

ROAD TRAFFIC ACCESSIBILITY PREDICTION **PORT OF ROTTERDAM**



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The Port of Rotterdam is working continuously to improve accessibility to strengthen its position as Europe's largest logistical and industrial hub. In this context, sustainable solutions are being sought to optimise access to Europe by road, rail, pipeline, inland and shortsea shipping.

Current morning traffic conditions on the Rotterdam Ring

During normal morning peak conditions (without accidents), there are mainly problems on the north-eastern section of the Rotterdam Ring and the A15 Papendrecht-Gorinchem.

The intensity/capacity ratio can be seen below:



Current evening traffic conditions on the Rotterdam Ring

During normal evening peak conditions (without accidents), there are mainly problems on the Rotterdam Ring river crossings and the A15 Papendrecht-Gorinchem.

The intensity/capacity ratio can be seen below:



Legend:

- Yellow, I/C ratio 0.7 - 0.8 (congested but still no traffic jams)
- Orange, I/C ratio 0.8 - 0.9 (extremely congested, tendency for traffic jams)
- Red, I/C ratio 0.9 - 1.0 (too congested, traffic jams)

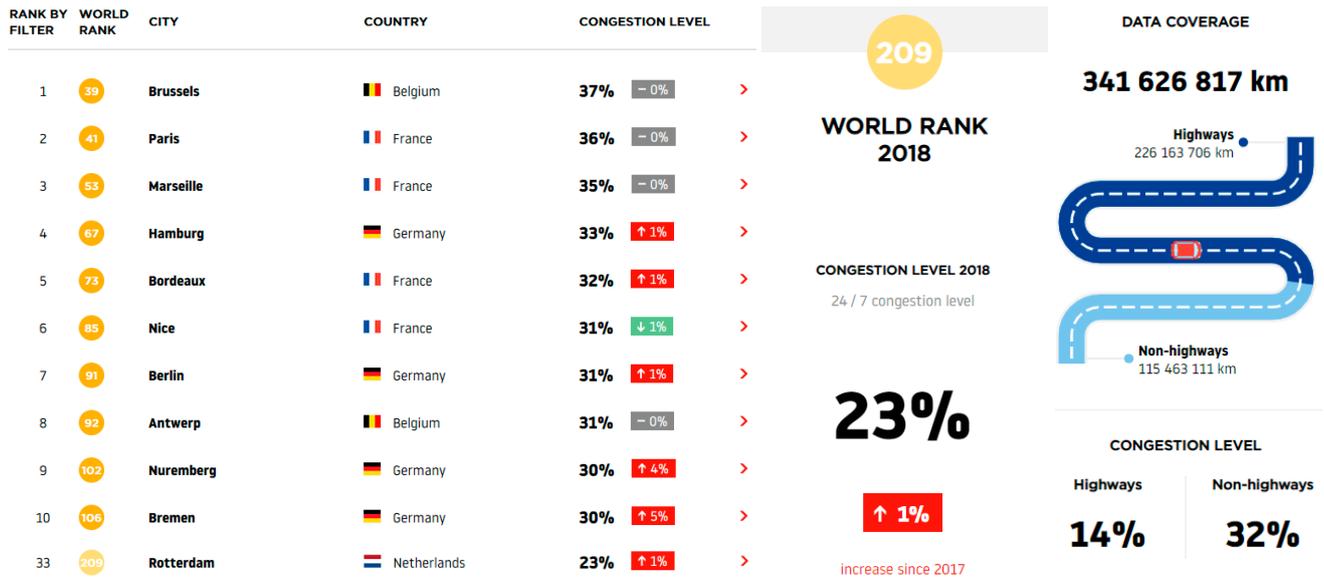
TOMTOM TRAFFIC INDEX

The TomTom Traffic Index, which is published annually, showed that Rotterdam has a relatively low traffic congestion score compared with other large sea ports in Northwest Europe. On average, a journey during rush hour in the Rotterdam region takes 23 percent longer because of traffic congestion.

This is considerably lower than Hamburg (33%) and Antwerp (31%). A striking conclusion from TomTom's global research is that congestion around Rotterdam mainly stems from non-motorway roads: 32 percent.

The delays on motorways are lower than expected: 14 percent. Antwerp and Hamburg also have the highest motorway congestion scores at respectively 32 and 29 percent additional journey time. Le Havre and Amsterdam are just below Rotterdam at 13 and 11 percent.

The Port Authority is making efforts to promote transport by road, rail and water (inland shipping). It is also working to reduce congestion together with regional parties within De Verkeersonderneming.

