



MAKEDONSKI TELEKOM AD – SKOPJE

Address: Kej 13 Noemvri 6, 1000 Skopje, R. North Macedonia

**ANNUAL REPORT
on the operations of Makedonski Telekom AD - Skopje in 2018**

This Annual Report on Operation refers to Makedonski Telekom AD - Skopje (hereinafter referred to as: "MKT").

The fixed line voice revenues in 2018 still show a downward trend, mainly due to the decrease of the outgoing traffic. On the other side, the mobile voice revenues have been stabilized. The revenues from mobile non-voice services show increase in 2018, supported by the IPTV revenues growth trend mainly due to the growing IPTV subscriber base.

At the end of 2018, MKT had 212,356 voice access fixed lines compared to 210,905 at the end of 2017. The number of total BB accesses is stable with 196,263 at the end of 2018, compared to 193,958 at the end of 2017. The number of IPTV customers at the end of 2018 reached 128,406 customers (including Magenta1, 3 Play and other TV services), marking 9.3% increase from the end of 2017. The number of Fibre to the Home (FTTH) customers reached 48,516 at the end of 2018, marking 14.8% increase from the end of 2017.

MKT had 1,205,728 mobile subscribers at the end of 2018, compared to 1,203,228 at the end of 2017. The mobile market penetration in Republic of North Macedonia is 105.9%, which shows continual trend of individuals owning multiple SIM cards. As a result of the market saturation, MKT especially focuses on retaining the customers in order to protect the market share.

The Macedonian market was characterized by highly competitive campaigns and offers in 2018. MKT launched several new packages, price plans and additional services specially designed to meet the customers' needs, targeting different customer segments, and primarily focusing on delivering the best quality of its own services.

MAGENTA 1 continued to be MKT's main product offering. By integrating mobile and fixed products and services, it maximizes the household base, satisfying the needs of entire family, and securing revenues and profitability.

In order to provide best service quality, MKT continued to invest in its mobile and fix network development, thus improving the availability of both fiber based and mobile high-speed internet.

In 2018, MKT was strongly focused on improving the digital experience of its customers with several large initiatives in both the Business and the Consumers segment.

Presented below are the available remuneration data for the BoD members of MKT with active mandates on 31 December 2018*, related to the applicable period of 2018.

- a) Data about the remunerations in MKT and in other companies if the respective member is also a member of the management bodies of other companies (salary, salary remunerations, remunerations for membership, bonus, insurances and other rights)

Name and surname (applicable period)	Company where the member is a member of the managing body	Salary	Salary remuneration	Remunerations for membership	Bonus	Insurances	Other rights
Nazim Bushi	Makedonski Telekom AD - Skopje (President of Board of Directors)	0	0	MKD 124,000 (monthly net) for period 01.01.2018 – 30.06.2018) MKD 310,000 (monthly net) for period 01.07.2018 – 31.12.2018)	0	0	None
Sasho Veleski	Makedonski Telekom AD - Skopje (Vice President of Board of directors)	0	0	MKD 93,000 (monthly net)	0	0	None
Andreas Maierhofer	T-Mobile Poland (President of the Management Board of T-Mobile Polska)	This may not be disclosed due to applicable requirements.	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
	Makedonski Telekom AD - Skopje (member of Board of Directors)	0	0	0	0	0	None
David Kopriva	Makedonski Telekom AD - Skopje (member of Board of Directors)	0	0	0	0	0	None
Andrea Ságghy	Makedonski Telekom AD - Skopje (member of Board of Directors)	0	0	0	0	0	None
Karoly Schweininger	Vidanet Zrt.	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
	Makedonski Telekom AD - Skopje (member of Board of Directors)	0	0	0	0	0	None
Janos Tremmel	Vidanet Zrt.	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
	Kalásznet Kft.	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
	Makedonski Telekom AD - Skopje (member	0	0	0	0	0	None

	of Board of Directors)						
Peter Veil	Makedonski Telekom AD - Skopje (member of Board of Directors)	0	0	0	0	0	None
Borce Siljanoski	Makedonski Telekom AD - Skopje (member of Board of Directors)	0	0	0	0	0	None
Miroslav Vujic	Makedonski Telekom AD - Skopje (member of Board of Directors)	0	0	MKD 62,000 (monthly net)	0	0	None
Divna Jovkovska Eftimoska	Makedonski Telekom AD - Skopje (member of Board of Directors)	0	0	MKD 62,000 (monthly net)	0	0	None
Zamir Mehmed	Makedonski Telekom AD - Skopje (member of Board of Directors)	0	0	MKD 62,000 (monthly net)	0	0	None

b) Data about the employment if the member has established a labour relation with other employers (name of employer, activity, salary amount, salary remunerations, bonus, insurances and other rights).

