



**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 2019**

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

Total revenues in 2019 has increased driven by the continued expansion of the customer base across all segments. The higher mobile revenues are driven by mobile non-voice services (mobile internet) while mobile voice revenues show downward trend. Fixed revenues are stable, and the decrease of the fixed voice revenues is compensated by IPTV revenues growth trend. To sustain the positive performance recorded in 2019, MKT intends to further leverage integrated Magenta offer, high network quality and market position as a premium provider.

At the end of 2019, MKT had 215,810 voice access fixed lines compared to 212,356 at the end of 2018. The number of total BB accesses has increase with 204,247 at the end of 2019, compared to 196,263 at the end of 2018. The number of IPTV customers at the end of 2019 reached 136,372 customers (including Magenta1, 3 Play and other TV services), marking 6.2% increase from the end of 2018. The number of Fibre to the Home (FTTH) customers reached 60,172 at the end of 2019, marking 24% increase from the end of 2018.

MKT had 1,219,797 mobile subscribers at the end of 2019, compared to 1,205,728 at the end of 2018. The mobile market penetration in Republic of North Macedonia is 103.8% , 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.

MKT registered customer growth in all three focus segments – postpaid, BB internet and TV customers. And as of the end of Q2 2019, MKT become single largest TV operator (in terms of TV customer base) in North Macedonia.

MAGENTA 1 continued to be MKT's main product offering both in Business and the Consumers segment. Simplification of product propositions and digital customer experience were main guiding directions in 2019.

Presented below are the available remuneration data for the BoD members of MKT with active mandates on 31 December 2019\*, related to the applicable period of 2019.

- 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 (Non-Executive member and President of Board of Directors)	0	0	MKD 310,000 (monthly net)	0	0	None
Sasho Veleski	Makedonski Telekom AD - Skopje (Non-Executive member and 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 (Non-Executive member of Board of Directors)	0	0	0	0	0	None
David Kopriva	Makedonski Telekom AD - Skopej (Independent 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 (Non-Executive 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 (Non-Executive member of Board of Directors)	0	0	0	0	0	None
Peter Veil	Makedonski Telekom AD - Skopje (Independent member of Board of Directors )	0	0	0	0	0	None
Borce Siljanoski	Makedonski Telekom AD - Skopje (Non-Executive member of Board of Directors)	0	0	0	0	0	None
Vladimir Ivanovski	Makedonski Telekom AD - Skopje (Non-Executive member of Board of Directors)	0	0	0	0	0	None
Sasho Simjanovski	Makedonski Telekom AD - Skopje (Non-Executive member of Board of Directors)	0	0	MKD 62,000 (monthly net)	0	0	None
Miroslav Vujic	Makedonski Telekom AD - Skopje (Non-Executive member of Board of Directors)	0	0	MKD 62,000 (monthly net)	0	0	None
Divna Jovkovska Eftimoska	Makedonski Telekom AD - Skopje (Independent member of Board of Directors)	0	0	MKD 62,000 (monthly net)	0	0	None
Zamir Mehmed	Makedonski Telekom AD - Skopje (Independent 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 14,708 (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
Karoly Schweininger	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
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 Siljanovski	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
Vladimir Ivanovski	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
Sasho Simjanovski	TTK Bank AD Skopje	Financial services	MKD 52,580 (monthly net)	None	MKD 6,500	None	MKD 13,000
Miroslav Vujic	Lawyer Miroslav Vujic	Lawyer	MKD 30,000 (monthly net)	None	None	None	None
Divna Jovkowska 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	2019
Short-term employee benefits (including taxation)	69,454
Contributions to the state pension system on short-term employee benefits	9,196
Other state contributions on short-term employee benefits	4,604
Termination benefits	4,362
Long-term incentive programs	14,401
Other payments	2,505
Total	104,522

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 2019.

### **Transaction with an interested party**

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

- a) At its extraordinary meeting dated 29 October 2018, MKT's Board of Directors adopted a Resolution for concluding a Lease Contract for Business Premises with the Operational-Technical Agency (hereinafter referred to as: "OTA"), 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.

The Contract is concluded for a period of 5 years by 31 December 2023 inclusive, and the subject of the lease are premises that are owned by the MKT 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).

- b) Additionally, at its regular meeting held on 21 March 2019, MKT's Board of Directors adopted a Resolution for concluding an Annex to the Lease Contract for Business Premises with OTA, as a transaction with an interested party due to the fact explained above.

