



Expert Intelligence: European Broadband Markets

Product Guide

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Introduction

Point Topic, the parent company of Expert Intelligence, was the first to map broadband across Europe at province level and below. We developed our European Kilometre Grid (EKG) to enable finer granularity in mapping and allow cross-compatibility across changes in European and national administrative boundaries.

Our proprietary research on broadband coverage and take-up is unique. Developed through key contracts with the European Commission and the European Space Agency, Expert Intelligence's database is now an independent product, not constrained by issues of commercial confidentiality or official policy. Clients are free to use the data for marketing, competitive analysis or benchmarking.

With its combination of granularity and time series it provides detailed insight on current and historic broadband coverage in Europe. It maps overall broadband coverage and coverage by technology, including next-generation tech like FTTP. Our base model outputs use the NUTS (Nomenclature of territorial units for statistics) classification of geographic boundaries, with alternative outputs at nation-specific administrative boundary classifications also possible.

Objectives

The European Broadband Markets product is aimed at providing a comprehensive overview of the footprint of residential broadband coverage across Europe, distributed by both technology and bandwidth, for our clients.

Our data covers 2011 to 2022, with yearly updates to reflect changes in broadband coverage, technology footprints and the progression of new technologies in the broadband sector.

Acting as a firm foundation for decision-making, our datasets rely on the cross-boundary NUTS (Nomenclature of territorial units for statistics) classification developed by the European Commission as well as our European Kilometre Grid (EKG) to address the need for reliable, standardised data freed from national and version-specific differences in the measurement, formatting, and representation of data.

Countries Covered

The below table includes all countries covered as part of the European Broadband Markets product. Data for Switzerland and Croatia is only available from 2012, while data for all other countries is available from 2011.

Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Republic
Denmark	Estonia	Finland	France	Germany	Greece
Hungary	Ireland	Italy	Latvia	Lithuania	Luxembourg
Malta	Netherlands	Norway	Poland	Portugal	Romania
Slovakia	Slovenia	Spain	Sweden	Switzerland	United Kingdom

Methodology

Data Sources

European Broadband Markets is the result of year-long research and cooperation by Point Topic, Expert Intelligence's sister company, with the European Commission and European Space Agency, as well as data from own research and partners to create the most reliable and extensive dataset of regional broadband coverage in Europe.

Point Topic developed the methodology and primary inputs, including the European Kilometre Grid, to cover a series of projects and outputs including for the European Space Agency (<https://artes.esa.int/projects/broadband-mediterranean-development-bb-med>). This approach was then applied to the Broadband Coverage in Europe series which Point Topic has supported for the last eight editions and is still ongoing. The methodological approach used in the 2024 edition of the Broadband Coverage in Europe study mirrors the approach used in the 2013-2017 studies, which was in turn based on a methodology first implemented by Point Topic in 2012.

Survey of NRAs (National Regulatory Authorities) and broadband network operators was at the core of the 2012-2022 studies. The survey results were validated and cross-checked against additional information gathered from other sources, including public announcements by telecoms operators. The additional research also helped to fill in any gaps, which resulted from incomplete information from NRAs or operators. Survey data and additional information were combined and used to calculate coverage by individual technologies.

European Kilometre Grid

The European Kilometre Grid (EKG) is a 1km² grid developed by Point Topic and Expert Intelligence, spanning the European continent. On top of being used in the original Broadband Coverage in Europe study as a source of demographic data, the EKG is also used in our modelling to process data, distribute data to a highly granular, cross-compatible geographic layer, as well as to allow geographic normalisation (described below) to consistent output boundaries. The EKG and associated demographic data rely on year-long research by Point Topic and Expert Intelligence, as well as projects and source data involving European Commission's Copernicus Programme, CORINE and others.

Geographic Normalisation

A key difficulty concerning geographic boundaries of administrative regions, in general and in the case of NUTS, is the maintenance of meaningful timelines when boundaries change or are redefined throughout time. Across the different NUTS releases between 2006 and 2022, a large number of regions were merged, subdivided, renamed, created, removed or had their boundaries changed. Thus, understanding for example the evolution of broadband coverage in a particular area becomes hard when this area is not part of a consistent administrative region.

