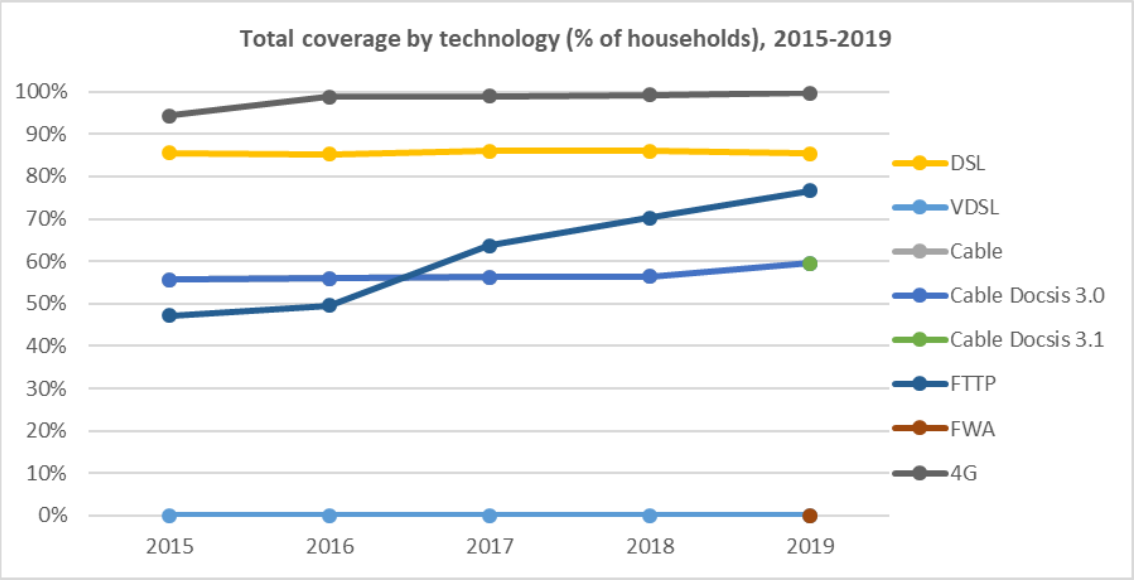
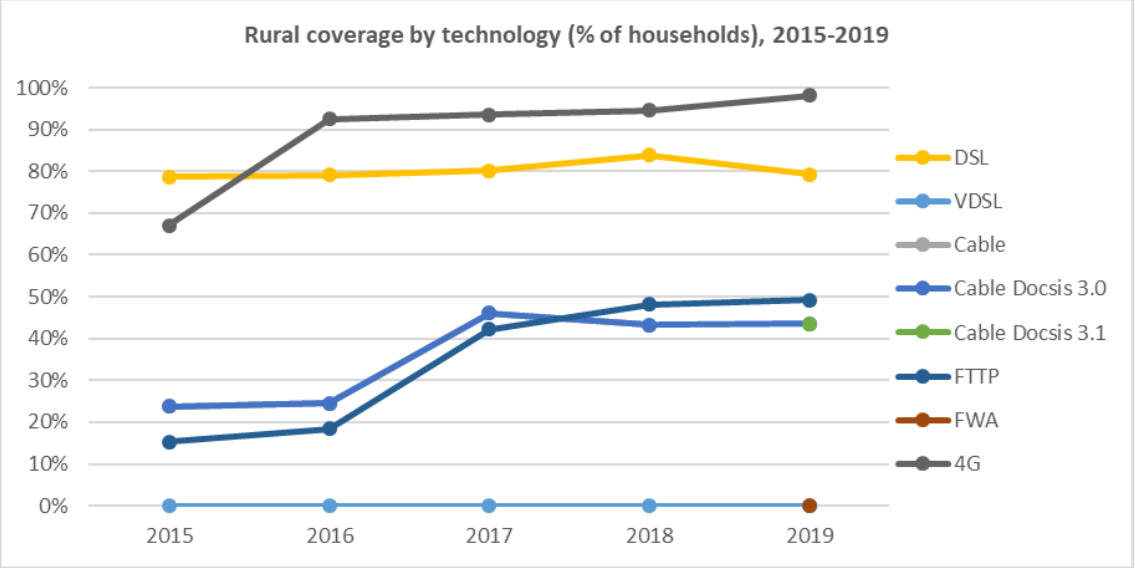
Portugal

Portugal has very good VHCN broadband coverage of 83% (against an EU average of 44%) and good fast broadband (NGA) coverage (83%), which is close to the EU average. FTTP continues to improve at the same pace as in previous years. Total FTTP coverage increased by 7 percentage points (pps), from 70% in 2018 to 77% in 2019, well above the EU average of 34%. Rural FTTP coverage also increased, from 48% to 49%, also well above the EU average (19%). Aggregate 4G coverage[1] has reached 100% (98% in rural areas).