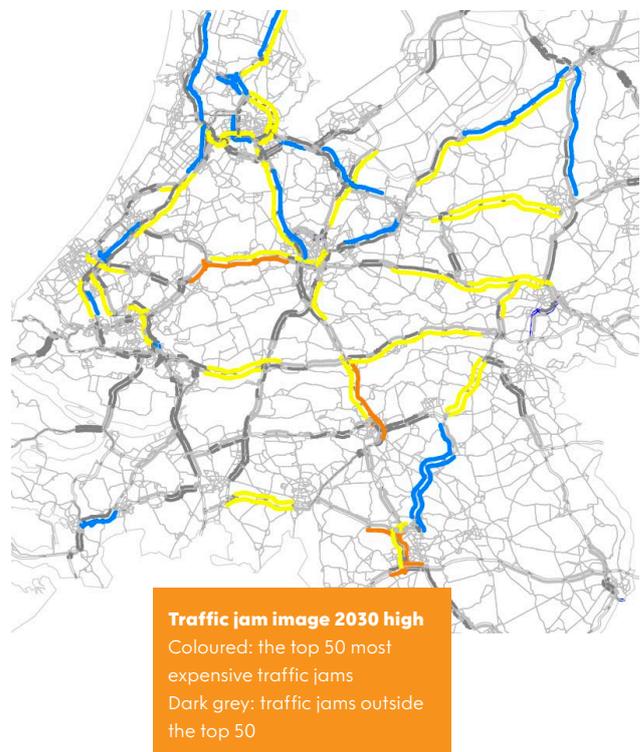


ROAD TRAFFIC GROWTH

KIM (Knowledge Institute for Mobility) is predicting a 35-percent increase in travel time loss by 2023 compared with 2017. For the next few years, this corresponds with the high scenario adopted by the Dutch central government for 2030. Moreover, growth in the Randstad region will increase by a further 2 to 7%. The coloured roads indicate those roads with the predicted highest traffic congestion costs in the government's high scenario for 2030 (in the top 50 of the Netherlands).

Construction projects or studies are ongoing for most road sections in the Rotterdam region.

in the low scenario for 2030, the number of vehicle loss hours will reduce slightly as this scenario also takes into account the fact that several sections of new national road will be constructed, such as the Blankenburg connection and the A16 Rotterdam.



INVESTMENTS IN NEW INFRASTRUCTURE



Infrastructure being constructed:

1. Blankenburg connection (complete by 2024) - Blankenburg connection resolves the problem in the Benelux tunnel (largely evening peak) and provides an alternative during accidents on the A15 (Botlek tunnel)
2. A16 Rotterdam (complete in 2024) - Resolves the morning peak problem on the A20
3. Widening A15 (complete in 2021) - Partially resolves the problem on the A15

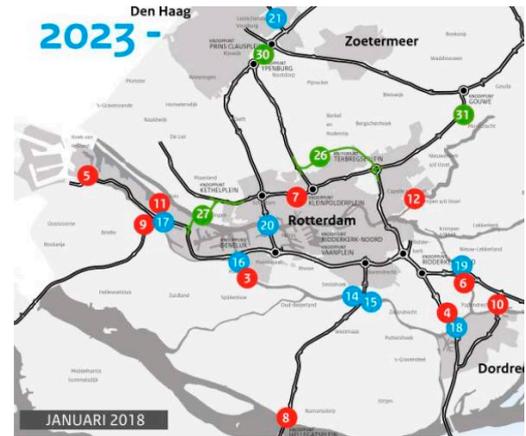
NEW INFRASTRUCTURE STUDIES



Studies for which a budget is already available:

1. Suurhoffbrug (86M euros, complete by 2031) - Results in improvements to Suurhoffbrug robustness (currently in a poor state of repair)
2. Bridge and tunnel connection Rotterdam (480M euros, complete by 2030) - Resolves the problem on Brienoordbrug during the morning and evening peaks
3. A20 (178M euros, complete by 2027) - Resolves the Gouwe intersection problem
4. A15 (332M euros, complete by 2030) - Resolves the problem on the A15
5. A4 (460M euros, complete by 2028) - Resolves the morning peak problem in the vicinity of The Hague

RIJKSWATERSTAAT MAINTENANCE CHALLENGE



- A considerable part of our infrastructure dates from the reconstruction after World War II. This infrastructure has now entered a phase in which it requires radical maintenance. This not only applies to Rijkswaterstaat infrastructure, but also to infrastructure managed by provinces and cities. And concerns not only national roads, but also sections of the Delta works.
- Slim steel bridges were constructed in the 1970s and 80s, which are now shown to be unable to withstand the increase in traffic intensity. That is why bridges including the Suurhoffbrug and 2nd Van Brienoordbrug already require renovation or replacement. The decision to replace the Suurhoffbrug has already been taken. A temporary bridge will be constructed first; the new, permanent bridge will be constructed by 2030. The Ministry of Infrastructure and Water Management aims to replace the two Van Brienoordbruggen, during which the inconvenience will be reduced to several weeks in the summer holidays of 2025 and 2026.
- The Heinenoord tunnel is scheduled to be closed twice for two weeks in the 2023 and 2024 summer holidays.

THE REGION AND MINISTRY OF INFRASTRUCTURE AND WATER MANAGEMENT AMBITION

- Generate mobility transition in cities: shifting commuting traffic from the car to bicycle and public transport
- Create infrastructure where this is really necessary. Resolve the largest bottlenecks that are predicted for 2030
- Keep the port accessible for employees and road freight transport

