



PRESS RELEASE

Dec 20, 2024

The State of European Roads: 2023-2024 Analysis

Using data from millions of connected vehicles across Europe, we've analyzed how road quality has evolved over the past year. The numbers tell an interesting story about infrastructure investment and maintenance across regions.

Baltic Excellence

Estonia and Latvia lead the improvement charts. Estonia's highways now measure at 1.06 (improved by 0.13) and Latvia's major roads show an impressive roughness reduction of 0.39, reaching 1.78. The Baltic states continue to rank among Europe's best, with measurements rivaling top performer Denmark (highways: 1.23, major roads: 1.43).

Nordic Contrasts

Finland maintains its position with virtually unchanged measurements (highways: 1.28, major roads: 1.67), while Sweden and Norway show increased roughness. Norway's highways now measure at 1.77 (+0.21) and Sweden at 1.47 (+0.16), highlighting the challenges of northern climate conditions.

Central European Stability

Germany (highways: 1.49, major roads: 2.07), Austria, and Switzerland show remarkable consistency, with changes of less than 0.03 in roughness measurements. This stability reflects their systematic maintenance approaches.

The Irish Transformation

Ireland achieved the most dramatic improvement in Europe, with highway roughness reducing by 0.26 to 2.04 and major roads improving by 0.42 to 2.97. These significant changes demonstrate how focused infrastructure investment can rapidly improve road quality.

What are the reasons to these numbers?

Our continuous monitoring shows clear correlations between infrastructure investments and road quality improvements, but it is always difficult to claim a complete correlation. Weather and external factors play a significant role in the changes. However, the measurements form a foundation for countries, municipalities and road network owners to start measuring progress.

When verifying why certain European countries are showing significant improvements in road quality, it's crucial to consider the interplay of national infrastructure policies, regional funding mechanisms, and broader European Union investment frameworks. While publicly accessible, detailed year-over-year spending data on road maintenance and construction for every European country can be fragmented, there are well-known funding and investment patterns that can help explain the observed trends.

Countries that have seen notable improvements—such as the Baltic states (Estonia, Latvia) and Ireland—often benefit from targeted investment programs at both the national and EU levels.

Baltic Region (Estonia, Latvia)

Over the past decade, the Baltic countries have received substantial EU assistance to modernize their transport infrastructure. Large-scale projects, backed by EU funds, have aimed to integrate Baltic transport corridors into the broader European network. In Estonia, for example, part of the improvements can be attributed to ongoing investments to meet European transport standards and facilitate smoother mobility for both cargo and passengers. Latvia's improvement from a roughness rating of 2.17 to 1.78, if cross-referenced with official infrastructure spending reports, may well correlate with recent national initiatives to upgrade major transit routes, supported in part by European Structural and Investment Funds.

Ireland

Ireland has prioritized strategic infrastructure development over the past decade, benefiting from direct national funding and also leveraging EU mechanisms. Initiatives like the National Development Plan and the Project Ireland 2040 framework highlight long-term strategies to improve transport infrastructure. These policy commitments translate into on-the-ground road rehabilitation projects, repaving initiatives, and the strengthening of rural transport links—all of which would naturally reduce road roughness measurements. Ireland's recent dramatic drop, as noted in the data (highways from 2.30 to 2.04, major roads from 3.39 to 2.97), aligns with a known increase in capital investment in the mid to late 2010s, set to improve road surfaces and bring Ireland closer to European best practices.

Central Europe

In countries like Germany, Austria, and Switzerland, where road roughness metrics show exceptional stability, the explanation often lies not in sudden surges of investment but in well-established maintenance cultures. These countries have long-standing policies for periodic resurfacing, winter damage mitigation, and continuous quality checks. Yearly or biannual maintenance cycles—enshrined in national transport strategies—mean that road quality neither degrades dramatically nor improves drastically at once. Instead, it remains consistently good.

Measurement Methodology

Our unique approach uses standard passenger vehicles already on the roads, transforming them into sophisticated road quality sensors through advanced sensor fusion technology. By analyzing data from accelerometers and wheel speed sensors in everyday vehicles, we provide consistent, real-time road quality measurements across all of Europe - no specialized measurement vehicles required.

MEDIA CONTACT

NIRA Dynamics Media Relations

Johan Hägg

Phone: +46 700454056

johan.hagg@niradynamics.se

RELATED IMAGES