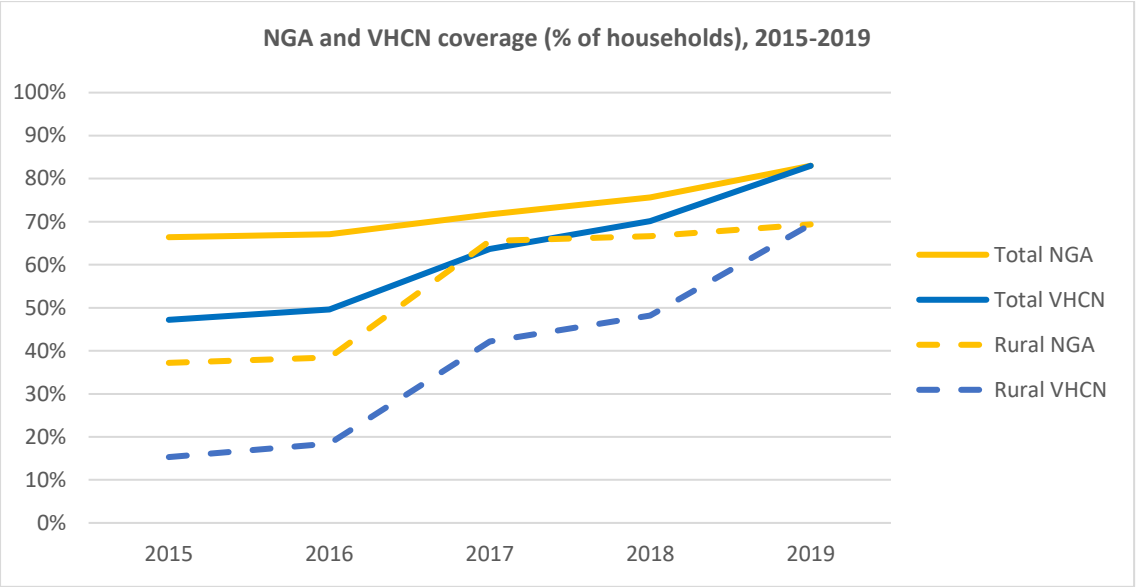


Source: IHS and Point Topic, Broadband coverage in Europe studies



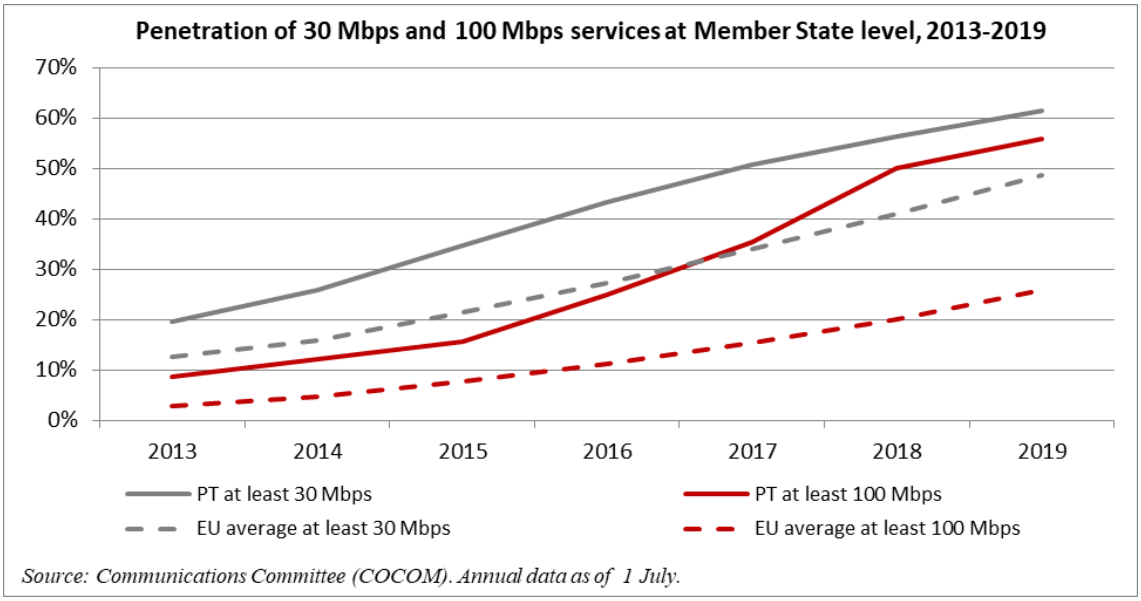
Source: IHS and Point Topic, Broadband coverage in Europe studies