Name and surname (applicable period)	Name of employer	Activity of employer	Salary amount	Salary remunerations	Bonus	Insurances	Other rights
Nikola Ljushev	Crnogorski Telekom	Telecommunications	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
Nazim Bushi	Cair municipality	Cair municipality	MKD 24,000 (monthly net)	None	None	None	None
Sasho Veleski	Mikron Tech doo Prilep	Production on industrial and universal small electronic motors	MKD 13,000 (monthly net)	None	None	None	None
Andreas Maierhofer	T-Mobile Poland	Telecommunications	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
David Kopriva	Deutsche Telekom AG	Telecommunications	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
Andrea S�ghy	Magyar Telekom Plc.	Telecommunication	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
Karoly Schweininger	Magyar Telekom Nyrt.	Telecommunications	This may not be disclosed due to	This may not be disclosed due to applicable	This may not be disclosed due to	This may not be disclosed due to	This may not be disclosed due to

			applicable requirements	requirements	applicable requirements	applicable requirements	applicable requirements
Janos Tremmel	Magyar Telekom Nyrt.	Telecommunications	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
Peter Veil	Deutsche Telekom AG	Telecommunications	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
Borce Siljanoski	Deutsche Telekom AG	Telecommunications	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements	This may not be disclosed due to applicable requirements
Miroslav Vujic	Lawyer Miroslav Vujic	Lawyer	MKD 30,000 (monthly net)	None	None	None	None
Divna Jovkovska Eftimoska	None	None	None	None	None	None	None
Zamir Mehmed	None	None	None	None	None	None	None

** These data are presented in scope, layout and content as given by the respective member of the BoD and MKT has not made any verification of the accuracy and completeness of the data.*

In addition, the compensation of the key management of MKT, including taxation charges and contributions, is presented below:

In thousands of denars	2018
Short-term employee benefits (including taxation)	70,964
Contributions to the state pension system on short-term employee benefits	9,499
Other state contributions on short-term employee benefits	4,090
Termination benefits	9,400
Long-term incentive programs	1,621
Other payments	2,593
Total	98,167

Further details on MKT's financial performance, the operating and accounting policies, as well as other relevant disclosures, including details for the investigation into certain consultancy contracts, are given in the MKT financial statements for the year ended 31 December 2018.

Transaction with an interested party

Below are the details of the transactions concluded with an interested party:

- a) On 20.08.2018, MKT concluded an Agreement for International IP Peering and Global Transit Services with Magyar Telekom, as a transaction with an interested party, in view of the fact that Magyar Telekom is the sole shareholder of Stonebridge Communications AD, a shareholder that owns 56.67% of the voting shares (issued shares) in MKT.
With the Resolution of the Board of Directors of MKT adopted at the regular meeting held on 13 March 2018, the conclusion of the Agreement for International IP Peering and Global Transit Services with Magyar Telekom was approved, as a transaction with an interested party, in order to enable international IP connection of all its customers on broadband internet.
The value of the contract is EUR 600,000 and its implementation and the adequate payments by MKT to Magyar Telekom shall be made by 1 July 2020.

- b) At its extraordinary meeting dated 29 October 2018, MKT adopted Board of Directors's Resolution for concluding a Lease Contract for Business Premises with the Office for General and Common Affairs of the Government of the Republic of North Macedonia (hereinafter referred to as: "OGCA"), as a transaction with an interested party, in view of the fact that the Government of the Republic of North Macedonia is a shareholder of MKT that owns more than 38% of the voting shares. OGCA will use the leased premises for the purposes of accommodating the Operational-Technical Agency. The Contract is concluded for a period of 2 months starting as of 01.11.2018, and the subject of the lease are premises that are owned by the Company and are located within the office building – TC Centre – Skopje, located at ul. Orce Nikolov bb Skopje, for a monthly lease in the amount of EUR 5,000 (VAT excluded).
- c) MKT concluded a Delivery Framework Contract for IPTV STBs (set-top boxes) with Crnogorski Telekom, based on the Resolution of the Board of Directors, adopted at the regular meeting dated 12 December 2018, as a transaction with an interested party, considering that Mr. Nikola Ljushev, Executive member of the Board of Directors and Chief Executive Officer of MKT has conflict of interest as an authorized person of both MKT and Crnogorski Telekom. The contract is concluded for an indefinite period and the initial obligation for delivery of IPTV STBs in 2018 shall be in the amount of EUR 150,000, for a quantity of 6 000 set-top boxes.

