

DESI Report 2018

Telecoms chapter

Czech Republic

Market developments

1. Competitive environment

Fixed broadband prices	CZ-2016	CZ-2017	EU-2017
Fixed broadband price index [values between 0-100]	88	87	87

Source: Commission Services based on Fixed Broadband Prices in Europe (Empirica). Digital Economy and Society Index 2018.

Fixed broadband is the most common service in bundles (98% of all bundles). The second most common service in bundles is pay TV (67 % of all bundles). The most favourite setup of a bundle is pay TV & fixed broadband (42% of all bundles).

a. Fixed Markets

Fixed broadband market shares	CZ-2016	CZ-2017	EU-2017
Incumbent ¹ market share in fixed broadband	26.4%	24.0%	40.3%
Technology market shares			
DSL	31.0%	29.3%	64.2%
Cable	18.1%	17.8%	19.4%
FTTH/B	16.8%	17.5%	12.9%
Other	34.1%	35.4%	3.6%

Source: Communications Committee. Data as of July 2016 and July 2017.

New entrants' DSL subscriptions by type of access (VDSL excluded)	CZ-2016	CZ-2017	EU-2017
Own network	1%	1%	0.5%
Full LLU	25.5%	46.6%	72.8%
Shared Access	0.3%	0.3%	4.1%
Bitstream	73.5%	52.1%	14.7%
Resale	-	-	7.8%

Source: Communications Committee. Data as of July 2016 and July 2017.

The Czech telecoms market has a number of notable features. The incumbent² voluntarily separated in 2015. Before the separation, its delayed broadband deployment on its DSL network saw the emergence of a large number of local alternative operators (more than 1 000) that use Fixed Wireless Access (FWA) technology, including WiFi technology. These

¹ Under the term 'incumbent', the data in the table refers to O2 Czech Republic that is present only on the fixed retail market. CETIN is the incumbent on the wholesale market as explained in the section on the voluntary separation

² In June 2015, O2 Czech Republic a.s. (the former vertically integrated incumbent) voluntarily separated into two companies:

- Česká telekomunikační infrastruktura a.s.(CETIN), which retained the infrastructure of the former vertically integrated incumbent and now acts solely as a wholesale service provider; and
- O2 Czech Republic, which provides retail services on the fixed market and is also a mobile network operator (holder of frequency licences and owner of mobile exchanges) that offers both retail and wholesale services on the mobile market.

operators exert considerable competitive pressure on the wholesale incumbent, with FWA representing one-third of the technology used in the broadband market. The FWA gained market share in 2017 providing for most new subscriptions, boosted also due to the new spectrum allocations in the 3.7 GHz band. However, it is worth noting that the deployment of FTTH/B networks was driven by these local operators, while the incumbent is focusing on the upgrade of its copper network to VDSL. Cable companies — CATV providers — have had a stable number of subscribers and market share in recent years. The main CATV provider enjoys a market share of more than 80% in this segment. Its urban footprint is a major competitive constraint for the retail incumbent as cable provides the wide majority of ultrafast broadband connections (above 100Mbps) in the Czech Republic. There are no wholesale access products available via cable.

In 2017, the new entrant's share of DSL subscription by type of access changed due to the significant migration from CETIN's ADSL bitstream access to its VDSL offer. Hence, although in absolute terms the number of fully unbundled lines decreased marginally, the uptake of ADSL bitstream access halved in this period. Still, 52.1% of the new entrants' DSL broadband subscriptions use ADSL bitstream access – down from 73.5% last year, but still much higher than the EU average of 14.7%. However, new entrants using xDSL account for only a small share of the fixed broadband market – 5,7%. On the other hand, the retail incumbent O2 relies heavily on the ADSL and VDSL bitstream access lines supplied by the wholesale incumbent CETIN.

In 2017, CETIN continued upgrading its DSL network to VDSL. This is part of the CZK 22 billion plan (approx. €800 million) launched in 2015 to develop NGNs over the next seven years, mainly by upgrading its network to VDSL2, VDSL3 and vectoring technology. This year the lease of VDSL lines to new entrants grew to more than double.

CETIN offers three-year and seven-year contracts with long-term volume commitments for wholesale bitstream access seekers. 21 companies used the bitstream reference offer ('mass market offer') that is adjusted in 2017 as well.

Coverage	CZ-2016	CZ-2017	EU-2017
Fixed broadband coverage (total)	99%	98%	97%
Fixed broadband coverage (rural)	97%	95%	92%
Fixed NGA coverage (total)	75%	89%	80%
Fixed NGA coverage (rural)	52%	59%	47%
Ultrafast coverage (total)	no data	60%	58%
4G coverage (average of operators)	94%	99%	91%

Source: Broadband Coverage Study (IHS and Point Topic). Data as of October 2016 and October 2017.