To address this, the NUTS normalisation procedure developed by Expert Intelligence allows data to be represented on-demand in any of the European Commission's NUTS versions released between 2010 and 2022. By disaggregating all data to our European Kilometre Grid (EKG) and re-aggregating to the boundaries of one consistent NUTS version, we allow the creation of consistent time series and enable long-term analysis of data that would otherwise be difficult or impossible to compare. It also gives us the ability to map our broadband data to any other system of administrative boundaries, as all demographic information is contained within the EKG itself (should this be of interest to you, please contact us).

Metrics

Geographic and Demographic Data

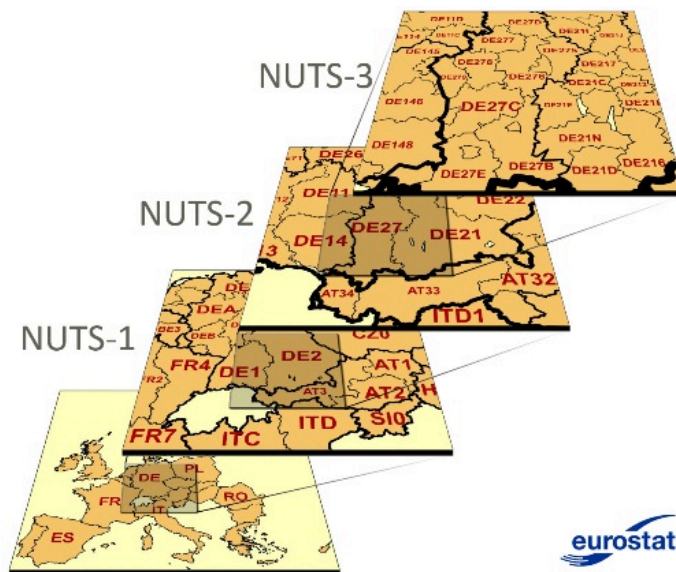
We include a number of geographic and demographic metrics to form the backbone of our European Broadband Markets product. These metrics are listed in the table below.

Metric	Type	Description
Reported At	Date	Reporting year for data
Country Code	Geographic	Country/NUTS0 code
Country	Geographic	Name of country in English

NUTS3	Geographic	NUTS3 code
NUTS3 Region	Geographic	Name of NUTS3 region in local language
Population	Demographic	Population of NUTS3 region
Total Households	Demographic	Number of households in NUTS3 region
Percentage Rural (>100 people/sqkm)	Demographic	Percentage of households in NUTS3 region where population density is below 100 people / sqkm
Percentage Rural (>300 people/sqkm)	Demographic	Percentage of households in NUTS3 region where population density is below 300 people / sqkm
Percentage Rural (>600 people/sqkm)	Demographic	Percentage of households in NUTS3 region where population density is below 600 people / sqkm
Percentage Urban (<600 people/sqkm)	Demographic	Percentage of households in NUTS3 region where population density is above 600 people / sqkm

NUTS

Our base model outputs are at the NUTS3 level of the NUTS (Nomenclature of territorial units for statistics) geographic classification system developed by the European Commission. First released in 2003, the European Commission has revised the classification system across multiple releases (2006, 2010, 2013, 2016, 2021), with significant changes in the number of regions and their boundaries. NUTS3 regions must have populations between 150,000 and 800,000 but can vary greatly in size.



Overview of NUTS levels from NUTS0 (countries) to NUTS3 ('small regions')
 Source: <https://ec.europa.eu/eurostat/web/nuts/background>

The advantage of the NUTS system is that it covers nearly all of Europe, including the UK, Switzerland, and Norway - with later versions extending as far as Albania, Iceland and Turkey. Furthermore, the system is hierarchical, so that each additional digit corresponds to an additional NUTS level, as illustrated by the example below:

NUTS Level	NUTS Code	NUTS Name
NUTS0	DE	Germany/Deutschland
NUTS1	DE2	Bayern
NUTS2	DE21	Oberbayern
NUTS3	DE211	Ingolstadt, Freie Kreisstadt

Supporting data including boundary files for all NUTS releases are available from Eurostat, as are a wide range of statistics on population, economy and other topics.

