



MAKEDONSKI TELEKOM AD – SKOPJE

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

**ANNUAL REPORT
on the operations of Makedonski Telekom AD - Skopje in 2016**

On 13 February 2006, Magyar Telekom Plc., the controlling owner of the Company, (via Stonebridge Communications AD - Skopje, majority shareholder of the Company), announced that it was investigating certain contracts entered into by another subsidiary of Magyar Telekom Plc. to determine whether the contracts were entered into in violation of Magyar Telekom Plc. policy or applicable law or regulation. Magyar Telekom's Audit Committee retained White & Case as its independent legal counsel to conduct the internal investigation. Subsequent to this, on 19 February 2007, the Board of Directors of the Company, based on the recommendation of the Audit Committee of the Company and the Audit Committee of Magyar Telekom Plc., adopted a resolution to conduct an independent internal investigation regarding certain contracts in Macedonia.

Based on publicly available information, as well as information obtained from Magyar Telekom and as previously disclosed, Magyar Telekom's Audit Committee conducted an internal investigation regarding certain contracts relating to the activities of Magyar Telekom and/or its affiliates in Montenegro and Macedonia that totaled more than EUR 31 million. In particular, the internal investigation examined whether Magyar Telekom and/or its Montenegrin and Macedonian affiliates had made payments prohibited by U.S. laws or regulations, including the U.S. Foreign Corrupt Practices Act (the "FCPA"). The Company has previously disclosed the results of the internal investigation.

Magyar Telekom's Audit Committee informed the U.S. Department of Justice (the "DOJ") and the U.S. Securities and Exchange Commission (the "SEC") of the internal investigation. The DOJ and the SEC commenced investigations into the activities that were the subject of the internal investigation. On 29 December 2011, Magyar Telekom announced that it had entered into final settlements with the DOJ and the SEC to resolve the DOJ's and the SEC's investigations relating to Magyar Telekom. The settlements concluded the DOJ's and the SEC's investigations. Magyar Telekom disclosed the key terms of the settlements with the DOJ and the SEC on 29 December 2011. In particular, Magyar Telekom disclosed that it had entered into a two-year deferred prosecution agreement (the "DPA") with the DOJ.

The DPA expired on 5 January 2014, and further to the DOJ's request filed in accordance with the DPA, the U.S. District Court for the Eastern District of Virginia dismissed the charges against Magyar Telekom on 5 February 2014.

In relation to the local investigation by the state authorities in Macedonia and further to the previously disclosed information in the Financial Statements of the Company for the preceding years, the criminal procedure at the basic court is on-going.

We have not become aware of any information as a result of a request from any regulators or other external parties, other than the previously disclosed, from which we have concluded that the financial statements may be misstated, including from the effects of a possible illegal act.

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

On 31 October 2013, an Accession Agreement was concluded with T-Mobile Macedonia (hereinafter referred to as: "TMMK") as an Accessing Company to MKT, as an Acquiring Company. The Accession Agreement has been changed with the Annex thereof concluded on 20 April 2015. TMMK, as a fully owned subsidiary of the Company,

has been consolidated until 2014 inclusive.

In accordance with the Accession Agreement and the Annex thereof, and pursuant to the provisions of the Law on Trade Companies, 31 December 2014 is determined as the date from which all transactions of TMMK, from an accounting point of view, shall be considered as effectuated on behalf of MKT. Implicitly, as of 1 January 2015 the bookkeeping for MKT and TMMK will be kept only by MKT.

In accordance with the Accession Agreement and the Annex thereof, which were adopted and confirmed by the Shareholders Assemblies of MKT and TMMK on the meetings held on 17 June 2015, the business activities of TMMK stopped as of 30 June 2015, when this company was deleted from the Central Register. With the deletion, TMMK no longer exists as a legal entity without a liquidation procedure to be conducted.

With the cessation of TMMK, the assets and liabilities of TMMK were transferred to MKT by way of a universal transfer of the entire assets and liabilities.

MKT is a joint stock company incorporated and domiciled in the Republic of Macedonia (RM) for the provision of telecommunications services. MKT's immediate parent company is AD Stonebridge Communications – Skopje, solely owned by Magyar Telekom Plc., registered in Hungary. The ultimate parent company is Deutsche Telekom AG (DT), registered in the Federal Republic of Germany.