While the target for fixed broadband full coverage is almost met, next generation access (NGA) coverage jumped above the EU average. With regard to the take up of fast broadband (32%) and ultrafast broadband (15.8%) the Czech Republic is performing close to the EU average of 33% and 15.4% respectively. The ultrafast broadband uptake is exclusively catered for by new entrants. The digital divide is best illustrated by NGA coverage, where urban areas are much better served than rural ones. In rural areas, the lack of infrastructure is expected to be tackled with structural intervention co-financed by EU funds. In terms of mobile broadband 4G coverage is almost ubiquitous (99%).

The fixed market can be influenced by fixed wireless access (FWA) providers PODA and Nordic Telecom companies that acquired licences for rights of use for radio frequencies 3.7 GHz band in the 2017 auction.

In 2017 a consolidation process took place in the fixed broadband access market. Kaprain Industrial Holding – owner of the broadband access provider “Nej.cz” – extended its portfolio by purchasing “RIO Media”. The merged companies will represent the 5th largest broadband access provider in the Czech Republic. The merger was not notified to the NCA as it did not meet the minimum turnover threshold.

Evidence of fixed mobile substitution was already stated by the Czech Telecommunication Office (ČTÚ) in the analysis of former relevant Market 1/2007 (Access to the public telephone network at a fixed location for residential and non-residential customers) and Market 2/2007 (Call origination on the public telephone network provided at a fixed location³). In the second quarter of 2017 the market share of mobile subscribers reached 89.7 % of the total sum of subscribers. In the same period the share of mobile voice traffic reached 93.1 % of the total voice traffic.

b. Mobile market

Mobile market	CZ-2016	CZ-2017	EU-2017
Market share of market leader	42%	42%	35%
Market share of second largest operator	33%	32%	28%
Number of MNOs	4	4	-
Number of MVNOs	1	1	-
Market share of MVNO (SIM cards)	-	-	-

Source: Communications Committee. Data as of October 2016 and October 2017.

There are three GSM/UMTS/LTE network operators and one CDMA network operator in the Czech mobile market. The CDMA network operator decided to switch off CDMA network and replace it with the LTE network. The process is expected to be completed in 2018. Under the LTE licences obtained as part of the 2013 spectrum auction, MNOs are obliged to provide regulated access to their LTE networks at wholesale prices which will enable profitable replicability of their retail services. In 2017 ČTÚ adapted the regulated wholesale price twice and notified them to the MNOs. One full MVNO is present on the Czech market, whereas other 157 MVNOs are branded resellers having commercially agreed wholesale access agreements with MNOs/MVNE.

According to the NRA, the most common technology for mobile backhaul was microwave lines (67,7%), while fibre made up only 21,2% of the available backhaul. As a preliminary assessment of ČTÚ fibre or enhanced radio (e.g. 80 GHz) backhaul capacity needs are expected to grow in line with the mobile data volume increase. Small/femto cells could be connected to the backhaul through regulated fixed access products - LLU or bitstream (VDSL). In 2017 ČTÚ decided to analyse the mobile backhaul market in order to map the needs of mobile operators and the existing capacity serving these needs. The analysis will be forward looking and takes in consideration the 5G deployment.

A network sharing agreement between O2 Czech Republic/CETIN and T-Mobile CZ has been in place since 2011, and its scope has been expanding. It currently covers all mobile

³ Cases CZ/2016/1845 for (former) Market 1/2007 and CZ/2016/1844 for (former) Market 2/2007

technologies (2G, 3G and 4G) and the entire Czech Republic apart from Prague and Brno (which means it covers the other cities and all rural areas, which together account for about 85% of the population). On 25 October 2016 the European Commission started to investigate the network sharing agreement. The investigation was ongoing in 2017 and examines whether the agreement restricts competition and thereby breaches EU antitrust rules.

Two mobile operators signalled in public statements the gradual switch-off of their 3G network.

Mobile broadband prices [EUR/PPP]	CZ-2016	CZ-2017	EU-2017
Least expensive offer for handset (1 GB + 300 calls basket)	€46	€44	€24
Least expensive offer for tablet and laptop (5 GB basket)	€26	€26	€17

Source: Mobile Broadband Price Study (Van Dijk and Empirica). Prices expressed in EUR/PPP, VAT included. Data as of February 2016 and February (handset) 2017 - July (tablet-laptop) 2017.

Overall, mobile broadband prices remained high in the Czech Republic in 2016. Prices for both handset offers (€44/PPP versus €30/PPP) and tablet/laptop offers (€26/PPP versus €18/PPP) were significantly above the EU average.