[1] The 4G coverage indicator used in the country chapters differs from the DESI indicator for 4G coverage. The former is an aggregate indicator, i.e. measures the coverage of all operators together. The latter is an average indicator, i.e. the sum of all coverages divided by the number of operators. Because of this difference, the two indicators may produce different results.



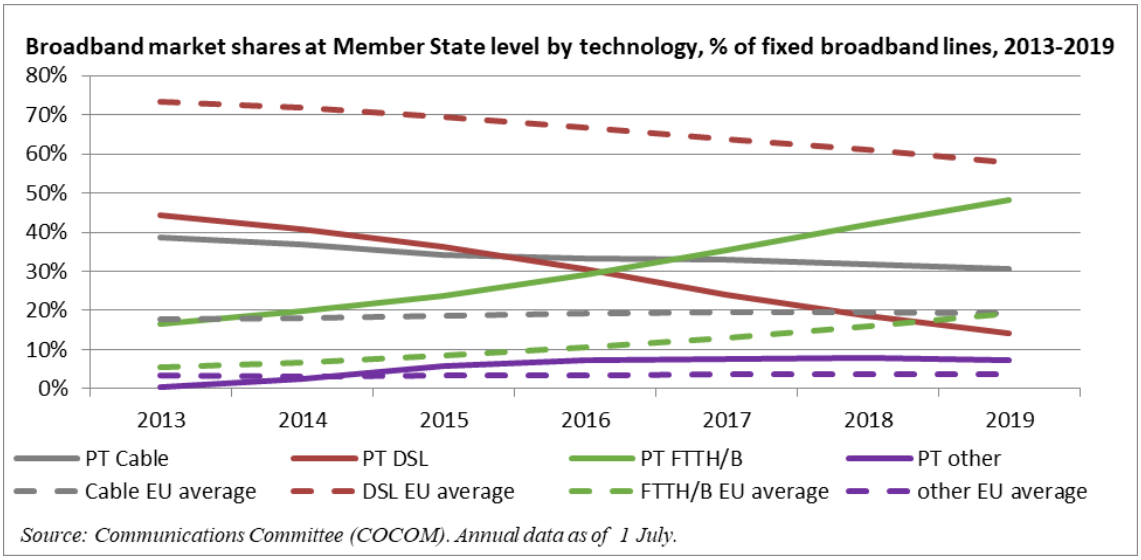
Source: IHS and Point Topic, Broadband coverage in Europe studies

Take-up of broadband of at least 30 Mbps increased by 5 pps (from 56.4% in 2018 to 61.4%, above the EU average of 48.7%, in 2019). Over the same period, take-up of broadband of at least 100 Mbps increased by 6 pps (from 50% in 2018 to 56%, well above the EU average of 26%, in 2019). According to information from ANACOM (*Autoridade Nacional de Comunicações*), the number of high capacity lines increased by 12% between 2018 and 2019, and by the end of 2019 71.6% of internet lines had a theoretical download speed of 100 Mbps or higher.