The European Broadband Markets data outputs are in the 2021 release by default, but can be represented using any NUTS version from 2006. We provide a range of key demographic indicators to contextualise the data, which are partially but not completely based on Eurostat and other national statistics (see appendix).

Population

Population figures at NUTS3-level are based directly on Eurostat data tables *CENS_11AG_R3* and *DEMO_R_PJANGRP3*, including for non-EU countries. Years 2012 and 2013 populations were interpolated as no source data was available. UK population data is the only exception here, with 2020 and 2021 NUTS3-level populations sourced from the Office for National Statistics, table ref. 13079.

Population figures at EKG-level were used for modelling but do not appear in client outputs. EKG population figures rely on year-long research by Point Topic and Expert Intelligence, as well as projects and source data involving European Commission's Copernicus Programme, CORINE and others.

Households

Households, or premises passed, are the standard unit for quantifying fixed broadband penetration. During raw data collection, respondents were provided with the total number of households in each area to simplify the number of households passed per NUTS3.

As it is not possible to obtain annually updated household figures by NUTS3 regions for all of the BCE study countries, the number of households in each NUTS 3 region was calculated using NUTS 3 level population data and country-wide number of household figures. Country-level household figures for EU countries are based on Eurostat's *LFST_HHNHTYCH* data table. For Switzerland, they are based on the BFS *cc-d-01.02.02.01* data table, for Norway on the *SSB 09747* data table, and for the UK on the Office for National Statistics '*Families and Households*' spreadsheet. For both the Eurostat and BFS source, data was only available to 2012, with 2011 data extrapolated back.