MKT is an integrated telco operator primarily offering fixed line and mobile services. MKT is a leading mobile service provider, dedicated to the provision of up-to-date technologies and advanced service offerings, commensurate to the highest technological and service standards. MKT is also a leading fixed line service provider of traditional telecommunications services and content services within the scope of the fixed line network, broadband services and integrated solutions, including TV over Internet Protocol (IPTV).

MKT's objectives for the forthcoming years comprise being a leading provider of technology in Macedonia and providing quality services with attractive prices in order to be prepared for the competition.

In January 2014, MKT successfully completed the All IP Transformation Project and the last customer on the public switched telephone network (PSTN) was migrated to the IP Multimedia Subsystem (IMS) platform. The IMS platform enables the use of different advanced and innovative services in the fixed telephony.

In 2016, the mobile voice revenues contributed with 34.8% to the total revenues, while 16.8% of the total revenues of MKT were generated from fixed line voice services. The fixed line Internet and data services revenues contributed with 14.4%, while the mobile non-voice services revenues contributed with 13% to the total revenues. The revenues from IPTV contributed with 5.7% to the total revenues.

The fixed line voice revenues still show a downward trend, mainly due to the decreased number of fixed-line customers and the decrease of the outgoing traffic. The IPTV revenues have grown mainly due to the growing IPTV subscriber base. The mobile voice revenues decrease is driven by the lower voice retail revenues mainly coming from the decrease in prepaid supported by the same trend in prepaid traffic, as well as lower voice incoming revenues as result of the lower international to mobile minutes.

At the end of 2016, MKT had 217,576 voice access fixed lines compared to 226,501 at the end of 2015. The number of total DSL access is stable with 194,172 at the end of 2016, compared to 195,014 at the end of 2015. The number of IPTV customers at the end of 2016 reached 107,672 customers (including 3 Play, IPTV only and 2 MAX) marking 4.1% increase from the end of 2015. The number of Fibre to the Home (FTTH) customers reached 37,000 at the end of 2016, marking 11.8% increase from the end of 2015.

MKT had 1,257,887 mobile subscribers at the end of 2016, compared to 1,229,655 at the end of 2015. The mobile market penetration in Macedonia is 105.8%, which shows continual trend of individuals owning multiple SIM cards. As a result of the market saturation, MKT focuses especially on retaining the customers in order to protect the market share.

The Macedonian mobile market was characterized by highly competitive campaigns and offers in 2016. Due to the

increased competitiveness and in order to prevent the churn and encourage the usage, MKT launched various campaigns, price plans and additional services specially designed to meet the subscribers' needs, with a focus on value instead of price. These offers are targeting different customer segments. During 2015, a single Telekom brand was established and new product concept was introduced, which was in line with the global strategy of the Deutsche Telekom Group as a telecommunications leader in Europe. The MAGENTA products which had been developed, as a DT strategy, were redesigned in 2016 and highlighted the year, as a year of a holistic household approach offering integrated products and services to maximize the household base, secure the revenue and bring profitability.

MKT is continuously working on creating a market demand for mobile Internet and stimulating mobile data usage via device/data price plans.

The Macedonian mobile market, influenced by the global trends, is moving to a much broader and more interactive communications market, encompassing voice, mobile Internet and 3G/4G streaming services. Further roll-out of mobile broadband technology, improvement of customer management and billing processes and investment in value added services are planned in order to ensure market competitiveness.

Below are presented the available remuneration data for the BoD members of MKT with active mandates on 31 December 2016*, related to the applicable period of 2016.

- 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
Michael Frank	Cronogorski Telekom AD	0	0	0	0	0	None
Walter Goldenits	Deutsche Telekom Pan-Net Hungary Kft.	This may not be disclosed due to applicable requirement	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
Attila Keszeg	Immmr GmbH, Germany (member of Advisory Board)	0	0	0	0	0	None
	PanNet, Germany (member of BoD)	0	0	0	0	0	None
Susanne Krogmann	Crnogorski Telekom a.d., Podgorica (member of BoD)	0	0	0	0	0	None
	T-Mobile Czech Republic a.s. (member of Supervisory Board)	0	0	0	0	0	None
Karoly Schweininger	Vidanet Zrt.	This may not be disclosed due to applicable requirement	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 Zsom	Stonebridge Communications AD Skopje	This may not be disclosed due to applicable requirement	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