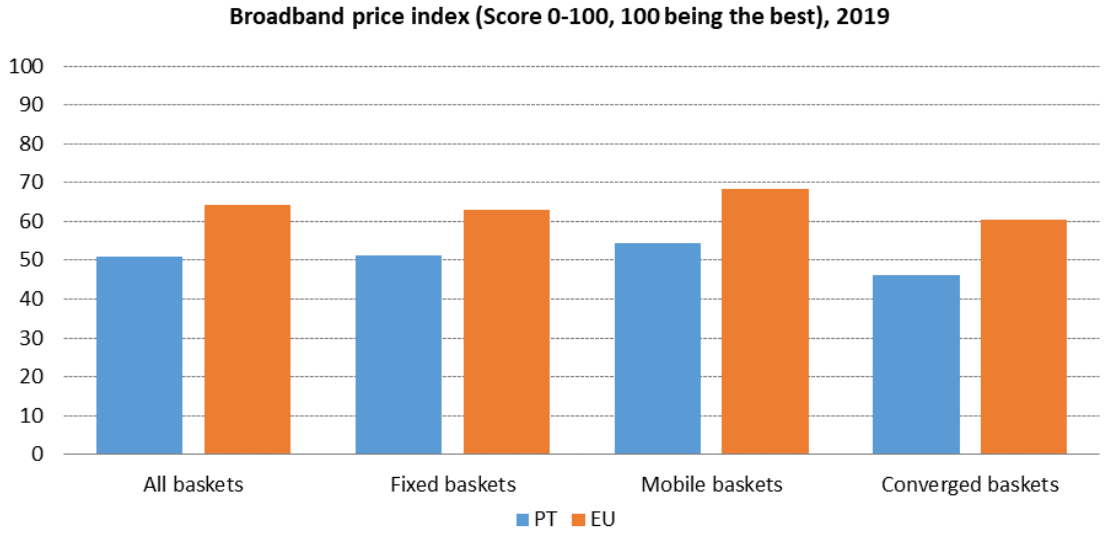


The share of cable in total broadband access continued to fall (from 31.8% to 30.6%), as did that of DSL (from 18.5% to 14.1%). In parallel, there was an upswing in fibre to the home/building (FTTH/B) technology. This saw a strong upward trend (from 41.9% to 48.1%) and has been the primary means of accessing broadband since 2017.

ANACOM reported that, at the end of Q2 2019, 86% of households subscribed to pay-TV services; 44% of subscribers had access via FTTH networks, which replaced cable TV as the main support network in early 2018. In fact, most of the growth in pay-TV comes from FTTH networks, and even the largest cable TV operator is now deploying FTTH. The number of FTTH TV subscribers has grown by 20% in the last 12 months. Conversely, cable TV, satellite and DSL have decreasing shares of pay-TV subscribers of 33%, 12% and 10%, respectively.



Convergent bundles prices, the most representative method used by operators to sell electronic communications services in Portugal, are 14 pps higher than the EU average. However, there seems to be no correlation between prices and take-up. While prices in Portugal are higher than the EU average, ranking 24 in DESI, Portugal has high take-up of broadband of at least 30 Mbps, and especially of broadband of at least 100 Mbps. Mobile prices are also 13 pps above the EU average, and mobile broadband take-up in Portugal is significantly lower than the EU average.



Source: European Commission, based on Empirica (studies of retail broadband prices)

1. Progress towards a Gigabit Society[2]

Public investment and competition between private operators are the two factors driving the expansion of broadband in Portugal. The authorities continue to monitor projects in rural areas that benefited from state aid in the past. In April 2019, the Portuguese Government decided to reduce the wholesale tariffs for access to Fibroglobal's network[3] (managing fibre networks in rural areas in the centre of the country and the Azores, built with public support), extend Fibroglobal's bitstream offer to 200 Mbps, 400 Mbps or 1 Gbps speeds, and introduce a multicast functionality for operators to

[2] It is noted that statements regarding planned or potential State aid measures record intentions declared by Member States and do not pre-judge or pre-empt the assessment of such measures by the Commission under the relevant state aid rules. The DESI report is not meant to provide any assessment of the compliance of such measures with state aid rules and procedures.

[3] http://www.fibroglobal.com/

deploy their own IPTV. Despite these measures, there is still no interest in accessing Fibroglobal's network, and MEO is the only provider to make extensive use of Fibroglobal's offer. The final decision on Fibroglobal's over-financing and the subsequent reimbursement of €3.1 million is still awaiting the Government's final approval[4].

For the next programming period, Portugal's priority is to replace the Atlantic submarine cable ring linking the mainland with Madeira and the Azores (CAM submarine cables), which is reaching the end of its life. In May 2019, a working group on the future of submarine cables for CAM communications, chaired by ANACOM, was set up. In December 2019, the working group submitted a report including 12 recommendations to the Government, to fit in with the start of operations for the new CAM ring within the deadline (2023) and lasting 25 years[5]. Portugal is also interested in linking Lisbon to Marseille through a new submarine cable. EllaLink, a submarine cable system connecting Fortaleza (Brazil) to Sines in Portugal, is expected to enter into service in Q1 2021.

A further challenge to network deployment is the fragmentation of the rules on the authorisations necessary to access infrastructure at municipal level and the lack of coordination between them. Moreover, operators are required to pay different types of taxes to local authorities for network deployment.

In January 2020, ANACOM launched a consultation on the draft regulation on the methodology to set remuneration for access to and use of infrastructure suitable for accommodating communications networks[6]. This regulation will not be applicable to municipalities[7]. However, it does not prevent municipalities from choosing to apply ANACOM's regulation. The comments received during the consultation procedure are now being analysed.