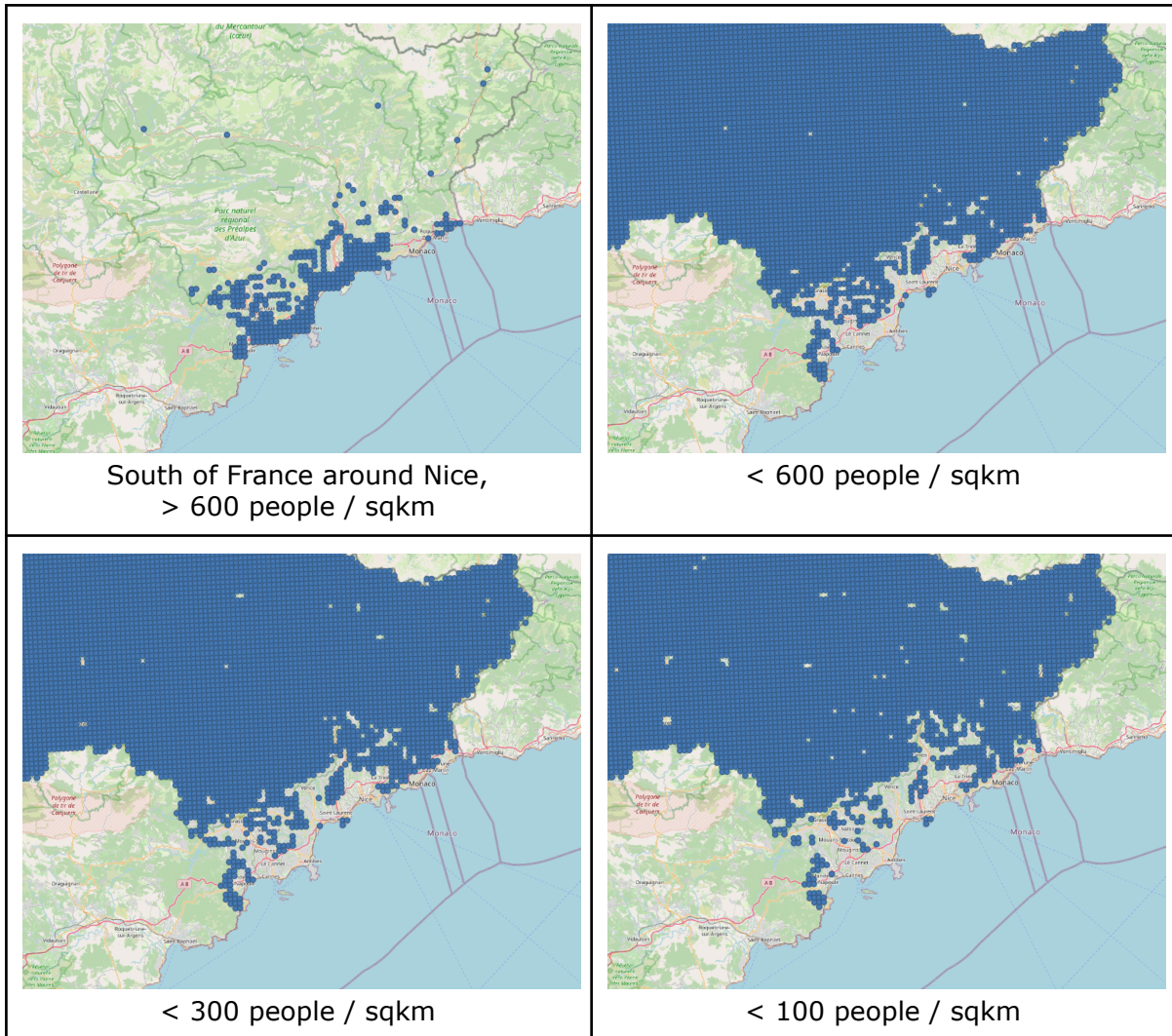
Percentage Rural

Defined as the percentage of population within a NUTS3-region situated in an area considered rural.

Population density is a key determinant of broadband coverage and rate of roll-out of new technologies. The proportion of rural population is calculated using a methodology originally developed by Point Topic, using the population density metric from the CORINE Land Cover datasets of the European Commission's Copernicus Programme, as well as Expert Intelligence's European Kilometre Grid (EKG).

We apply three separate cut-off population densities when determining the proportion of households in a NUTS3 which is rural: 100, 300 and 600 population per EKG (square kilometre). 'Percentage urban' is then the remaining population in EKGs above 600 people/sqkm. We apply this categorisation across an entire EKG, i.e. we do not distinguish between 'parts' of the EKG that may, for example, have a population below or above 300 people/sqkm.

Note that the classification of urban and rural areas is debated, and all cut-off population densities may not align with those used by other sources. 100 was the population density considered most appropriate when Point Topic began working on this project (which is still found in older outputs of this product), while 300 is considered the classification for 'semi-dense' urban areas recommended in the *Applying the Degree of Urbanisation* publication by Eurostat and other organisations, following the recent push by the United Nations to develop methodologically aligned definitions for rural and urban areas.



In our context, percentage rural refers to rural population as opposed to rural households. Multiplying 'percentage rural' by 'households' gives a reasonable estimate for 'rural households', although household figures are derived from country-level people per household figures multiplied by NUTS3-level populations, due to the lack of reliable NUTS3-level household figures. Thus, any regional variation in household size is not respected.

Overseas Territories

France, Portugal and Norway include territories which are not part of mainland Europe in their national statistics. Such territories (e.g. Svalbard, Réunion) are not included in modelling and outputs. A full list of overseas territories can be found in the appendix.

Broadband Data

Broadband coverage data at the technology level is the core of the European Broadband Markets product. This data, collected by European Union and European Economic Area member states at operator and regulator level, is the most significant coordinated data collection of broadband data at the European level. Where necessary, each country's data was standardised among common criteria to correspond to the shared technology groups, while any missing data points were filled in using assumptions on regional and national coverage, demographics, technology footprints and market conditions.

All broadband coverage metrics were collected under the assumption of no overlap between coverage of individual ISPs at any location (known as overbuild in broadband terminology). This will result in an overestimate of broadband coverage in most regions, as some degree of overbuild is in reality to be expected.

What is Coverage?

The definition of 'coverage' is not a straightforward one, both in terms of calculating the proportion of an area covered by broadband from local sources, as well as defining when a household is covered by a particular broadband technology. A number of assumptions have to be made.