Panche Kralev	President of Foundation Telekom For Macedonia	0	0	MKD 203,259 (net)	0	0	None
	Makedonski Telekom AD Skopje (President of Board of Directors)	0	0	MKD 1,488,000 (net)	0	0	None
Nazim Bushi	Makedonski Telekom AD Skopje (Deputy President of Board of Directors)	0	0	MKD 1,116,000 (net)	0	0	None
Aleksandar Stojkov	Makedonski Telekom AD Skopje (member of Board of Directors)	0	0	MKD 744,000 (net)	0	0	None
Nebojsa Stajkovic	Makedonski Telekom AD Skopje (member of Board of Directors)	0	0	MKD 744,000 (net)	0	0	None
Vladimir Zdravev	Makedonski Telekom AD Skopje (member of Board of Directors)	0	0	MKD 744,000 (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
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
Michael Frank	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 Zsom	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 Sághy	Magyar Telekom Plc.	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
Walter Goldenits	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
Attila Keszeg	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

Susanne Krogmann	Deutsche Telekom AG, Bonn	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
Aleksandar Stojkov	Faculty of Law "Iustinianus Primus" Skopje	High Education	MKD 737,175 (net)	MKD 719,868 (net)	None	None	None
Nazim Bushi	Cair municipality		MKD 264,000 (net)	None	None	None	None
Nebojsa Stajkovic	Ministry of Interior of Republic of Macedonia		MKD 566,699 (net)	None	None	None	None
Vladimir Zdravev	Solun i Ivan DOOEL	Tourism and hospitality	MKD 561,720 (net)	MKD 279,852 (net)	None	None	None

** These data are presented in scope, layout and content as given by the respective member of 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 the Company, including taxation charges and contributions, is presented below:

In thousands of denars	2016
Short-term employee benefits (including taxation)	116,245
State contributions on short-term employee benefits	13,377
Long-term incentive programs	17,018
Other payments	5,309
Total	151,949

Further details on MKT's financial performance, the operating and accounting policies, as well as other relevant disclosures, are given in the MKT financial statements for the year ended 31 December 2016.

Transaction with an interested party

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

- a) Framework Cooperation and Service Agreement has been concluded with Magyar Telekom, as a transaction with an interested party considering that Magyar Telekom is a sole shareholder of Stonebridge Communications AD, shareholder that owns 56.67% voting shares (outstanding shares) in MKT.

With the Resolution adopted at the regular meeting held on 16 September 2015 the Board of Directors of MKT approved the conclusion of the Framework Cooperation and Service Agreement with Magyar Telekom, as a transaction with an interested party for the provision of services in connection with Fix Access Shared Service Centers that will increase the efficiency in development and operational activities, optimize costs and explore additional business potentials for future oriented platforms.

The value of the Framework Agreement is up to 196,177 EUR, wherein the said Agreement shall be implemented and the respective payments shall be effectuated by MKT to Magyar Telekom until 31.12.2018.

- b) With the Resolution of the Board of Directors of MKT adopted on the regular meeting held on 16 March 2016 it was approved to conclude this Agreement for International IP Peering and Global Transit Services

with Magyar Telekom, as a transaction with an interested party, in order to enable international IP connectivity for all of its Internet broadband customers. The services include ADSL, FTTH, HS ISA, mobile internet and others. On 24 August 2016 an Agreement for International IP Peering and Global Transit Services was concluded with Magyar Telekom, as a transaction with an interested party considering that Magyar Telekom is a sole shareholder of Stonebridge Communications AD, shareholder that owns 56.67% from the total number of shares with voting rights issued by MKT. The value of the Agreement is 500.000 EUR, wherein the said Agreement shall be implemented and the respective payments shall be effectuated by MKT to Magyar Telekom until 30 June 2018.