Regulatory developments

2. Supporting measures for deployment and investment in high-speed networks

a. Spectrum

In the Czech Republic, the percentage of the harmonised spectrum assigned for wireless broadband rose to 80% in 2017 due to the spectrum auction in the 3.6 – 3.8 GHz band.

On 29 August 2017 ČTÚ announced the assignment of radio frequencies in the 3.6 – 3.8 GHz band on the basis of the auction organised earlier that year. The winning applicants were: Nordic Telecom 5G a.s. (80 MHz), O2 Czech Republic a.s. (40 MHz), PODA a.s. (40 MHz) and Vodafone Czech Republic a.s. 40 MHz). The price of each block of 40 MHz was 203 000 000 Kč (approx. EUR 8 200 000). Suntel Net s.r.o. and T-Mobile Czech Republic a.s. applied unsuccessfully in the tender.

LTE is starting to be deployed in the 1800 MHz band as the refarming was completed in 2017. As a consequence, all former GSM licence holders now hold at least 20 MHz of contiguous spectrum.

The national roadmap for the deployment of WBB in the 700 MHz band is still under development. All necessary coordination agreements with neighbouring countries have already been concluded in 2017. National consultation is planned to be launched in 2018 followed in 2019 by auctions for the 700 MHz and 3.5 GHz band. The actual provision of services in the 700 MHz would start at the latest in 2021. PPDR obligations are expected to be accommodated in the 700 MHz band.

The amendment to the Electronic Communication Act of 19 July 2017, foresees the latest date for transition to the Terrestrial Digital Broadcasting DVB-T2 standard as being February 2021. According to national plans the sub-700 MHz band will be used for terrestrial digital TV broadcasting till 2030, in line with the national Digital TV broadcasting development strategy.

The 450 MHz CDMA license of the O2 Czech Republic a.s. was renewed under the technology neutrality principle based on a public consultation procedure. The price of spectrum was set on the basis of an independent expertise.

High spectrum fees were identified as a "financial barrier" in the Action Plan adopted by the Government in March 2017 to implement and facilitate the National NGN plan.

5G trials were announced in November 2017 by one of the operators. Public testing took place in the 3.6 GHz band in Prague.

b. National and EU investment in broadband

In 2016, the Czech Republic adopted the National Development Plan of the Next Generation Networks, which approaches the development of electronic communications networks in two levels. The first level is the identification of legislative or financial barriers with a proposal for action. In March 2017 the Czech Government adopted an Action Plan under National NGN Plan as on the basis of the identification of legislative or financial barriers with a proposal for action to address them. The Action plan lists a set of twenty measures that would focus amongst others on speeding up the permitting process and establishing rights of way. The legislation setting out the construction permitting process was amended accordingly.

In the Operational Programme Enterprise and Innovation for Competitiveness, €21 million (CZK 14 billion) is planned to support the NGA roll-out plan in rural areas. Providers of telecom networks and services are the main beneficiaries of the programme. The programme is expected to allocate grants to deploy NGA and backhaul. A first call for tender was organised in September 2017. However, the implementation of the subsidy scheme has suffered substantial delays and encountered a number of problems that will need to be addressed swiftly in order to prepare the second call in 2018.

c. Implementation of the Broadband Cost Reduction Directive (BB CDR)

In July 2017 the Czech Republic notified the Commission the measures it had taken to transpose the Directive⁴ into national law, specifically through Law No 194/2017 on measures to reduce the costs of deploying high-speed electronic communications networks. The Commission is in the process of compliance assessment of the notified legislation.

The national regulator (ČTÚ) is tasked to be the dispute settlement body under the transposition of the Directive. ČTÚ has set up the Single information Point within its structures in Brno. The Ministry of Trade, in cooperation with the NRA, is preparing a guide for investors in electronic communication networks describing the implementation and functioning of the Cost Reduction legislation and the amended Construction law.

3. Regulatory function

Apart from the transposition of the BB CRD the Czech legislator adopted on 19 July 2017 the Law 252/2017 amending the Electronic Communications Act 127/2005. The scope of these amendments provide for consumer protection provisions and the DVB T2 deployment strategy:

⁴ Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks (OJ L 155, 23.5.2014, p. 1).

- 1) Reduction of the time needed or the effective switch of operators when porting numbers
- 2) The termination and renewal conditions of the contract
- 3) Higher sanctions applicable for breaches of consumer protection legislation in electronic communications, including those applicable for breaching the Net Neutrality and Roaming rules
- 4) Provisions relating to the DVB T2 strategy and deployment.