In terms of calculating the proportion of households covered from local sources, we align our assumptions with those of the European Commission's Broadband Coverage in Europe project. Raw data collection, both from national regulators and broadband operators, assumes zero overlap. This means that, within any NUTS3 area, the broadband coverage reported by individual broadband operators is added up, regardless of whether these operators may in reality cover some of the same geographic areas. For example, if operator A covers 30% of households within a NUTS3 region, and operator B also covers 30%, we assume overall coverage in the NUTS3 is 60%. In reality, it will often be lower, as there will be overlap (operator A and B will both offer services in some of the same premises). Should two operators cover 80% of premises in a NUTS3 region each, coverage would be 100%. In reality, both operators may be avoiding the same particular area within the NUTS3 region where providing coverage is uneconomical.

Coverage is different from market share or take-up, in that a household does not need to use or be subscribed to the services of a broadband operator, connection or technology to be covered by it. A household is covered if it simply has the option of using the service, through the necessary infrastructure being present. Whether infrastructure is 'present' at a household or not is somewhat dependent on the particular situation or technology, although in general is understood to mean that the service can be provided to the household without the construction of new infrastructure and limited set-up costs to the customer or operator.

We refer to residential coverage in all instances within this report and model. Business broadband coverage is outside the scope of this project.

Percentage and Household-level Coverage

Coverage figures are provided as a percentage and in units of households.

Percentage coverage is defined as the number of households (premises) passed by a broadband connection or specific broadband technology, as a proportion of all premises in the area.

Household coverage is defined as the number of households (premises) passed by a broadband connection or specific broadband technology.

Broadband Metrics

Metric	Type	Years Covered
Overall Fixed Broadband Coverage	Overall Broadband Coverage	2011 - 2022
Overall NGA Coverage	Overall Broadband Coverage	2011 - 2022
FTTP & DOCSIS 3.1 Coverage	Overall Broadband Coverage	2019 - 2022
DSL	Technology	2011 - 2022
VDSL	Technology (subcategory of DSL)	2011 - 2022
VDSL 2 Vectoring*	Technology (subcategory of VDSL)	2019 - 2022
FWA*	Technology	2019 - 2022
WiMAX	Technology (subcategory of FWA)	2011 - 2018
Cable	Technology	2011 - 2022 (includes DOCSIS 3.0 from 2019)
DOCSIS 3.0	Technology (subcategory of Cable)	2011 - 2018
DOCSIS 3.1*	Technology (subcategory of Cable)	2019 - 2022
FTTP	Technology	2011 - 2022
LTE	Technology	2011 - 2022
Broadband Coverage Above 2Mbps	Speed Category	2011 - 2020

Broadband Coverage Above 30Mbps	Speed Category	2011 - 2022
Broadband Coverage Above 100Mbps	Speed Category	2011 - 2022

* *Country-level data only.*

For metrics above marked with an asterisk (*), measurements are only available at country-level, due to a lack of NUTS3-level source data. NUTS3-level coverage is assumed to be equal to country-level coverage.

Overall Broadband Coverage

Overall broadband coverage is an aggregation of individual technology coverage and provides insight on a region's overall level of connectedness.

Overall Fixed Broadband Coverage

Refers to coverage of any broadband technology, at any speed. Includes DSL, VDSL, VDSL 2 Vectoring, FTTP, Cable, DOCSIS 3.0, DOCSIS 3.1 (after 2019), FWA/WiMAX (FWA included instead of WiMAX from 2019).

Overall NGA Coverage

NGA (Next Generation Access) - Coverage by technologies assumed to provide at least 30Mbps download bandwidth. Includes VDSL, VDSL 2 Vectoring, FTTP, Cable, DOCSIS 3.0, DOCSIS 3.1 (included after 2019).

FTTP & DOCSIS 3.1 Coverage

FTTP & DOCSIS 3.1 Coverage – sometimes referred to as VHCN (Very High Capacity Networks). A measure of the highest bandwidth technologies, with download speeds easily exceeding 100Mbps.

This metric is only covered from 2019.

Coverage by Technology

Coverage is also broken down into individual technology groups, for the below technologies. While we provide bandwidth estimates for technologies, these are mainly for giving context to the reader and are not meant to be definite figures. Broadband speeds are impacted by a multitude of factors and any estimate is very context-dependent.

DSL Coverage

DSL (Digital Subscriber Line) is an umbrella term, and includes ADSL, VDSL and VDSL 2 Vectoring coverage. DSL is transmitted over copper telephone cables, and bandwidths are generally low. ADSL download speeds generally do not exceed 10-20Mbps.