In July 2019, DST Telecom, NOS and Vodafone signed an agreement defining the main terms for the construction and use of a new fibre optic network to cover between 900,000 and 1.2 million homes. The new network will cover areas currently not covered by these operators. MEO continues to invest in FTTH, expanding its coverage in some parishes to reach 100% fibre optic coverage of households. These investments are in line with its strategy of covering the entire country with fibre optic network by 2020. Despite the investment plans announced by MEO, DST Telecom, NOS and Vodafone, there are still some white areas. Further use of public funds has not been ruled out.

Portugal is currently working on the spectrum award procedure to meet the target for uninterrupted 5G wireless broadband coverage in all urban areas, as well as on major roads and railways, by 2025. Several 5G trials are underway. The city of Aveiro has committed to becoming a 5G city by 2020[8].The Spain-Portugal cross-border corridor connecting the cities of Vigo and Porto was launched in 2018 in the context of an EU project known as 5GMOBIX. The process continued during 2019, with first trials on roads planned for 2020.

[4] In 2018 ANACOM reported that it had identified over-financing with regard to the first five years of Fibroglobal's contracts concerning the Central and Azores areas. The contracts stipulate that an over-financing assessment should take place at five-year intervals for the duration of the contract. Notwithstanding the periodic analyses, a final global assessment must take place once the contract reaches the end of its 20-year duration.

[5] https://www.anacom.pt/render.jsp?contentId=1499946&languageId=1

[6] https://www.anacom.pt/render.jsp?contentId=1499901&languageId=1

[7] For more detailed information, please see Article 19, n. 3, of the consolidated version of Decree-Law No 123/2009, of 21 May 2009, English version available at: https://www.anacom.pt/render.jsp?contentId=1418606&languageId=1

[8] http://5gobservatory.eu/wp-content/uploads/2019/10/90013-5G-Observatory-Quarterly-report-5_final.pdf

In November 2019[9], ANACOM approved the new reference speeds[10] to meet the coverage obligations in the 800 MHz frequency band applicable to each operator in the 160 parishes.

2. Market developments

Másmóvil Group has recently acquired Cabonitel, the company that owns NOWO and ONI. It is the fourth largest fixed operator, with a subscribers' market share of 3-4%, which also operates a MVNO service (1.3% market share). In January 2019, CTT, Portugal's universal postal service provider, closed its MVNO operation, which had a subscribers' share of less than 1%.

ANACOM reported that at the end of Q2 2019, there were four operators with significant market shares in Portugal: MEO, the NOS group, Vodafone and the NOWO/Onitelecom group. Overall, MEO was the largest player in all market segments except pay-TV (in which it was the second-largest operator), with subscribers' shares of between 39.6% and 44.8%. MEO was also the largest multiple-play operator (40.4%). The NOS group was the largest pay-TV operator (40.5%), the second-largest fixed voice operator (34%) and fixed broadband operator (36%), and the third-largest mobile operator (25%). Vodafone is the second-largest mobile operator (30.3%) and the third-largest fixed operator, with subscribers' shares of between 15.8% and 19.7%. NOWO/Oni is the fourth-largest fixed operator, with subscribers' shares of 3-4%. In general, MEO and Vodafone have increased their fixed broadband and pay-TV subscribers' shares by leveraging their respective FTTH networks, while NOS has managed to increase its mobile market shares by cross-selling mobile services to its cable-TV subscribers.

ANACOM reported that in the first quarter of 2019, MEO overtook NOS (38.5%) to become the largest residential fixed broadband provider (38.8%). MEO has been increasing its overall fixed broadband market share since the beginning of 2018, benefiting from the expansion of its FTTH network in areas where it was not previously present. Its FTTH subscribers' share is now 55.4%, an increase of 5.1 pps in 2 years. MEO has also been upgrading its ADSL customer base.

According to ANACOM´s data, bundles grew by 45%, one of the lowest growth rates recorded to date. 4P/5P bundles, however, grew by 13.4% thanks to upgrades of existing clients, reaching 49.2% of the total number of multiple play subscribers. Operators also include in their bundles access to OTT video-streaming services. In 2019, all three MNOs started offering single-play and bundled mobile offers which include 'unlimited' mobile traffic for monthly rates ranging from €40 to €45 for single play offers, and €70-80 for 4P offers.