In 2017 ČTÚ almost completed the 4th round of market reviews⁵. On 26 May 2017 ČTÚ notified⁶ the market analyses for wholesale local access and wholesale central access for mass-market products provided at a fixed location (3a and 3b of the 2014 Recommendation). The analysis took into consideration the voluntary separation of the incumbent. On 26 June 2017 the Commission adopted a decision⁷ in which it asked ČTÚ to set out in its final measure the reasons for not including CATV and Wi-Fi based solutions in the relevant market. Furthermore, the Commission requested ČTÚ to observe the compliance of O2 and CETIN with their voluntary separation commitments, in particular the distinct management and supervisory structure, as well as separate headquarters, workforce, IT systems. Finally, the Commission asked ČTÚ to monitor the market situation in Markets 3a and 3b, both to ensure (a) that the commercial agreements in Market 3b are sustainable and foster market entry or expansion and (b) that its chosen approach (e.g. pricing flexibility with an "economic space test"), indeed, leads also to an improvement in competitive conditions in Market 3a, indicated, for example, through new market entry or expansion based on inputs obtainable on the wholesale local access market. ČTÚ is planning to notify the remedies in the first half of 2018. On 23 June 2017 ČTÚ notified⁸ the market for wholesale high-quality access provided at a fixed location. On 19 July 2017 the Commission decision⁹ was adopted to close the notifications without comments.

ČTÚ launched a public consultation on 17 August 2017, inviting for comments on the three criteria test regarding the 'mobile services market' (market 15 in the 2003 Recommendation) covering all network technologies (2G, 3G, 4G). While the mobile wholesale data market is not identified in the Commission Recommendation as susceptible to *ex ante* regulation, ČTÚ may identify such market as susceptible to *ex ante* regulation if an assessment carried out in the national circumstances proves that the so called 'three criteria test'¹⁰ is met. The consultation ended on 17 October 2017¹¹. Once the Czech NRA finds that one or more operators enjoy SMP and proposes the imposition of regulatory obligation(s) to redress the retail market failures identified, the Commission will review this measure under Article 7 of the Framework Directive.

⁵ markets listed in the 2014 Recommendation

⁶ Cases CZ/2017/1985 and CZ/2017/1986

⁷ C(2017) 4500 final

⁸ Case CZ/2017/1999

⁹ C(2017) 5228 final

¹⁰Point 2 of the recommendation:

(a) the presence of high and non-transitory structural, legal or regulatory barriers to entry;

(b) a market structure which does not tend towards effective competition within the relevant time horizon, having regard to the state of infrastructure-based and other competition behind the barriers to entry;

(c) competition law alone is insufficient to adequately address the identified market failure(s).

¹¹ <https://www.ctu.cz/vyzva-k-uplatneni-pripominek-k-navrhu-testu-tri-kriterii-pro-trh-mobilnich-sluzeb>; the deadline for input was prolonged from 17 September to 17 October.

4. Consumer matters

ČTÚ received 1 774 consumer complaints as of 30 September 2017. The most common complaints are related to contractual terms, contracts and their amendments (419 complaints) and to billing (247 complaints).

a. Roaming

Following the introduction of Roam Like at Home¹² (RLAH) in June 2017, Czech subscribers consumed 2.3 times more voice and 6.6 times more data roaming services when travelling in the EU in summer 2017 compared to summer 2016.¹³ No price increase was observed by ČTÚ in the case of MNOs.

ČTÚ received three sustainability derogation request from MVNOs but none was granted.

ČTÚ is currently examining a possible breach of Article 6e (3) of Regulation 531/2012. Specifically, there is a suspicion that the tariff provided in Articles 6a, 6b and 6e (1) has not been automatically applied to all existing customers by some operators as from 15 June 2017. ČTÚ is evaluating the impact of these practices on end-users and formal proceedings were not launched in 2017.

The sanction for breaching the RLAH rules were increased by the adoption of Law no. 252/2017 amending the Electronic Communications Act 127/2005, to 15 000 000 CZK or up to the 5 % of company turnover¹⁴.

b. Net neutrality

In March 2017 ČTÚ published a guiding document on "selected issues of access to the open internet and European rules on network neutrality"¹⁵. The document provides guidance on the application of certain rules of Regulation (EU) 2015/2120¹⁶ in the Czech Republic in particular on issues of zero-rating, internet access services with data caps and services blocking a certain type of content. The document also provides definition of fixed and mobile internet access service speeds and the definition of large, persistent and regularly occurring degradation of service/deviations in service provision. ČTÚ followed the BEREC guidelines in the document.

All Czech MNOs have a zero-rated service included in their offer.