DSL coverage must be higher than VDSL coverage, and VDSL coverage must be higher than VDSL 2 Vectoring coverage. In early years, there may be a significant difference between DSL and VDSL coverage while they are found to converge closer to 2020, due to gradual updates of DSL technology to VDSL.

A household is said to have DSL coverage if it is in a telephone exchange area fully enabled for DSL.

VDSL (FTTC) Coverage

Very high-speed digital subscriber line (VDSL), also known as FTTC (Fibre to the Cabinet) is a hybrid technology involving fibre connections to exchanges/cabinets, and copper cables from there to the end-user. Downstream bandwidths are commonly around 50-80Mbps. VDSL coverage includes VDSL 2 Vectoring coverage.

A household has VDSL coverage when close enough to a VDSL-enabled exchange/cabinet to receive a high-speed broadband connection. For this, the household usually needs to be less than 1km away from the cabinet.

VDSL 2 Vectoring Coverage

Enhancement to VDSL service to enable higher transmission rates. Download speeds up to 100Mbps.

A household has VDSL coverage when close enough to a VDSL 2 Vectoring-enabled exchange/cabinet to receive a high-speed broadband connection. For this, the household usually needs to be less than 1km away from the cabinet.

Cable

'Cable' broadband is transmitted via the coaxial copper cables also used for TV networks. Speeds are dependent on the data transmission standard used, which in Europe is usually DOCSIS (Data Over Cable Service Interface Specification), as well as the distance of cable between the end-user and a centralised node (similar to the relationship between DSL and exchanges). While bandwidths vary significantly, downstream speeds tended to be between 10-40Mbps before DOCSIS 3.0, and up to 300Mbps after.

'Cable' coverage includes 'DOCSIS 3.0' and 'DOCSIS 3.1' coverage, which offer significant increases in bandwidth to end-users.

'DOCSIS 3.0' is separately tracked until 2018. From 2019, 'DOCSIS 3.0' is no longer tracked, as 'Cable' coverage is assumed to fully use at least the DOCSIS 3.0 standard. Hence why the difference between 'Cable' and 'DOCSIS 3.0' coverage gradually decreases from 2011 to 2018 in many regions.

'DOCSIS 3.1' is tracked from 2019 onwards.

DOCSIS 3.0

DOCSIS (Data Over Cable Service Interface Specification) 3.0 - a communication standard for cable tech, download speeds up to 300Mbps, used since 2006.

A subcategory of cable coverage, and recorded separately until 2018.

A household is considered to have DOCSIS 3.0 coverage if it can be connected to the service without the construction of new network infrastructure, and can be connected within reasonable time and cost limits.

DOCSIS 3.1

DOCSIS 3.1 - an updated DOCSIS standard that allows download speeds of up to 500Mbps-1000Mbps for end-users (with upward potential of up to 10Gbps).

Tracked from 2019 onwards.

A household is considered to have DOCSIS 3.1 coverage if it can be connected to the service without the construction of new network infrastructure, and can be connected within reasonable time and cost limits.

FTTP

Fibre-to-the-premise refers to broadband transmitted entirely over fibre optic cables. This frees the transmission from the drawbacks of copper-based cables (interference, packet loss), allowing for nearly no degradation of performance over distance, however at the significant cost of new infrastructure being laid down to every end-user. While expensive, the roll-out of FTTP is widely considered a top priority for providing next generation connectivity across Europe and large sums of money are being invested into the expansion of FTTP coverage.

A household is considered to have FTTP coverage if it can be connected to broadband using a fibre connection and without the construction of new network infrastructure, and can be connected within reasonable time and cost limits.

FWA

FWA (Fixed Wireless Access) refers to technologies using wireless communications (including LTE, 4G, 5G) to provide broadband services to the end-user. It is included as a metric from 2019 (inclusive). FWA is an umbrella term and includes WiMAX, LTE, and HSPA. FWA coverage is introduced in the same year WiMAX and HSPA stop being covered.

FWA is tracked from 2019 onwards.

A household is considered to have FWA coverage if it can receive at least 2Mbps downstream connectivity without the construction of new FWA network infrastructure, and can be connected within reasonable time and cost limits.