Regulation and Pricing

The Macedonian law concerning the electronic communications (Law on Electronic Communications - "LEC") was enacted on 5 March 2005. Thus, by means of certain transitional provisions, the country's telecommunications regulations were harmonized with the European Union (EU) regulatory framework. For the purposes of aligning with the EU Framework Directives 2009, the new draft LEC was enacted in March 2014 as primary legislation, as well as rulebooks as secondary legislation.

On 19 December 2014, amendments of the LEC were enacted. One of the most important changes is implemented in Article 75-a, which regulates the prices of international roaming.

In accordance with this Article, the Agency for Electronic Communications ("the Agency") has the right, with a Decision, to determine the maximum prices for the services which are offered to the roaming users from countries with which the Republic of North Macedonia has concluded agreements on the reduction of the prices of roaming services in public mobile communications networks (Bosnia and Herzegovina, Montenegro and Serbia) on a reciprocal base, which cannot be higher than the prices of the same services in the EU. In a period of 3 years, starting from 2015, the prices will be reduced to the maximum determined. There is an initiative for imposing additional roaming regulation for the purpose of bringing the roaming prices between Western Balkan (Kosovo and Albania are included) countries at the same level as the domestic ones, starting from July 2021 (RLAH-roam like a home model). Before the start of the RLAH, the idea is to implement RLAH+ model i.e. to calculate the retail roaming prices based on the wholesale roaming prices plus a surcharge.

On 6 November 2015, in the Official Gazette of the RM No. 193, amendments to the LEC were enacted, wherein the respective changes affect the misdemeanour provisions.

On 27 December 2016, MKT was once again designated as a Universal Service (US) provider for the following period of 5 years, for fixed telephony services and Internet of 2 Mbit/s, public payphones and equivalent access for disabled end-users for a five-year period starting as of 1 January 2016.

At the end of 2018, the Macedonian Ministry for Information Society and Administration, published a draft national broadband plan for the RM. The main purpose is to set the national NGN broadband targets.

Regulation of Fixed Line Business

MKT is a significant market power (SMP) operator on the wholesale markets of fixed telephony networks and services, including the market of access to the networks for data transmission and leased lines. MKT, as an SMP operator, has the obligation to enable its subscribers to access publicly available telephone services of any interconnected operator

with an officially signed interconnection contract.

In 2017, both relevant retail markets for fixed telephony: 1. Access to the public telephone network at a fixed location and 2. Publicly available telephone services at a fixed location were deregulated. Based on it, MKT is not an SMP anymore and has no ex-ante regulations for the retail fixed services.

According to the bylaws, MKT has an obligation to publish reference offers for the wholesale products for interconnection, Unbundling Local Loop (ULL), Local Bit-stream Access (BSA), Reference Access Offer for providing access to physical infrastructure and use of specific network facilities and wholesale terminating segments of leased lines.

On 15 July 2014, the Agency introduced an obligation for all operators with cable network infrastructure (including MKT) to build their network underground and to place their existing aerial networks underground by the end of 2020 in the cities with more than 15,000 citizens. Additionally, all fixed and mobile operators are obliged in terms of the digital agenda targets to provide broadband services with a minimum speed of 30 Mb/s for 100% of the households' network coverage and 100 Mb/s for 50% of the households' network coverage by the end of 2020.

The Rulebook on the emergency number E 112 was enacted on 27 October 2015 (Official Gazette No. 184/2015). Even though the obligations for the operators are defined in the rulebook, the date for starting the service is not set.

Regulated Wholesale Prices

In May 2017, the Agency adopted a Decision for designation of MKT as an SMP operator on wholesale markets, local and central access on a fixed location, relevant markets, 3a and 3b. With the same market analysis, one.Vip was designated as an SMP operator for the first time, with same regulatory obligations as MKT. one.Vip is obliged to offer wholesale broadband services on DOCSIS technology.

