



## 5G / IMT-2020 Indicators

### Introduction

The following new indicators were agreed by the 11<sup>th</sup> and 12<sup>th</sup> Meetings of the ITU Expert Group on Telecommunication/ICT Indicators (EGTI) in September 2020 and 2021, respectively, to provide additional details for the measurement of IMT-2020 / 5G coverage and subscriptions. The definitions and methodology are based on [the 2020](#) and [the 2021](#) report of the EGTI subgroup on 5G indicators. Data is collected as of 2022.

## **NEW** Indicator: Percentage of the population covered by at least a 5G mobile network (i271G5\_pop)

### **Definition:**

Refers to the percentage of inhabitants that are within range of at least a 5G mobile-cellular signal, irrespective of whether or not they are subscribers. This is calculated by dividing the number of inhabitants that are covered by a 5G mobile-cellular signal by the total population and multiplying by 100.

### **Clarifications and scope:**

This indicator captures mobile-broadband coverage and refers to the proportion of the population that lives within range of a consistently usable 5G mobile-cellular network signal (as defined by ITU-R IMT 2020 5G Requirements), regardless of whether they actually subscribe to the service or use it. It is based on where the population lives, and not where they work or go to school. It excludes the percentage of the population only covered by mobile-cellular technologies such as WCDMA (UMTS) and associated technologies such as HSPA, CDMA2000 and related technologies such as EV-DO, mobile WiMAX 802.16e and LTE. It also excludes the percentage of the population covered by a 3G or 2G mobile-cellular network, and by GPRS and EDGE technologies. Coverage should refer to all broadband mobile-cellular technologies. If this is not the case, it should be specified in a note.

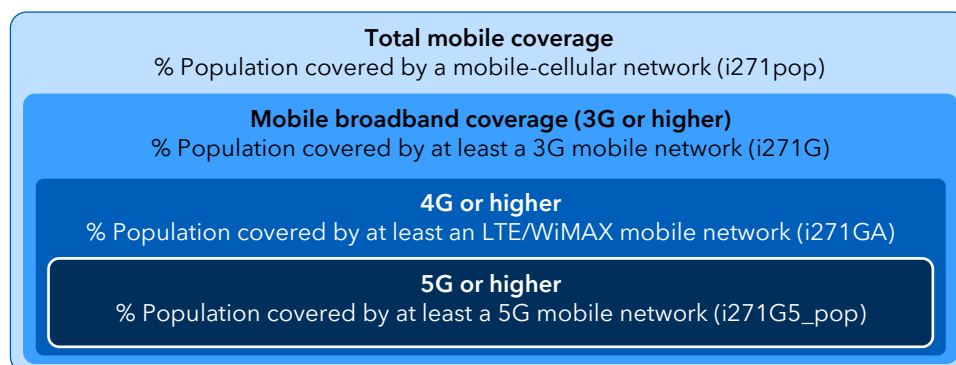
### **Method of collection:**

Please refer to Section 2.2 of the [ITU Handbook for the collection of administrative data on telecommunication/ICT](#) for the calculation of mobile network coverage.

The data can be collected from licensed 5G mobile-cellular operators in the country. However, they are likely to have different levels and locations of coverage. Another method would be to request each operator's 5G coverage maps, which can then be overlaid with maps showing the population of the country.

### **Relationship with other indicators:**

This indicator is a component, therefore never greater than Indicators *Percentage of the population covered by a mobile-cellular network (i271pop)*, *Percentage of the population covered by at least a 3G mobile network (i271G)*, and *Percentage of the population covered by at least an LTE/WiMAX mobile network (i271GA)*.



### **Methodological issues:**

Some countries have difficulty calculating overall mobile-broadband population coverage. In many cases, data refer only to the operator with the largest coverage, and this may understate the true coverage. If the coverage only refers to one operator, this should be specified in a note.

## NEW Indicator: Active mobile broadband subscriptions to 5G / IMT-2020 (i271mw\_5G)

### Definition:

Refers to subscriptions that have generated Internet traffic in the last 90 days in 5G / IMT-2020 mobile-broadband networks. The indicator excludes subscriptions having generated Internet traffic only in LTE/4G, HSPA, UMTS, EV-DO and previous 3G networks, and also excludes fixed WiMAX subscriptions. It includes both postpaid and prepaid subscriptions, and both residential as well as business subscriptions. It also includes data only, USB/dongle subscriptions active subscriptions.

### Clarifications and scope:

This indicator aims at collecting all individual subscriptions by humans to mobile broadband with 5G/ IMT-2020, hence, excludes any other possible use of 5G/ IMT-2020 networks, such as IoT, massive machine-to-machine (M2M) or ultra-low latency reliable services.