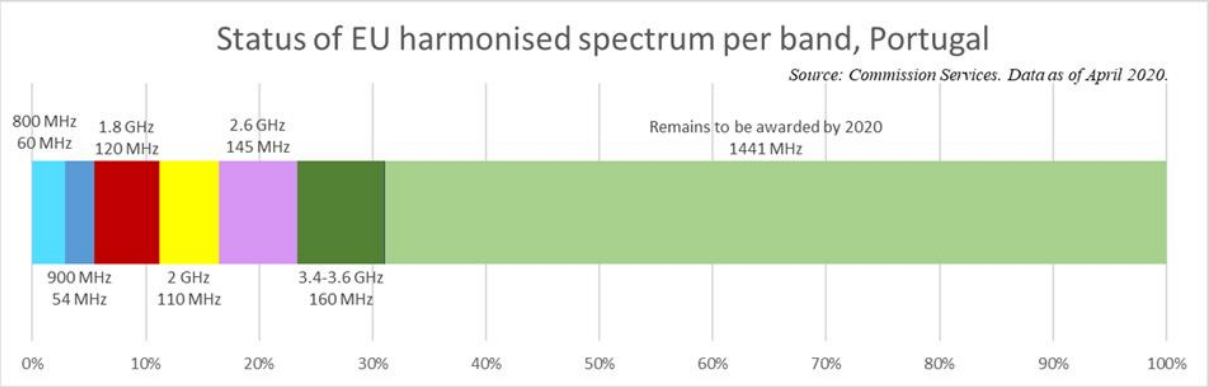
As ANACOM reported, fixed broadband traffic is growing at a decreasing rate of more than 20% a year, and average traffic per line reached 121 GB/month during the period in question. Fixed voice traffic is decreasing by 16.2% a year, despite the generous fixed traffic allowances included in bundles. However, active mobile service subscribers have remained stable at around 12 million. Nevertheless, the proportion of mobile subscriptions included in convergent bundles and, consequently, the proportion of post-paid subscriptions, continues to increase. Mobile broadband subscribers grew by 8.6%, reaching 64% of all active mobile subscriptions. In 2019, mobile voice traffic increased by 1.9%. Mobile-fixed calls are only 5% of the total. In comparison with the previous year, mobile internet traffic grew by 36%.

9 https://www.anacom.pt/streaming/FinalDec21nov2019speed800MHz.pdf?contentId=1498080&field=ATTACHED_FILE

10 The data speeds are now the following: 43.2 Mbps for MEO, 4 Mbps for NOS and 7.2 Mbps for Vodafone.

3. Regulatory developments

3.1. Spectrum assignment



On 22 October 2019, ANACOM launched a public consultation[11] concerning the upcoming multi-band auction of the 700, 900, 1800, 2100, 2600 and 3600 MHz bands, then scheduled for April 2020[12], but now suspended on account of the COVID-19 crisis. A new public consultation on the specific terms of the auction was carried out in February 2020. One operator (Dense Air) holds the rights of use of 56-100 MHz[13] in the 3.4 - 3.8 GHz band until 2025. This may pose some difficulties in the reorganisation and/or the amount of spectrum of the band available before the deadline of December 2020. Additionally, ANACOM has authorised operators to use the 3.6 GHz band, as well as the 1800 MHz and 2.6 GHz bands, for trials. Its aim is to develop technical tests and scientific studies using various technologies (namely 5G, in conjunction with 4G), to test the various features and capabilities of these technologies, as well as refine their theoretical models, before moving on to the implementation of future 5G networks. The process of releasing the 700 MHz band is ongoing. On 4 October 2019[14], ANACOM issued a Decision approving the migration plan for digital terrestrial television (DTT)[15]. However, the migration process has been suspended on account of the COVID-19 crisis [16].

By its Decision of 27 March 2020, ANACOM approved an addendum to the national roadmap for the release of the 700 MHz band. In this context, the process of migrating the DTT network to the sub-700 MHz band has been suspended until suitable conditions are created to allow the resumption of the work concerned on all fronts, with a new timetable to be established at that time, in consultation with the operator of the DTT network (MEO) [17].

On 6 September 2019[18], the Government defined the conditions for providing compensation for the costs that occurred with the first digital dividend.