AEC developed a process and model for economical replica of retail and wholesale NGA products. In January 2019 AEC approved the new decreased wholesale prices for mobile origination services (MVNO).

Regulation of the Mobile Business

MKT has radiofrequency usage rights for the following radiofrequencies for public mobile communications systems:

- 2 x 12.5 MHz in the 900 MHz band, validity period: 8 September 2008 – 8 September 2018 (10 years)
- 2 x 10 MHz in the 1800 MHz band, validity period: 9 June 2009 – 9 June 2019 (10 years)
- 2 x 15 MHz 2100 MHz band, validity period: 17 December 2008 – 17 December 2018 (10 years)
- 2 x 10 MHz in the 800 MHz band, validity period: 1 December 2013 – 30 November 2033 (20 years)
- 2 x 15 MHz in the 1800 MHz band, validity period: 1 December 2013 – 30 November 2033 (20 years)

2 x 15 MHz in the 2100 MHz band and 2 x 12.5 MHz in the 900 MHz are prolonged until 2028.

The competitor one.Vip has frequency usage rights for the following radiofrequencies for public mobile communications systems:

- 2 x 12.5 MHz in the 900 MHz band
- 2 x 10 MHz in the 2100 MHz band
- 2 x 10 MHz in the 800 MHz band
- 2 x 15 MHz in the 1800 MHz band
- 2 x 10 MHz in the 800 MHz band
- 2 x 15 MHz in the 1800 MHz band

The duration of two licences positioned in the lower parts of the bands previously owned by one.Vip was until 2017, 10 MHz from 900 MHz band and 10 MHz from 1800 MHz band and they expired on 23 March 2017. Based on a request from one.Vip for licence prolongation, the Agency adopted Resolution No. 0804-974 dated 2 November 2016 not to prolong these two licences. Their resolution was based on efficient and effective spectrum usage and

necessity for realising radiofrequencies for entrance of third mobile operator on the market in order to foster competition. At the moment, these radiofrequencies are not allocated and are not available for sale to the existing operators.

2 x 15 MHz in the 2100 MHz band is prolonged until 2028.

The retail services provided by the mobile network operators in Republic of North Macedonia are currently not subject to price regulation.

MKT is an SMP Operator on the wholesale market for voice call termination services in mobile communications networks, whereby several obligations are imposed: interconnection and access, non-discrimination in interconnection and access, accounting separation and price control and cost accounting.

At the beginning of the year 2016, the Agency conducted new market analyses on the relevant market for mobile origination and adopted a new Decision for SMP designation in April 2016. The regulatory remedies imposed by the Agency are as follows: joint dominance of one.Vip and MKT, the same remedies for both operators, mobile access obligation for all MVNO hybrid types (including Reseller), a cost based price for Full MVNO and retail minus (-35%) for the Reseller, an obligation for access to MMS services and mobile data based on technology neutrality (including 4G access).

An auction procedure concluded in August 2013 awarded the whole 790 – 862 MHz band together with the unassigned spectrum in the 1740 – 1880 MHz band for Long Term Evolution (LTE) technology in a public tender. Each of the 3 Macedonian mobile operators acquired an LTE radiofrequency license of 2x10 MHz (in the 790 – 862 MHz band) and 2x15 MHz (in the 1740 – 1880 MHz band). Each license was acquired for a one-off fee of EUR 10.3 million (MKD 634,011 thousand). TMMK will retain the license for 20 years, until 30 November 2033, with an extension option for up to 20 years in accordance with the LEC.

Audiovisual and Media Regulation

As of 28 December 2018 the Law for Audio and Audiovisual Media Services has been amended in a way that new obligations are imposed to the operators that retransmit program services. By submitting the application for program services registration to the Agency for Audio and Audiovisual Media Services, the responsible person of the operator and the person in charge of the broadcaster submit a statement under full moral, material and criminal responsibility confirming that for the retransmission of program services they have regulated TV rights for a foreign broadcaster who plans to retake its entire programming service for the territory of the Republic North Macedonia. In case of retransmission of any part of the program service of a broadcaster from another country for which the broadcaster does not have regulated rights for the territory of the Republic of North Macedonia, all the moral, material and criminal liability falls on the broadcaster and on the operator that retransmits its program service. The procedure for determining the liability for the violation or the violation committed, as well as the manner of registration of a legal representative of a broadcaster from another country shall be prescribed by the Council of the Agency for Audio and Audiovisual Media services with a by-law.