WiMAX

WiMAX (Worldwide Interoperability for Microwave Access) is a wireless broadband communication standard using wireless communications to provide broadband services to the end-user, offering speeds of up to 30/40Mbps. Although considered a high-potential technology when formally introduced in 2001, its adoption has been limited.

WiMAX is tracked until 2018 (inclusive), from 2019 included in FWA.

LTE

LTE (Long Term Evolution) - a type of mobile connectivity protocol. Mainly used by mobile phones but also for home broadband via special 4G routers for access in fixed locations.

A household is said to have LTE coverage if it is in the recorded coverage area for at least one LTE mobile network.

Coverage by Bandwidth

These metrics allow for a comparison of (downstream) bandwidth which consumers are able to receive on available fixed broadband networks. The 2Mbps, 30Mbps, 100Mbps categories were first included as broadband coverage metrics in 2013, with coverage prior to 2013 being estimated.

It can be difficult to accurately estimate regional speed coverage data through surveying regulators and broadband operators. In addition to the survey data recorded from NRAs and ISPs during data collection, we also relied on availability data for various broadband technologies across NUTS3s to estimate achievable speeds.

For all categories, while a technology may be included in the speed category, there may be a proportion of connections using that technology that are not able to reach that speed threshold. For example, not all DSL connections are able to reach 2 Mbps, not all VDSL connections are able to reach 30Mbps, and not all VDSL 2 Vectoring connections can reach 100Mbps (due to a steep drop in performance more than 500m distance from the exchange point).

The following speed categories are covered by the model.

Broadband Coverage Above 2Mbps

Coverage by broadband network/s capable of realistically achieving actual download speeds of at least 2Mbps.

The following technologies are considered included in this category: DSL (including VDSL/VDSL2 Vectoring), FTTP, Cable (including DOCSIS 3.0/3.1), FWA (4G TD LTE and 5G FWA) broadband access technologies.

Broadband Coverage Above 30Mbps

Coverage by broadband network/s capable of realistically achieving actual download speeds of at least 30 Mbps.

The following technologies are considered included in this category: VDSL (including VDSL 2 Vectoring), FTTP, DOCSIS 3.0/3.1 (or Cable where DOCSIS 3.0 is no longer tracked), FWA (4G TD LTE and 5G FWA).

Broadband Coverage Above 100Mbps

Coverage by broadband network/s capable of realistically achieving actual download speeds of at least 100Mbps.

The following technologies are considered included in this category: FTTP, DOCSIS 3.0/3.1, VDSL 2 Vectoring, FWA (5G FWA only).

Usage Rights

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By using the dataset, the user agrees to indemnify the licensor and hold it harmless against any claims arising from the use of the data.

Applications and Final Remarks

The European Broadband Markets product represents the result of year-long data collection, proprietary research, and cooperation with the European Commission and the European Space Agency. The product may be used for a wide range of applications including marketing, competitive analysis of benchmarking.

Expert Intelligence is always looking to improve its products and allow for further applications for its users. We are working on incorporating additional metrics into our outputs and are open to collaborating with clients to include additional data.

Our base model outputs are at NUTS3 level, however we are also able to provide outputs using alternative geographic boundary classifications on demand.

Appendices

Fields

The below table covers all fields currently included as part of the base model outputs. Alternative output formats are available upon request.

Field	Description	Source
country_code	Country code / NUTS0 code	Eurostat
country	Country name in English	Eurostat
nuts3	NUTS3 region code	Eurostat/GISCO
nuts3_name	NUTS3 region name in local language	Eurostat/GISCO
reported_at	Reporting year for broadband and demographic metrics	-
land_area	Land area in km ²	Eurostat/GISCO; European Union; Point Topic
population	Population in NUTS3 region	Eurostat; Office for National Statistics
population_density	Population density (people/km ²) in NUTS3 region	Eurostat/GISCO; Point Topic; Expert Intelligence
households	Number of households in NUTS3 region	Eurostat; Office for National Statistics; Statistics Norway; Bundesamt für Statistik
percentage_rural	Percentage of population living in rural areas in NUTS3 region	Eurostat/GISCO; Point Topic; Expert Intelligence
rural_population	Population living in rural areas (population density < 100 people/km ²) in NUTS3 region	Eurostat/GISCO; Point Topic; Expert Intelligence
overall_fixed_bb_population	Population with fixed broadband coverage in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
overall_fixed_bb_percentage	Percentage of population with fixed broadband coverage in NUTS3 region	Eurostat; Point Topic; Expert Intelligence