The Annex to the Contract expands the subject of the lease with additional space owned by MKT, equipped with furniture and IT equipment, which is located within the already leased business premises in the office building - TC Centre - Skopje, located at ul. Orce Nikolov bb Skopje, for a monthly lease in the amount of EUR 2,583 (VAT excluded).

### **Regulation and Pricing**

The Law on Electronic Communications - "LEC" of North Macedonia was enacted in March 2014 as primary legislation, followed by rulebooks adopted as secondary legislation in order to align with the EU Framework Directives 2009.

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.

In March 2019, article 75-a was changed in order to enable extension of the RLAH regulation. On 5 April 2019, six

Western Balkan countries signed an agreement aimed at gradually abolishing the retail roaming surcharges by 1 July 2021. The Western Balkan regional roaming rules were inspired by the EU Roaming Regulation. In particular, the agreement includes a “roam like at home” principle: from 1 July 2021 the roaming services within the region should be provided at domestic retail prices without surcharges for international roaming. The agreement applies only on the territories of the Western Balkan countries and has no impact on the users in the European Union. The Western Balkan countries comprise Albania, Bosnia and Herzegovina, Kosovo, North Macedonia, Montenegro and Serbia. The agreement replaces the previous agreement of 29 September 2014 signed by the four countries of Bosnia and Herzegovina, North Macedonia, Montenegro and Serbia.

In July 2019, the LEC was changed once again, and article 29-a was added in order to enable the financing of the Operational-Technical Agency. With this regulation, the Agency is obliged to transfer part of its funds to finance the activity of the Operational-Technical Agency, as follows:

- 50% of the total revenue generated by the Agency for the preceding calendar year from the annual fees paid by the operators for market surveillance, set out in the Agency's annual performance report for the previous calendar year, adopted by the Commission of the Agency, and
- 10% of the total revenue generated by the Agency for the previous calendar year from the revenues from the annual fees for radio frequency utilization by the holders of authorizations for radiofrequency utilization, set out in the Agency's annual report for the previous calendar year, adopted by the Commission of the Agency.

The Agency is obliged to pay the amounts to the Operational-Technical Agency no later than April 15 of the current year.

New articles 71-a 71-b, 71-c, 71-d and 71-e were added requiring the establishment of a National Broadband Competence Office as an expert and advisory body to support the investment in Broadband Networks.

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.

In April 2019, the Ministry of Information Society and Administration issued the National Broadband strategy which sets the following targets:

- By the end of 2023, at least one major city should be covered with 5G signal;
- By the end of 2025, the regional highways and state highways defined by the Agency should be covered by a continuous 5G signal;
- By the end of 2027, all urban areas will be covered by a continuous 5G signal;
- By the end of 2029, everyone will have access to 5G internet with a minimum internet speed 100 Mbps;
- By the end of 2029, at least 50% of the total number of subscribers agreements of households across the whole country should have internet access of at least 100 Mbps;
- By the end of 2029, all households will have affordable access to a network that provides download speeds of at least 100 Mbps with the possibility of upgrading to gigabit speed;
- By the end of 2029, all public institutions (schools, universities, research centres and other educational institutions, health institutions, ministries, courts, local governments and other public authorities and bodies,) should have symmetric access to the Internet of at least 1Gb/s.

### **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. Publically 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, A1 Macedonia (formerly known as one.Vip) was designated as an SMP operator for the first time, with same regulatory obligations as MKT. A1 Macedonia is obliged to offer wholesale broadband services on DOCSIS technology.

In the middle of 2019, the NRA implemented ERT testing (margin squeeze methodology) to the NGA based broadband wholesale services supplied by the two dominant operators (MKT and A1 Macedonia). The developed ERT model will test the economic replicability of the retail bundles including broadband services with access speed higher than 30 Mb/s.

### **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, 2 x 12.5 MHz in the 900 MHz are prolonged until 2028 and 2x10 MHz on 1800 MHz band is prolonged until 2029.

The competitor A1 Macedonia 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 A1 Macedonia 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 A1 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 ex-ante 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 A1 Macedonia 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). In January 2019, the Agency approved the new decreased wholesale prices for mobile origination services (MVNO).

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). MKT 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 of 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. Since the new members of the Council have not been elected so far, the above amendment is not implemented in practice, yet.

## 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 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. In September 2019 the company was rebranded as 'A1'.