On 4 February 2019, additional amendments on the Law on Audio and Audiovisual Media Services were adopted: "Paragraph (3) and paragraph (4) of Article 35 amending Article 143 of the Law Amending and Supplementing the Law on Audio and Audiovisual Media Services ("Official Gazette of the Republic of North Macedonia" No. 248/2018) shall enter into force 60 days after the election of the Council of the Agency for Audio and Audiovisual Media Services, elected in accordance with the Law on Amending and Supplementing the Law on Audio and Audiovisual Media Services ("Official Gazette of the Republic of North Macedonia" No. 248/2018)".

All of the above shall enter into force 60 days after the election of the Council of the Agency for Audio and Audiovisual Media Services.

Competition

The competition in the telecommunications business is well-developed in all segments. Two main integrated players that offer full portfolio of fixed and mobile services shape the telecommunications market in Republic of North Macedonia .

Vip Operator, a subsidiary of the Telekom Austria Group, was merged with Telekom Slovenije's subsidiary ONE. The merger was consolidated as of 1 October 2015. In November 2017, Telekom Austria became full owner of the company, after purchasing the remaining 45% share from Telekom Slovenije, as agreed with the merger.

one.Vip, as an integrated operator, was offering various services - mobile and fixed voice, mobile and fixed broadband Internet and TV. The main focus was put on mobile post-paid, as well as on bundled FMC offers. In the mobile segment one.Vip continued to increase the contract ratio, which reached 63% by YE 2018. Total mobile base declined by 1.5% YoY, as a result of decline in prepaid segment. (source: Telekom Austria Q4 2018 report). In the fixed segment, one.Vip offers triple play bundles (fixed voice/Internet/TV) and FMC products. They introduced broadband internet for home use over 4G routers in 2017 and managed to increase significantly their fixed BB base in 2018 (15% Q4 YoY: Telekom Austria Q4 2018 Report).

Telekabel is the biggest cable provider among around 50 active cable operators, having strong presence in regions where MKT has low market share. They are entering in the mobile business as of January 2019, as an MVNO on MKT's network. By offering all fix and mobile services, they are becoming a new FMC player on the market.

The other cable operators also have a significant role in the telecommunications market and, as providers of cable television as their main service; they are well-established on the Macedonian market. Most of them offer Internet broadband services and fixed voice services on top of the TV service.

The MVNO Lyca-mobile entered the market in July 2016, on the network of one.Vip, and reached a low market share by year end 2018 (around 2% according to an internal estimation). They are limited to prepaid offers only, and focus on international calls and data packages.

The product portfolio of all operators is driven by bundle products. The cable operators are bundling their TV offer with Internet and fixed voice services. The fixed voice service of the cable operators is usually perceived as a value added service. As the overall market is price sensitive, the price perception plays a major role in the customers' choice and thus the cable operators' offers are seen as more competitive than MKT's.

The trend of number portability continued to increase in 2018, for both mobile and fixed numbers. By the end of Q2 2018, there were almost 245 thousands mobile and 179 thousands fixed ported numbers in total (source: Report for electronic communications development Q2 2018, the Agency).

As at 31 December 2018, MKT has an estimated retail fixed voice market share of 56%, retail fixed broadband Internet market share of 41% and TV market share of 31% (source: internal best estimates for market development based on official Telekom Austria report Q4 2018 and AEC Q2 2018 report). In the mobile market, the market share of MKT was estimated to 50% (source: internal best estimates based on official Telekom Austria report Q4 2018, AEC Q2 2018 report and internal reports for active customers).

Marketing and Sales

Operating in a highly competitive environment in all telecommunications segments, MKT was focused on the retention of the existing customers and their up-sales to bundled converged services, as well as on the acquisition of new customers on the fixed and mobile market, for both the residential and the business segment.

Simplify the products

The simplicity of our offers and organization makes the digital transformation of our core business easier. In this way

we increase our implementation speed – both in terms of the interaction with the customers and the implementation of new strategic initiatives.

