Environment
• High Accuracy and authentication for resilient navigation

New mobility solutions for the first and the last mile driven by Galileo
In the air: SBAS supports Greener Aviation

SBAS supports greener aviation

- Closer alternate
- Missed Approach reduction
- Track reduction
- Rationalization of conventional radio NavAids infrastructure
- LPV to runways without instrument approach procedures published

Online Environmental tool available

Estimate potential savings in fuel and CO2 thanks to EGNOS LPV in the EGNOS User Support Website.

Environmental showcases

Estimation of emissions and noise reduction thanks to EGNOS together with optimal aircraft performance at Akureyri and Almería.

Akureyri – ILS vs RNP

Almería – NDB vs RNP

Full article available in the EGNOS User Support Website
At the sea: GNSS enable greener and safer operations at sea and inland waterways

- Automation and digitization of the ports of the future
- High accuracy and integrity for future Autonomous vessels
- Accurate and authenticated position for vessel monitoring to fight illegal fishing
- Galileo positioning and Search and Rescue for Surveillance and safety at sea
- Optimized routing and collision risk reduction with Galileo and Copernicus
On the ground:
GNSS support transition to more efficient railway transport

- GNSS is a game changer to develop ERTMS (European Railway Traffic Management System):
  - Contribute to EU Green Deal by dematerializing the signaling infrastructure
  - Increase safety and the efficiency of the traffic
  - Provide significant cost savings for deployment and maintenance
  - Support interoperability of regional/capillary lines
In our cities:
GNSS increases the efficiency of public transport towards greener cities

- Transport is the main cause of city air pollution.
- Some cities decided not to ‘return to normal’ after COVID, but build a better, more sustainable and efficient transport system and sustainable urban planning in their recovery plans.

GNSS can help cities move towards greener transportation, support urban planning and activity monitoring while boosting innovation and economic growth.
The European Union Agency for the Space Programme is hiring!

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