A1 Macedonia, 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, A1 Macedonia's contract ratio reached 63% by Q3 2019. The total mobile base increased by 3.3 % year over year, as a result of new product logic introduced in Q2 2019, which stipulates reporting the WiFi routers in mobile post-paid (previously reported in the fixed segment, in fixed voice and Internet) (source: Telekom Austria Q3 2019 report).

In the fixed segment, A1 Macedonia offers triple play bundles (fixed voice/Internet/TV) and FMC products. They introduced broadband internet for home use over 4G routers in 2017 and significantly increased their fixed BB base in 2018.

Telekabel is the biggest cable provider among around 30 active cable operators, having strong presence in the regions where MKT has low market share. They entered the mobile business in January 2019, as an MVNO on MKT's network, offering post-paid services. By offering all fix and mobile services, they became third fully integrated 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 Lycamobile present on the market since July 2016, on the network of A1 Macedonia, reached a low market share by year end 2019 (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.

As at 31 December 2019, MKT has an estimated retail fixed voice market share of 62%, retail fixed broadband Internet market share of 45% and TV market share of 32% (source: internal best estimates for market development based on official Telekom Austria report Q3 2019 and AEC Q2 2019 report). In the mobile market, the market share of MKT was estimated to 48% (source: internal best estimates based on official Telekom Austria report Q3 2019, AEC Q2 2019 report and internal reports for active customers).\*

\*All market shares are based on the new product logic of Telekom Austria, reporting WiFi routers in mobile. (starting from Q2 2019)

## Marketing and Sales

In 2019, MKT was focused to continue the growth of its postpaid customer base, as well as the base of broadband internet and TV customers. The bundled convergent packages remained the core proposition in both the residential and the business segment. The market environment become even more competitive with the entrance

of the new mobile (MVNO) operator (Jan. 2019).

### **Simplification of the products and digital customer experience**

The simplification of the product propositions and the enabling of digital interaction channels were the main guiding directions in the majority of MKT offers in 2019. The Telekom app that was completely redesigned in May 2019, was continuously improved so as to offer 24/7 customer service, fast and easy bill payment and possibility to manage their own products & services for the MKT residential customers. By the end of 2019, the base of app users grew substantially from 25% to more than 46% of the base of residential smartphone users .

Following this direction, a lot of novelties in the product propositions were implemented in the course of 2019. Below are some highlights:

Magenta 1 was redesigned so as to allow bigger transparency on the prices of the individual services and benefits included in the package, as well as higher flexibility in shaping the offer for different types of families (extending the proposition even for households of one member).

A completely new web Magenta 1 configurator was introduced as part of the efforts to provide superior digital experience, supporting better transparency and easier configuration by existing and prospect customers.

In September 2019, additional benefits were introduced for the new Magenta 1 proposition that are available exclusively via the Telekom App, allowing customers to choose different benefit every month according to their needs.

In 2019 , a special attention was paid to the introduction of products that make lives of the citizens easier and smarter, by introducing propositions such as Smarthome (home automation), Kids security and before the end of 2019 also handset insurance in the portfolio.

Magenta 1 has been continuously strengthening its position as the best offer on the market, reaching approx. 15% of the all households in the country.

By the end of 2019, powered by the strong growth of Magenta 1 users, MKT recorded customer growth in all three focus segments – post-paid, BB internet and TV customers.

As of the end of Q2 2019, MKT became the single largest TV operator (in terms of TV customer base) in North Macedonia.

In the Business Segment, we drive our growth story via Digital Transformation. We try doing things in a different way, pioneering working models and digital competencies, so that our business transforms from inside out.

By introducing SFA- Sales Force Automation, as an end-to-end system that covers the entire sales portfolio, we simplify our processes, transforming our business towards digital operations with full focus on convergence, delivering highest customer satisfaction.

Magenta 1 Business (M1B) remains the focus proposition in the B2B segment, and it is used by 53% of the total SOHO and SME customers. The “Highest satisfaction index compared to competition” contributes towards long term customer retention and therefore the customers’ migration towards M1B and the revenue shift from one leg to FMCC customers remain B2B main targets.

Aiming to strengthen the market position as a service provider of everything that businesses need, the Magenta 1 Business proposition is enriched with digital services, customized for specific industry verticals. Embedding digital services in M1B, we have managed to increase the Cloud revenues in the SOHO and SME segment for 31% in 2019 compared to 2018.