overall_nga_population	Population with NGA coverage in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
overall_nga_percentage	Percentage of population with NGA coverage in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
fttp_and_docsis3_1_population	Population with coverage of FTTP & DOCSIS 3.1 in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
fttp_and_docsis3_1_percentage	Percentage of population with coverage of FTTP & DOCSIS 3.1 in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
dsl_population	Population with coverage of DSL in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
dsl_percentage	Percentage of population with coverage of DSL in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
vdsl_population	Population with coverage of VDSL in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
vdsl_percentage	Percentage of population with coverage of VDSL in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
vdsl_2_vectoring_population	Population with coverage of VDSL 2 Vectoring in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
vdsl_2_vectoring_percentage	Percentage of population with coverage of VDSL 2 Vectoring in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
fttp_population	Population with coverage of FTTP in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
fttp_percentage	Percentage of population with coverage of FTTP in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
fwa_population	Population with coverage of FWA in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
fwa_percentage	Percentage of population with coverage of FWA in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
wimax_population	Population with coverage of WiMAX in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
wimax_percentage	Percentage of population with coverage of WiMAX in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
cable_population	Population with coverage of Cable in NUTS3 region	Eurostat; Point Topic; Expert Intelligence

cable_percentage	Percentage of population with coverage of Cable in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
docsis_30_population	Population with coverage of DOCSIS 3.0 in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
docsis_30_percentage	Percentage of population with coverage of DOCSIS 3.0 in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
docsis_31_population	Population with coverage of DOCSIS 3.1 in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
docsis_31_percentage	Percentage of population with coverage of DOCSIS 3.1 in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
lte_population	Population with coverage of LTE in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
lte_percentage	Percentage of population with coverage of LTE in NUTS3 region	Eurostat; Point Topic; Expert Intelligence
broadband_above_2mbps_population	Population with access to broadband faster than 2Mbps bandwidth downstream	Eurostat; Point Topic; Expert Intelligence
broadband_above_2mbps_percentage	Percentage of population with access to broadband faster than 2Mbps bandwidth downstream	Eurostat; Point Topic; Expert Intelligence
broadband_above_30mbps_population	Population with access to broadband faster than 30Mbps bandwidth downstream	Eurostat; Point Topic; Expert Intelligence
broadband_above_30mbps_population	Percentage of population with access to broadband faster than 30Mbps bandwidth downstream	Eurostat; Point Topic; Expert Intelligence
broadband_above_100mbps_percentage	Population with access to broadband faster than 100Mbps bandwidth downstream	Eurostat; Point Topic; Expert Intelligence
broadband_above_100mbps_percentage	Percentage of population with access to broadband faster than 100Mbps bandwidth downstream	Eurostat; Point Topic; Expert Intelligence

Overseas Territories

The below table contains all overseas territories which were removed from model calculations. A region will appear twice if its NUTS3 code has changed across NUTS releases. Not all regions are contained in all NUTS releases.

NUTS3_NAME	NUTS3
Guadeloupe	FR910
Martinique	FR920
Guyane	FR930
Réunion	FR940
Guadeloupe	FRA10
Martinique	FRA20
Guyane	FRA30
La Réunion	FRA40
Mayotte	FRA50
Guadeloupe	FRY10
Martinique	FRY20
Guyane	FRY30
La Réunion	FRY40
Mayotte	FRY50
Jan Mayen	NO0B1
Svalbard	NO0B2
Região Autónoma dos Açores	PT200
Região Autónoma da Madeira	PT300

Copyright Accreditation

Broadband Data

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- Office for National Statistics (2021). Table Population Estimates for 1 January 2020 on NUTS Boundaries, Table ref. 13079 [web].
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- Bundesamt für Statistik (2022). Table cc-d-01.02.02.01 (Switzerland) [web].
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- Statistics Norway (2022). Table SSB 09747 (Norway) [web].
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