[11] https://www.anacom.pt/streaming/SPD_Atribuica700outrasFaixas22102019.pdf?contentId=1488322&field=ATTACHED_FILE

[12] https://www.anacom.pt/streaming/dec23122019Atribuiao700_outrasfaixas.pdf?contentId=1498324&field=ATTACHED_FILE

[13] 100 MGHz in the Lisbon area, 100 MGz in the Porto area, and another 56 MHz in the other regions (see ANACOM's Decision of 23 December 2019, https://www.anacom.pt/render.jsp?contentId=1498292

[14] https://www.anacom.pt/streaming/FinalDec4Oct10.2019DTT700MHzband.pdf?contentId=1495863&field=ATTACHED_FILE

[15] After conducting a pilot test in the city centre of Odivelas on 27 November 2019, the process of releasing the 700 MHz band continued on February 2020, as determined by ANACOM´s above-mentioned decision.

[16] Decision taken by ANACOM on 12 March 2020. For more details, please see: https://www.anacom.pt/render.jsp?contentId=1520230&languageId=1

[17] The addendum is available here: https://www.anacom.pt/streaming/AdendaRoteirodecisao_EN.pdf?contentId=1521641&field=ATTACHED_FILE

[18] Administrative Rule No 587/2019 of 6 September 2019.

According to ANACOM, the March 2018 public consultation showed a current lack of market interest in the 26 GHz band. ANACOM stated that part of the band is still reserved for military use. Accordingly, ANACOM is to auction the other bands first and defer its decision on the 26 GHz band.

By the first quarter of 2019, Portugal had assigned 36% of the total 2090 MHz spectrum harmonised at EU level for wireless broadband. However, none of the pioneer bands have been assigned, so Portugal ranks 16 in the 5G readiness indicator.

3.2. Regulated access

As regards markets 3a and 3b in the 2014 Recommendation on Relevant Markets[19], on 12 September 2019 ANACOM approved the final decision on the changes to the reference offer for access to ducts (ORAC) and for access to poles (ORAP), simplifying and streamlining the procedures designed to facilitate use of this infrastructure and, ultimately, network rollout. On 25 July 2019, ANACOM approved a draft decision on other changes to ORAC and ORAP that were not included in the decision approved on 12 September. In the context of this draft decision it was decided, among other things, simplification of the customer drop installation procedure, revision of the Extranet access prices, definition of an annual maximum limit for follow-ups to be invoiced by MEO, and a maximum limit to the amount payable in non-compliance penalties.

As regards market 4 in the 2014 Recommendation on Relevant Markets[20] and market 14 in the 2003 Recommendation on Relevant Markets (trunk segments of leased lines), by Decision of 1 March 2019, ANACOM approved a 10% reduction in the maximum prices of Ethernet circuits connecting mainland Portugal with the autonomous regions of the Azores and Madeira (CAM circuits) and a 6% reduction in the prices of Ethernet circuits connecting various islands in the Azores (inter-island circuits). These circuits, supported over submarine cables owned by MEO, operate within the framework of the Reference Ethernet Leased Lines Offer (ORCE).

Moreover, as ANACOM reviews such prices annually, in January 2020 it notified the Commission of further reductions in price caps on CAM Ethernet circuits and inter-island Ethernet circuits. By Decision of 13 February 2020, ANACOM approved a 10% reduction in the maximum prices of Ethernet circuits connecting mainland Portugal with the autonomous regions of the Azores and Madeira (CAM circuits) and a 4% reduction in the prices of Ethernet circuits connecting various islands in the Azores (inter-island circuits).

The main purpose of these decisions is to improve competition conditions in the autonomous regions, benefiting both operators offering alternatives to MEO that need to lease these connections to develop their businesses, and consumers.

Finally, in 2019 ANACOM updated the parameters of the weighted average cost of capital (WACC) for the incumbent MEO, to be used in setting future prices for wholesale access products. In doing so, it used the same methods as in the past.

[19] Market 3(a) Wholesale local access provided at a fixed location and Market 3(b) wholesale central access provided at a fixed location for mass-market products.
[20] Market 4 Wholesale high-quality access provided at a fixed location.

4. End-user matters

a. Complaint

ANACOM received around 100,600 complaints in 2019, about 4% more than in the previous year. Around 4% of these complaints were submitted through the 'complaints book', available at all service providers' establishments that are open to the public, and electronically. Only 6% of complaints received were submitted via ANACOM's own channels for complaints.

The main areas of complaints are billing, contract transparency and management, technical assistance with malfunctioning services, the handling of complaints, contract termination, and customer support.

b. Open internet

The incorporation into Portuguese law of the system of penalties for non-compliance with Regulation (EU) 2015/2120 of 25 November 2015 (Open Internet Regulation) requires the approval of a new law, which is still pending. According to information from the Secretary of State for Telecommunications, the new law has been approved by the Government and has been in the legislative circuit since February 2020.