In order to maintain a significant price premium, we have introduced new services that differentiate us as a telco provider and are unique on the market, such as 4G Back Up for Broadband services and Managed Security.

This trend is expected to continue in 2020, and even grow further, based on the strengthening of the existing portfolio of trusted services and positioning MKT as a national Certificate Authority for electronic signatures, electronic corporate seals and time stamps.

### **“Use the technology for good” and “Telekom – your partner in Digital Transformation”**

In 2019, our marketing communications activities were focused on bringing to life our re-honed brand promise - to connect everyone to the opportunities of now. Through our communication we demonstrated that using technology for good can give everyone unlimited opportunities for personal and societal improvement.

In terms of the media, following the global trends, this year was marked with expanded advertising activities on the social media, experimenting with different variables aimed at most effective budget utilization.

### **Best quality service**

In order to provide best service quality, MKT continuously invests in the network development, widening the FTTH and VDSL coverage and providing services via 4G cubes in specific regions, thus reaching 100% Internet availability, country wide. In 2019, the FTTH coverage is 35% of all households in the country.

In mobile communications, we differentiate ourselves from our competitors with the outstanding quality of our network. We have been regularly coming out on the top position on the independent network tests. In the last performed P3 tests (2018), MKT was rated as “best in test” by the P3 communications network experts.

### **Excel in customer experience**

In 2019, according to our regular customer satisfaction surveys, MKT managed to remain number one operator in customer satisfaction in mobile, fixed and convergent services. Also, MKT managed to further improve its customer satisfaction vs previous year.

Providing simple and easy customer journey in an omnichannel approach was imperative for 2019. To achieve this, the different customer segments were addressed via the most appropriate sales channels. The Point of Sales are continuously modernised following the latest trends to provide best customer experience, where the customer can explore the products and services offered. The push sales channels like Door to Door (D2D) and telesales remained in focus with significant contribution to the overall sales results.

Customer support to MKT customers is shifting towards digital channels, especially via the Telekom app. MKT's application should become a 24/7 available support tool, as new functionalities are added. Also, live chat is available within the web site, for those customers that prefer written communication.

With continuous improvement of the on-line shopping experience, the online sales increased by 13% in 2019 compared to 2018.

### **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, in 2019 the agreement was extended for additional 2 years, including technical support for the customer and development of the new software functionalities for improvement of the current processes in the public transport (introduction of mobile application for smart ticketing, introduction of the electronic one ride ticket, improvement of the line control and integration with Google Transit service). MKT has high probability of getting the contract for Smart City Skopje (including Smart lighting, Smart parking and Smart metering). In 2019 few offers were prepared for several

municipalities regarding Smart lighting and Smart parking. From society digitalization perspective, support activities for e-health and e-education strategy preparation are ongoing.

Other important segment that was covered in 2019 is the SW development. The E-Inspector system, developed by internal resources for the Municipality of Skopje provides transparency in the work of the inspectors, efficiency and safety of the inspectors in the field, submission of digital field records, supervision of the inspectors' work in their current location and administration of the inspectors. The E-Inspector System consists of the mobile application to be developed for Android and IOS platform for the needs of field inspectors, WEB application for the needs of inspectors' dispatchers and smart phones as end user equipment. Furthermore, since Cyber security is a hot topic for organizations and businesses of all sizes across every industry, Penetration testing of the National Bank of the Republic of North Macedonia (NBRM), as a service provided by our experts and the experts of our partners, includes focused screening of their IP addresses for the purposes of assessing the infrastructure security, operating systems, databases and other system software, as well as the application security.

Moreover, collaborating with our partners MKT established a (web-based) integrated communication and data management system for documents and workflows that will digitize and automate the existing work processes and documents that are part of the work of the public services company in Skopje. The process of cloudification is finished successfully as the system is hosted on our own virtual private servers.

Moreover, MKT investigated the potential market and we made a cost analysis for the implementation of Narrowband for Internet of Things (NB-IoT). Furthermore, the utilization of 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 2019 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. We also started the process for potential cooperation with SAP. 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 which we can further leverage in our ICT business development activities.

Competitive pressure in conjunction with a saturated Telco market, complexity of the 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.

The 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 2019, MKT has made significant steps towards the achievement of targets 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 2019, installed capacity of more than

196K homes passed or 31.42% households' coverage with FTTH from MKT's network was reached. Regarding the VDSL rollout, the total numbers of VDSL CO were more than 192K and more than 19k VDSL FTTC homes passed.

