



Ookla's Coverage Metrics describe the user's mobile experience with their cellular network. Coverage Score™ incorporates a measure of each provider's service and footprint within the country. See next page for more detail.



816
Coverage Score

Coverage Score

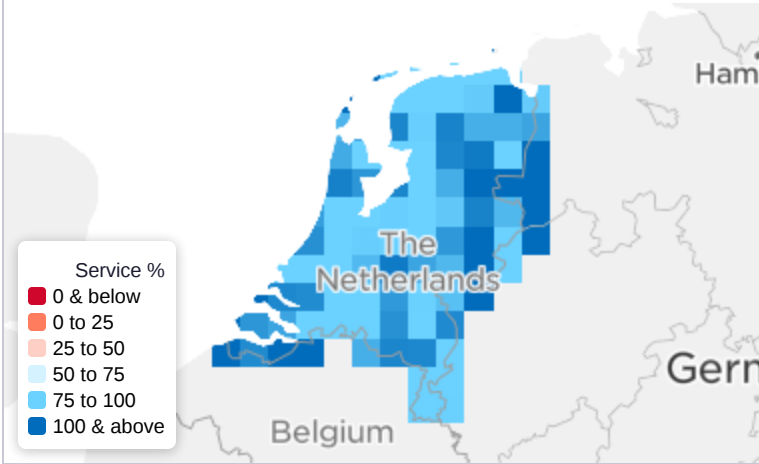
KPN Mobile	816
T-Mobile	710
Vodafone	584

Scan Counts

KPN Mobile	102,189,191
T-Mobile	103,722,905
Vodafone	68,823,765

KPN Mobile's General Service

Places that showed general service within the country.



KPN Mobile's 4G Service

Places that showed 4G service within the country.



Coverage Statistics

499,116,446

Scan Count

761,641

Total Locations Observed

761,606

Locations with Service

760,990

Locations with 4G

549,065

Device Count

Carrier	Total Locations Observed	General Service	4G Service
KPN Mobile	622,185	622,175	621,293
T-Mobile	541,172	541,167	540,476
Vodafone	445,143	445,092	444,455

How Coverage Score Works

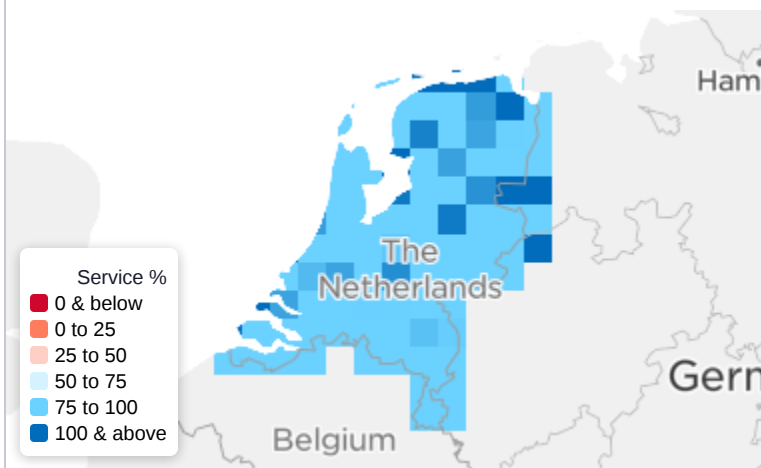
Ookla's Coverage Score captures both the number of locations in which an operator offers service (its footprint) and the quality of service in each location. Metrics are calculated using locations where coverage scans were contributed by Android Speedtest users. A location is an area that is equivalent to approximately 100 x 100m (about the size of a New York City block). To minimize the impact of misconfigured or underperforming devices, we require coverage scans from at least two devices at each location.

These features are determined using data from coverage scans, which capture the real-time network conditions of Android Speedtest users across the globe. An operator's footprint is the fraction of locations within a given market where a device has access to service. Each location is assigned a score based equally on the general and 4G service. For example, if a provider offered non-4G service in a location, that location would receive a score of 1/2. The overall Coverage Score for an operator is its footprint multiplied by the average quality score across its observed locations. Further, a multiplier is applied to the Coverage Score so that it is scaled from 0 to 1000 to avoid confusion that it could represent the percentage of an area or population with coverage.

Coverage Maps

T-Mobile's General Service

Places that showed general service within the country.



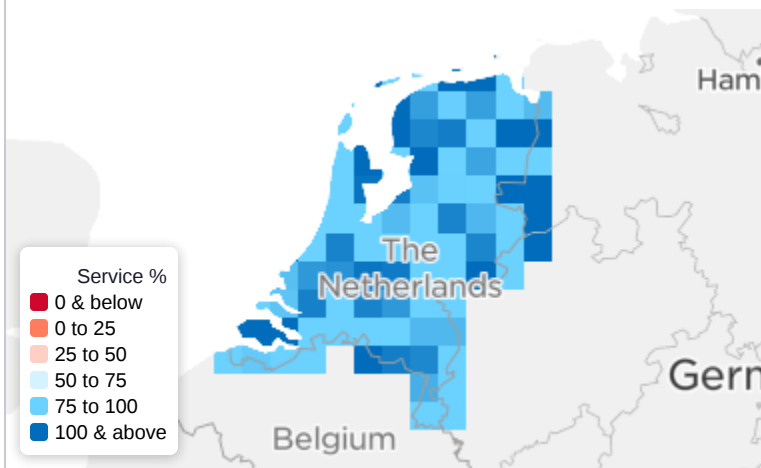
T-Mobile's 4G Service

Places that showed 4G service within the country.



Vodafone's General Service

Places that showed general service within the country.



Vodafone's 4G Service

Places that showed 4G service within the country.