¹² Regulation (EU) No 531/2012 of the European Parliament and of the Council of 13 June 2012 on roaming on public mobile communications networks within the Union (OJ L 172, 30.6.2012, p. 10), as amended by Regulation (EU) 2015/2120 and Regulation (EU) 2017/920.

¹³ Figures compare Q3/2017 with Q3/2016 retail roaming volumes according to the BEREC International Roaming Benchmark Report, April 2017-September 2017, published on 14 March 2018

¹⁴ Subsection 12 and 22 of section 118 of the Act No. 127/2005 Coll. on Electronic Communications and on Amendment to Certain Related Acts.

¹⁵

<https://www.ctu.cz/sites/default/files/obsah/stranky/956/soubory/vyjadreniceskehotelekomunikacnihouradukvybranymotazkampristupukotevrenemuinternetuae evropskympravidlu.pdf>

¹⁶ Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union (OJ L 310, 26.11.2015, p. 1).

The penalties applicable to the breach of net neutrality rules were increased with the adoption on 19 July 2017 of the Law 252/2017 amending the Electronic Communications Act 127/2005.¹⁷ These penalties may reach up to CZK 15 000 000 (approximately EUR 600 000) or up to 5% of the net turnover.

In 2017 ČTÚ started administrative proceedings for several breaches of Regulation 2015/2120. These consisted in the breach of transparency obligations provided in Article 4(1) as well as breach of Article 3(1)-(2) consisting in different treatment of data traffic that was beyond the appropriate traffic management measures. Different treatment of data traffic was forbidden by the decision of ČTÚ, while providers were required to make an amendment to the terms of the contract.

c. Emergency communications and 112

Caller location requirements are provided in Decree No. 238/2007 on the transmission of data for the purpose of emergency calls. In June 2017 new requirements for caller location accuracy were imposed on operators. Consequently, as of 1 March 2018 MNOs will have to provide Sector ID based location to the authority handling the call. It is planned to implement the handset based caller location solution. To this end, the National Data Protection authority cleared the solution as being compliant with data protection rules. According to the COCOM report on the implementation of 112¹⁸, access to emergency services for disabled end-users is ensured through text relay service. In 2017 the Czech Public Safety Answering System was upgraded to receive and handle eCall.

d. Universal service

Regarding universal service¹⁹, on 7 June 2017 ČTÚ imposed on O2 Czech Republic a.s. the obligation to offer persons with special social needs accessible discounted²⁰ tariff plans. Furthermore, on 10 November 2017 ČTÚ imposed on O2 Czech Republic a.s. the obligation to provide public payphones for next three years.

5. Conclusion

The fixed NGA coverage is extending at good pace in the Czech Republic based on the incumbents' VDSL upgrade. However, the rural coverage lags behind and FTTB/FTTH deployment is almost exclusively deployed in urban areas. The implementation of the subsidy scheme financed from ESIF funds has suffered substantial delays and encountered a number of issues with regard to the design of the tender that will need to be addressed swiftly by the

¹⁷ Section 118 (12) (p) of Act No. 127/2005 Coll. provides that an undertaking providing a publicly available electronic communications service commits an offense when [...] contrary to a directly applicable European Union rules governing common rules to ensure fair and non-discriminatory handling of traffic in the provision of Internet access services and the provision of related end-user rights (1) does not provide access to the open Internet, or (2) does not ensure that a contract that includes Internet access services contains the required data, (3) does not introduce transparent, simple and effective procedures for dealing with end-user complaints. A fine may be imposed for an offense under Section 118, up to [...] CZK 15 000 000 or up to 5 % of the net turnover of the perpetrator of an offense committed for the last completed accounting period, whichever is the higher [...]

¹⁸ <https://ec.europa.eu/digital-single-market/en/news/implementation-european-emergency-number-112-results-eleventh-data-gathering-round>

¹⁹ Directive 2002/22/EC of the European Parliament and of the Council of 7 March 2002 on universal service and users' rights relating to electronic communications networks and services (OJ L 108, 24.4.2002, p. 51).

²⁰ The discount amounts to CZK 200 (approximately EUR 8).

Czech authorities. The effective implementation of the Cost Reduction Directive, in particular, the Single Information Point, would contribute to the deployment of broadband infrastructure to bridge the digital divide.

The National Regulatory Authority did not grant any sustainability derogation to MVNOs while possible breaches of the RLAH rules by MNOs are under investigation.

The national roadmap for the deployment of WBB 700 MHz band is still under development. National consultation is planned to be launched in 2018 followed in 2019 by a multiband auction in the 700 MHz and 3.5 GHz band. The actual provision of services will not start before 2021.