As reported in ANACOM's net neutrality report of June 2019[21], internet service providers (ISPs) are not following ANACOM's 2018 recommendation[22] to foster end-users' freedom of choice by providing the same traffic volumes in the general data allowances and in the specific data allowances.

In May 2019, ANACOM asked the largest ISPs to ensure transparency as regards data transmission speeds. ISPs have modified information in contracts and on their webpages to ensure that all the values of the different speeds (download and upload) associated with fixed or mobile internet offers, as provided for by the Open Internet Regulation, are specified. They have also made sure to include clear and understandable explanations about these parameters.

c. Roaming

ANACOM reported looking into the way that operators ensure transparency, especially on their websites, as regards the value and/or the calculation method of the intra-EEA roaming data, with regard to some tariff plans.

d. Emergency communications

Handset-based advanced mobile location was deployed through the HELP 112 II project financed by the European Commission. Portugal has deployed an application called MAI 112[23] that enables end-users with disabilities to make 112 data and video calls, with simultaneous translation into Portuguese sign language.

e. Universal service

The contract with NOS for the provision of fixed telephony ended on 1 June 2019. Since then there has been no US provider for fixed telephony.

The contract for directory enquiry services and directories ended in September 2018. The Government asked MEO to retain the directory enquiry number (118). It also established that ANACOM should provide a service with all the telephone numbers of public and private entities and all the telephone

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21 https://www.anacom.pt/streaming/ReportNetNeurality2018May2019April.pdf?contentId=1479582&field=ATTACHED_FILE

22 https://www.anacom.pt/render.jsp?contentId=1456674

23 Link to Google Store - https://play.google.com/store/apps/details?id=io.cordova.mai112pt, link to App Store - https://apps.apple.com/pt/app/mai112/id1486324916?l=pt&ls=1, available also at www.112.pt

numbers of end-users for six months (as of 15 April 2019). The analysis provided by ANACOM is still pending Government approval. The phone book service no longer exists.

The contract with MEO for the provision of public payphones expired in early April 2019. On 7 April 2019 the Government decided to extend it for an additional year and asked ANACOM to prepare to launch a new tender. The Court of Auditors challenged the contract's validity as regards the extension decision. The final decision (the Government appeal the decision of the Court of Auditors) is still pending. According to ANACOM, very little use is made of this service.

5. Other issues

Portugal amended its national Portability Regulation[24] to change the date of entry into force of the regime applicable to the new mechanism to validate electronic portability requests, performed by a portability validation code (CVP). The mechanism using CVP has already been in use since 11 May 2019[25].

To prevent potential depletion of the National Numbering Plan (PNN - *Plano Nacional de Numeração*), to safeguard the current use of the '9' range for the mobile telephone service, and to address other issues arising in the near future in relation to provision of services of this kind, specifically the extraterritorial use of numbering resources and the possibility of assignment to companies other than providers of electronic communications services, ANACOM decided in June 2019 to start a regulatory procedure for the creation of a specific numbering range in the National Numbering Plan for machine-to-machine (M2M) services[26].

In October 2019, ANACOM decided to start a regulatory procedure for defining the conditions applicable to the sub-assignment of E.164 numbering resources of the national numbering plan[27].

On 28 November 2019, ANACOM approved the final decision on the definition of the maximum retail prices for calls to '707' and '708' (universal access services) and '808' and '809' (shared cost services) numbering ranges.

As reported by ANACOM, one MNO was warned for apparent non-compliance with intra-EU communications rules by disclosing wrong/misleading information on its website and customer support, information that has been clarified by the MNO.

6. Conclusion

Portugal performs well on the deployment of very high-capacity networks and on the take-up of broadband connections of at least 100 Mbps. An additional effort is still required to ensure that very high-capacity network coverage and mobile broadband take-up reach all households, including those in rural areas. Broadband prices remain a challenge. The rollout of 5G will depend on the implementation of the 5G strategy and on the prompt completion of the 700 MHz award procedure.

[24] Regulation No 257/2018 of 8 May 2018, establishing the principles and rules governing portability on public communications networks, https://www.anacom.pt/render.jsp?contentId=1435216
[25] Decision of 09.01.2019, https://www.anacom.pt/render.jsp?contentId=1466734
[26] https://www.anacom.pt/render.jsp?contentId=1474746
[27] https://www.anacom.pt/render.jsp?contentId=1487102