- c) MKT has effected a transaction with an interested party, Macedonian Tennis Federation, whose President and authorized person is concurrently Executive Member of the Board of Directors and Chief Operating Officer of MKT. The transaction has been effected under on the concluded Sponsorship Contract in the amount of MKD 615,000 + VAT concluded between MKT (as Sponsor) and the Macedonian Tennis Federation (as Sponsorship Beneficiary), for sponsoring the activities of the Tennis Federation in 2016, based on the Resolution of the Board of Directors of MKT for approval of the conclusion of this Contract, as a transaction with an interested party dated 15 June 2016. This sponsorship is a traditional activity of MKT for supporting the development of the sport in the Republic of Macedonia that will also contribute to the promotion of MKT on all events organized by the Macedonian Tennis Federation. On 27 June 2016, under the concluded Sponsorship Contract, the transaction was effected in the sponsorship amount for the benefit of the Macedonian Tennis Federation.
- d) On 04 October 2016 MKT concluded a Credit Facility Agreement with Magyar Telekom as a transaction with an interested party in view of the fact that Magyar Telekom is the sole shareholder of Stone Bridge Communications AD which owns 56.67% of the total number of voting shares issued by MKT. Board of Directors of MKT, on the regular Board of Directors meeting as of 13 September 2016 adopted conclusion of a Credit Facility Agreement between MKT, as the Borrower, and Magyar Telekom (MT), as the Lender, with the following main terms and conditions:
- The value of the loan pursuant to the Credit Facility Agreement is in maximum amount of up to EUR six (6) million (excluding interest);
 - The potential debits based upon this Agreement for the loan shall be made on the basis of the Credit Facility Agreement and on a need to need basis, followed by written notification to the Lender (Utilisation Notice), which shall specify the value date of the potential disbursement and the amount of the loan;
 - MKT undertakes to pay reference rate to Magyar Telekom of 3 month EURIBOR plus 3.25% margin per annum. If the 3 month EURIBOR is lower than 0 (zero), then 0 (zero) reference rate will be applied in the respective interest period. Currently the 3 month EURIBOR is negative.
 - The loan will be repaid in accordance with the available cash and considering the operational liquidity of the Company up to 31st March 2017;

As of financial statements date, MKT has not utilized any amount from the Credit Facility Agreement.

- e) MKT on 4 November 2016 it concluded an Agreement with the Joint Stock company for construction and management of residential and commercial properties of importance for the Republic of Macedonia, responsible for management of the National Arena (hereinafter referred to as: "Joint Stock Company"), on naming and branding the National Arena "Filip II" (hereinafter referred to as: "the Agreement") in accordance with the brand and design rules of Deutsche Telekom, as a transaction with an interested party.

With the Resolution of the Board of Directors of MKT adopted at the 68th regular meeting held on 16.03.2016, the conclusion of the Agreement was approved, as a transaction with an interested party in view of the fact that the Joint Stock Company, a contracting party in this Agreement, is owned and founded by the Government of the Republic of Macedonia which is a shareholder in MKT that owns over 38%

voting shares in the Company, pursuant to the provisions of the Law on Trade Companies and the Statute of MKT.

The commercial terms and conditions of the Agreement are aimed at achieving the common goal of both parties and they have been agreed in the interest of both parties, whereas the Agreement itself serves as a confirmation of the MKT's commitment towards the achievement of the goals for good corporate governance and responsibility to the wider community.

The Agreement will start to apply as of the date of its signing and the fulfilment of all necessary conditions for successful start of the cooperation, whereas the value of the Agreement is less than 2% of the book value of the MKT's assets in accordance with the latest audited financial statements of the MKT and it will be implemented in the period of 3,5 years in accordance with the terms and conditions of the Agreement.

- f) On 9 February 2017 MKT concluded a Contract for Surveying and Mapping of Underground Telecommunication Lines with Crnogorski Telekom a.d., as a transaction with an interested party, in view of the fact that two members of the Board of Directors of the Company are also members of the Board of Directors of Crnogorski Telekom a.d., which is a contracting party in the transaction.

The conclusion of the Contract for Surveying and Mapping of Underground Telecommunication Lines with Crnogorski Telekom a.d., has been approved with a Resolution of the Board of Directors of MKT adopted at the extraordinary meeting held on 9 September 2016, as a transaction with an interested party.

The contract shall be concluded for a time period until the full completion of the project. The value of the Contract shall range between 1.2 and 1.5 million EUR, depending on the final mileage which will be covered on site, and its implementation and the respective payments by Crnogorski Telekom a.d. shall be performed in phases, in accordance with the Contract.

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. Furthermore, a number of strict obligations for the existing operators were stipulated. In December 2013, a public debate was opened for a new draft LEC for the purposes of aligning the LEC with the EU Framework Directives 2009. A new law 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.

According to 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 roaming users from countries with which the Republic of 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.

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

On 29 June 2011, MKT was designated as a Universal Service (US) provider for fixed telephony services, public payphones and equivalent access for disabled end-users for a five-year period starting from 1 January 2012. In 2013, a Universal Service Obligation (USO) fund was established, in which all telecommunications operators with an annual turnover above EUR 100 thousand in Macedonia participate.

On 27 December 2016, MKT was designated again as a Universal Service (US) provider for the next 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 from 1 January 2016.

On 25 December 2016, MKT received a Resolution from the Agency for the determination of the net cost for universal service provision for 2015.