To simplify the products means to offer our customers intuitive products and easy to understand services. Our convergent products such as Magenta 1 are the first step in that direction. Additionally, we want to significantly reduce the product complexity and to optimize them wherever possible.

Novelties in products portfolios

Magenta 1. Full of great benefits for families. In 2018, Magenta 1 remained the main offer that allows flexible combination of mobile communication, Internet and TV at home. Following the trends and the growing customer needs for mobile data, it was enhanced with additional features such as **Video** and **Family Share**. With **MaxTV GO**, the Magenta 1 customers can follow the Sport TV content, in which **UEFA Champions League and League Europe is exclusively available only for MaxTV customers**, from anywhere and at any device.

Video: We are revolutionizing the mobile market. Video was launched in February 2018 and it is a revolutionary new rate option that enables Magenta and Smart customers to stream videos over the mobile network to their smartphones without using the high-speed data volume included in their rate plans.

Family Share: For families and youngsters. The Family share option was launched in March 2018 and it is exclusively available only for Magenta 1 customers. It enables sharing the mobile internet with the Magenta 1 family members in the course of the month. And everything is simple and easy using the new Telekom MK app.

Sport: Makes the real difference. In line with the strategy for offering exclusive TV content as a main differentiator from the competition, MKT extended its Sport TV offer and, as of September 2018, it has the exclusive TV rights for broadcasting the UEFA Champions League and Europa League matches in the country.

Family Budget: More choices for purchasing devices. With Family Budget, the Magenta 1 customers have the option to purchase not only handsets, but also TV sets, laptops and tablets at attractive prices. This option was intensively communicated during 2018 as part of the Sport communication, and hence it contributed to the significant increase of sales of TV sets in 2018.

Magenta 1 has been continuously strengthening its position as the best offer on the market, reaching 12% of the households in the country.

The further growth of the mobile post-paid customers was supported by Smart portfolio that was enhanced with new additional features in combination with attractive handset offers. It continued to be very well perceived by the customers during 2018.

2018 was marked as the year of broadband growth, mainly by introducing new approach for addressing the non-addressed segments and x-sell of fixed services to the existing mobile post-paid base.

Further growth in TV was supported by the broadband growth, but also by keeping the strategy of offering the exclusive content as a main differentiator from the competition. As of 2018, MKT has the full exclusivity for TV distribution of UEFA and Europa League matches. The TV service was also enhanced with improved MaxTV GO that provided the customers with an ability to watch TV “wherever they are and from any device”

In the prepaid segment, the active base was stimulated by activities with tailor made offers for different segments. Different communication activities were executed, mainly with BTL campaigns giving positive results on both the customer satisfaction and the financials. During the summer period excellent results were achieved by attracting visitors to MKT’s offer.

In the Business segment, MKT’s focus proposition during 2018 was Magenta 1 Business. FMCC revenues in 2018 have increased by 21% compared to FMCC revenues in 2017, thus reaching 70% of total SOHO and SME revenues. FMCC proposition was enriched with the newly introduced Office 365 product which was well accepted on the

market and contributes towards the strengthening of the MKT's position as a service provider of everything that businesses need.

Best quality service

In order to provide best service quality, MKT continuously invests in the network development, widening the FTTH and VDSL coverage in the country and providing services via 4G cubes in specific regions, thus reaching to 100% Internet availability, country wide. In 2018, the FTTH home passed rate is 28%.

In mobile communication we set ourselves apart from our competitors with the outstanding quality of our network. We have regularly come out on the top position on the independent network tests. In 2018, MKT was rated as "best in test" by the P3 communications network experts.

Excel in customer experience

Providing simple and easy customer journey was imperative for 2018. To achieve this, the different customer segments were addressed via the most appropriate sales channel. Although the PoS remains the main sales channel, in 2018 the D2D and Telesales significantly increased their contribution.

Digitalization is the key for improving the customer experience. In 2018 MKT was strongly focused on improving the digital experience of its customers. Two main pillars were push of the e-commerce and usage of the self-service mobile app (Telekom MK).

With continuous improvement of the on-line shopping experience, the sale doubled in 2018 compared to 2017. The number of active Telekom MK app users significantly increased from 4% at the beginning of the year to more than 25% at the end of the year, from the residential smartphone user base. It was a result of the improved customer experience and the new features. The desktop and mobile versions of the web were constantly improved according to the latest standards and trends in the industry.