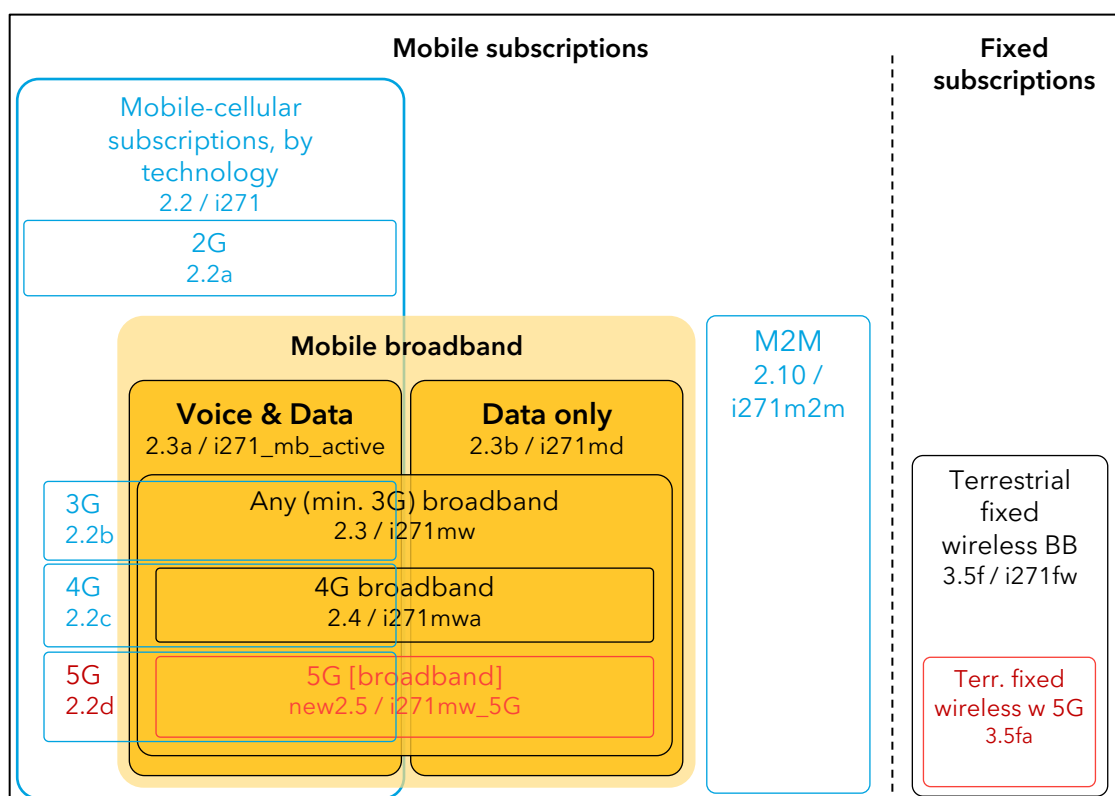
A contract (postpaid) subscription pays a recurrent bill with a predetermined frequency. It should be counted as an active mobile broadband subscription no matter the effective data consumption realized by the user. A prepayment or a pay-as-you-go subscription needs to pass the activity criterion to be considered as 'active': a billable Internet connection must have occurred in the last three months.

### Method of collection:

The data can be collected from licensed mobile operators in the country that offer 5G mobile-broadband services providing access to the Internet.

### Relationship with other indicators:

The complex relationship between the different breakdowns of the subscription indicators is illustrated below (see the *Handbook* for indicator codes):



## Clarification / modification of existing indicators:

### Indicator 3.5f: Terrestrial fixed wireless broadband subscriptions (i271fw)

Indicator *Terrestrial fixed wireless broadband subscriptions (i271fw)* should also include connections using 5G technology as well.

### Indicator 2.12: Amount of spectrum licensed for IMT systems, in MHz (i271\_spec\_li)

The comments section for each of the 3 blocks of the indicator *Amount of spectrum licensed for IMT systems* should include specify the relevant 5G / IMT-2020 spectrum bands and capacity assigned. Specifically,

- Indicator 2.12a: Block < 1 GHz (i271\_spec\_li1),
- Indicator 2.12b: Block 1 GHz- 6 GHz (i271\_spec\_li1to6) and
- Indicator 2.12c: Block > 6 GHz (i271\_spec\_liG6)

E.g., in country A, the following bands were assigned for 5G:

In block <1 GHz: 700 MHz; in block 1 to 6 GHz: 1800 MHz, 2100 MHz and 3400 Mhz; in block > 6 GHz: 26 GHz assigned to 5G / IMT-2020.