The 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 2019, there were more than 5K hybrid users and more than 5.3K FMS users.

Significant improvement was also achieved in terms of the LTE rollout, reaching 93% territory coverage and 99.8% population coverage outdoor. More than 99% of the total sites provide LTE services. At the end of 2019, 63.3% of BTSs were connected via optic.

During Q4 2019, MKT set up the first test 5G network in the centre of Skopje thus providing conditions for testing this new technology in real conditions. This is another step towards the introduction of 5G in North Macedonia which will provide technological advancement of the society and many new functionalities for the users. The purpose of the test 5G network is testing the performances in real conditions which would enable new services for the users, such as: super-fast fixed wireless internet, VR (Virtual Reality) 3600 live video, VR gaming in real time, ultra-HD multi video streaming, etc. The tests will be conducted during 2020 and based on them the network will be prepared for the commercial phase.

In the core domain, the emphasis was placed on the mobile voice network modernization. Several projects were initiated. The scope of the first one was HW upgrade of the existing MGWs in mobile network, in particular replacement of five obsolete MGWs with two new MRS network elements and migration of the commercial traffic. The second project was upgrade of the MSC nodes in Skopje and Veles from 16A to new SW version 18.1. The third project was related to the UDC. It was upgraded to new SW version R1 that bring new and enhanced features and also contain SW patches that will make the SW more stable and reliable.

Investing in new technologies that contribute to the improvement of the services and thus the customer experience is MKT's continuous focus. In that line, at the end of 2019, MKT introduced VoLTE technology in mobile telephony (Voice over LTE) which provides number of benefits to customers during making calls and transferring data to the up-to date 4G network. The users of Samsung S9 and Samsung S9 plus are the first to access the VoLTE technology, and then the technology will be expanded to other phone models and manufacturers collaboration like Apple, Huawei, etc.

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 three 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 the IP Core implementation and integration, as well as the IP Core services migration. The plan is to continue with the second phase of HA Aggregation Network modernization and to finish 100% of the Aggregation sites by 2021.

The modernization of the SPNI segment of the network continued in the Q4 2019 and it will be finished by the end of 2020. The scope of the SPNI project is integration of the main DCs into one geographically distributed network layer, providing network connectivity to all IT and NT services, as well as laying down the foundation for Cloudification of the NT and IT production, have started.

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, during 2019, MKT joined the Mediroom Advanced Program and performed an upgrade of the IPTV video/audio subsystem to MediaRoom 3.0. 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 in a more flexible and competitive manner.

## Information technology

During 2019, MKT started the IT Transformation

- The main objective of the IT transformation is selection of a sustainable and feasible concept for the IT Operating Model, that will enable the implementation of the DT and MKT digital strategy, as a financially most efficient option within the budget
- Different IT operating models were evaluated for implementation in the 6-9 months period and used in the next 7 years that can leverage EIRA as foundational capability for the digital future
- The IT transformation model is a combination of outsourcing legacy systems and insourcing new employees that will cover the missing skillset
- Dedicated cross-functional teams are built, unifying IT, Business and Operation for improved and flexible delivery.
- The Company focused on Digitalization and building EIRA
- The transformation will allow MKT to become competitive employer, leveraging the employee performance

There were several projects that were aimed at providing efficient IT systems and solutions which will fulfil the plan and enable the realization of the strategic focuses.

In the OSS domain, the Net Cracker (NC) project was successfully completed in two phases:

- Phase 1- Set up of an NC development environment and introducing a collaboration model for implementation of a functional change request in the OSS NetCracker platform without NC involvement
- Phase 2 – Implementation of new functionalities in the NetCracker system with MKT partner (CGI)
  - Optimization of the NC WorkForce Management system by simplifying the process and improving the data input
  - Introducing Employee backpack for improving the material and equipment work in WFM
  - Development of generic interface for WFM system, in order to have the possibility the system to be used by other external system without additional development on NC side
  - Additional functionalities for presenting the necessary information in Trouble Ticketing and CRM

In the CRM domain, Sales Force Automation was introduced.

In the ERP domain, the One.ERP project started rolling out in MKT in October 2019. Standardized data, standardized processes and standardized IT based on the SAP Standard on a group-wide Enterprise Resource Planning (ERP) platform is the main core of the platform. Joining the program, MKT is gaining experience with the largest ERP project in Europe and one of the largest ERP platforms in the world. The project expected to be completed in a very short period of time of only 14 months.

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