In 2018, MKT started the Digital Hub, attracting students from e-business and IT, in order to bring fresh new ideas in the e-commerce part, as well as move towards a more agile way of working and digital product development.

Another app is the use of Facebook chatbot in direct dialogues with the customers. The Virtual Technician (Vito) available via Moj Telekom provides self-service possibilities. With Vito, the customers themselves can check the quality of service, reset routers, set WiFi and other actions online. Besides the traditional customer support via a call center, the customers are also served online via mobile and web life chat channels.

In marketing communications, during 2018, MKT kept the same course as in 2017: we communicated three major messages – we have the best network; we have the best offer for the whole family, with Magenta 1; and, we offer the best standalone communication option, via Smart post-paid.

Sports continued to be our main domain of customer engagement, bringing to life our exclusive Champions League content, as well as the handball state representation sponsorship, through several major and numerous minor social media activities – Fantasy Football, Virtual stadium, a trip award to the world handball championship, Trip award to CHL finale in Kiev, and many more.

In business and ICT, our focus was on promoting Telekom MK as the most innovative partner for digital transformation of SME/SOHO as well as major accounts, with Magenta 1 Business as the best-seller, combining communication and innovative services in one package. In addition, the Smart City products and offers were given special promotion with a permanent display within the corporate HQ.

In media, in addition to regular business, the first programmatic efforts, both on our behalf and for few local websites, happened this year, opening up opportunities for improved audience purchase, as well as more effective budget utilization in the upcoming years.

Research and Development

MKT continues with its determination and its work to be an innovation and technology leader on the market. Among the main focuses, as a continuation to the previous years, are the projects in the area of Smart City. Further to our successful Smart Bus Transport Project implemented for the City of Skopje in 2015 and 2016 and the realized demo operation solutions for a Smart Light, Smart Waste, Smart Parking, Smart Bench and Electrical Vehicle Charging in 2017, during this year we have demonstrated the advantages of the implementation of such smart systems and our competences in this area to municipalities and key accounts.

Apart of the Smart City business area, we drive full force exploring of other business possibilities for growth and development, in the field of finance, health, education etc., especially considering their business prospects and potentials in terms of top line growth of our ICT and B2B business overall. As a firm supporter of the new era of smart connected way of life and working, in 2018 MKT successfully realized its pilot project in the area of Smart School - Hybrid Classroom, which is about implementation of an ICT assisted solution for interactive learning during classes and at distance, in two secondary schools in the City of Skopje. The implementation of this project aims at creating positive change in terms of the way of education, and providing advanced, self-driven, collaborative and interactive classroom experience for the youngsters. In addition, its aim is to demonstrate how the use of technology could support the quality and efficiency of the education, thus impacting the long-term development of the educational system, as well as the society and economy.

Moreover, we investigated the potential market and we made a cost analysis for the implementation of Narrowband for Internet of Things (NB-IoT). Furthermore, utilizing the potential coming out from the EU funded projects in smart Digitalization, IoT solutions, e-government, etc., was also under close loop.

In addition to the business development activities given above, in 2018 we put the focus on the development of the projects and products for digitization and smart working for the business segment, which we believe are growing market potentials in the forthcoming years, expected to be driven by the advantages of the efficiency of ICT in daily workflows systems and networks, as well as by the transparency and accountability of such solutions.

Under the motto - INNOVATION SYNERGIES – WIN WITH PARTNER, we keep further on our strategic technology partnerships-Cisco Gold, EMC Cloud solution provider and Microsoft Silver Data Center. Furthermore, in 2018 we got recertification of our Oracle Platinum and HP Business partnership, we finished the process of getting a status of Microsoft Cloud Solution provider and we launched Office 365 as a first Microsoft Cloud product. These partnerships are confirmations of MKT's competences in the areas of enterprise networks, cloud, collaborations, network securities, and Data Center technologies. Such competences are deemed to be crucial assets on which we can leverage further in our ICT business development activities.

Competitive pressure in conjunction with saturated Telco market, complexity of business environment with multiple and more sophisticated customer segments, multiple vendors and complex service offerings, fast changes in the technology with new technology paradigm targeting for one universal IP network and cloud based service delivery platform, as well as changes in the regulations, are only part of the challenges that MKT will face in the next few years.

In order to keep sustainable business and major revenue streams in a very complex telecommunication environment, as well as proactively influence the market trends with new business opportunities, MKT is aiming to keep its technology leadership position and ensure growth through service improvement and innovation by continuous development of its infrastructure.

Development of infrastructure and investment in Technology should encompass the following objectives/trends: broadband performance, integrated service delivery platforms, efficiency and quality leadership, self-service enablers, cloud concept and "virtual" infrastructure, cost efficiency, flexibility and responsiveness – reduced time-to-market, as well as competence development.

During 2018, we have made significant steps towards the achievement of our goals with the development of the

telecommunications network, service platforms and supporting systems.

In order to ensure a high quality broadband (BB) performance, BB market and technology leadership, MKT is continuously investing in fixed and mobile access development. At the end of 2018, installed capacity of more than 172,500 homes passed or 30.5% households' coverage with FTTH from MKT's network was reached. Regarding the VDSL rollout, the total numbers of VDSL CO were more than 154k and more than 13k VDSL FTTC homes passed.

Hybrid Access Solution was further developed which aggregates the bandwidth of both DSL and LTE transmission links and creates a single, powerful broadband pipe between the network service node and the customer's Broadband CPE. At the end of 2018, there were more than 4.8K users and more than 2.8K FMS users.

Significant improvement was also achieved in terms of the LTE rollout, reaching 92% territory coverage and 99.67% population coverage outdoor. More than 95% of the total sites provide LTE services. At the end of 2018, 62% of BTSs were connected via optic.

Alongside the extensive mobile BB access rollout, during 2018, high focus was put on the network quality and performance, which was confirmed by P3 "Best in Test" certificate in November 2018 which represents an internationally recognized acknowledgement for quality of mobile network, as well as by the National Report for Network Quality Parameters prepared by the Agency. MKT is the best in class for voice and data services and leads the overall ranking with 907 points.

During 2018, the emphasis was placed on the fixed voice network modernization. The scope of the project included HW/SW upgrade of IMS network nodes, OSS migration and consolidation, MMDec HW/SW upgrade, as well as LI HW/SW upgrade. The Project for Consolidation of subscriber databases was finished with the migration of the fixed customers at the end of November 2018. It's purpose was to unify the existing monolithic 2G/3G and LTE UDM mobile networks with the existing monolithic UDM for IMS fixed network. It provides consolidation of user data for all network functions such as user authentication, service authorization, mobility management and fraud protection on a single SDM system, thus enabling convergence of CS, PS, EPC, WLAN, M2M and IMS user profile services.

MKT continuously follows the latest technology trends in the world thus providing its customers with the latest innovative services which constantly keeps it as the leading operator on the market in Republic of North Macedonia and wider as part of the DT Group. In that line, the start of VoLTE project in MKT was announced at the end of 2018.

The growth of BB access and the continuous traffic increase are supported with further development of the IP Core and transport network as the cornerstone of all services. During the last two years, the IP Core & Transport Network Modernization project which includes modernization, reorganization and extension of all IP Core Network elements, Transport and Aggregation systems was successfully completed. MKT managed to install full DWDM network and finalized IP Core implementation and integration, as well as IP Core services migration. The plans are to continue with the HA Aggregation Network modernization and to finish 100% of the Aggregation sites and continue with the activities for modernization of the SPNI & BRAS segment of the network.

The video and high-speed data services are expected to be the main driver and main potential for further market differentiation as well as main opportunity for business growth. In order to improve the quality of the IPTV service and to achieve the ambition for being #1 TV provider on the Macedonian market, it is very important to follow the new technologies and new market trends. In that line, the expectation from the platform, besides ensuring the high quality of the existing services, is a new functionality that should increase the interactivity and service personalization for the customers.

Information technology

Following the Corporate Strategy and the EU IT strategy in the DT group, in 2018, MKT IT developed an IT Strategy and Business Plan that is focusing on:

1. Supporting new products development
2. Digitalization

3. Future proof and transformation
4. Cloudificatiion
5. New IT Architecture alignned with EU IT
6. Automation

There are several projects that are aimed at providing efficient IT systems and solutions which will fulfil the plan and enable the realization of the strategic focuses. In order to support new products development, functional improvements of several systems such as CRM system, Billing, OSS, as well as SAP system were made during 2018.

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