The services encompassed by the US for which MKT has received reimbursement from the USO fund are as follows:

- Access to public telephone services at a defined fixed geographic location;
- Reasonable number of public pay phones;
- Ensuring conditions for equivalent access to and use of publicly available telephone services for disabled end-users.

Regulation of Fixed Line Business

MKT is a significant market power (SMP) operator on the market of fixed line voice telephony networks and services, including the market of access to the networks for data transmission and leased lines. MKT, as a 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.

The obligations according to the performed analysis in 2014 on the relevant markets include the current obligations, as well as new obligations for the regulation of fibre based products and virtual unbundling local access (VULA) on Market 8 - Broadband market (broadband services based on optics), Market 1 - Access to public telephone networks at a fixed location for residential and business customers on all networks - technology neutral, deregulation on Market 10 - Transmission segments of the LL and deregulation of Wholesale Line Rental (WLR).

According to the new 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 access to ducts and dark fibre (RAO) and wholesale terminating segments of leased lines. An initial Fibre to the "x" (FTTx) regulation was introduced in the second quarter of 2011 with the obligation for Reference Access Offer (RAO) for ducts and dark fibre imposed on MKT by the Agency. As of 1 April 2015, MKT introduced the VULA service and the optic bit-stream access services as part of its referent wholesale offer.

The Number Portability (NP) procedures are an obligation that arises from the LEC and the NP Rulebook for all operators in Macedonia. The deadlines for porting are two days in a fixed network and one day in a mobile network. A beep signal is also introduced in the networks of MKT and TMMK, which informs the customers that their call is made towards a ported number. The all call query method is an obligation due to the IP migration of all operators on the domestic market.

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 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.

On 11 November 2015, the Agency published the final document for a market analysis on the relevant retail Market 3 – Minimal set of leased lines. MKT is released from the SMP obligation on this market and this market is no longer included in the list of relevant regulated markets by the Agency.

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. It will mainly depend on the preparedness of the Crisis Management Centre as the responsible body for the implementation of the service on the government side.

Regulated Retail Prices

Under an obligations arising from Article 91 of the LEC (retail price regulation), followed with the changes in November 2014 of the Recommendation for retail regulation, the Agency specified the manner and procedure for the regulation of the retail prices for fixed voice telephony networks and services of the operator with significant market power on the relevant retail markets. MKT is an operator with SMP status on the relevant retail Market 1 – Access to the public telephone network at a fixed location and Market 2 – Publically available telephone services at a fixed location. The prices for retail products offered on these two markets are subject to regulation by the Agency. The regulation of the retail prices is ex-ante, meaning that the Agency has to approve each price introduction, price change on every product or promotion prior to its being launched in retail. The ex-ante regulation is based on the price squeeze methodology.

Regulated Wholesale Prices

MKT has a cost-based price obligation for the regulated wholesale services by using LRIC. The results from the Bottom - up LRIC costing model have been implemented as of 1 April 2011.

As of 1 November 2011, MKT stopped offering PSTN and ISDN services for its customers, as well as for its wholesale partners, wherein all newly committed services are based on the Internet Protocol (IP) technology. In line with the PSTN migration of the MKT network, the Agency approved the proposed modifications of the WLR Reference Offer and BSA Offer of MKT applicable as of 1 January 2012. MATERIO was changed on MKT's initiative from 1 May 2012, and lower fixed termination rates (for origination, termination and transit) by 25% were approved by the Agency. The IP MATERIO (Internet Protocol Reference Interconnection Offer of MKT) was submitted for approval to the Agency in October 2013 on MKT's initiative, in line with the conclusions of the market analyses for the submission of the MATERIO changes with the description and conditions for IP interconnection. The Agency approved the IP MATERIO on 27 December 2013, the changes being effective from 1 January 2014.

The new measures in line with MKT's SMP obligation on wholesale markets for fixed call origination (Market 4), termination (Market 5) and transit (Market 6) from the final document include: implementation of IP interconnection by the end of 2016 at the latest, for fixed and mobile operators, transitional period for IP interconnection for alternative fixed and mobile operators up to three years, submission of an updated MATERIO with IP IC description (service and fees) and conditions by 31 October 2013, at the latest. The other measures for Market 4, 5 and 6 are the same as before (interconnection and access, access to specific network facilities, carrier selection (CS) and carrier pre-selection (CPS) transparency, non discrimination, accounting separation, price control and cost accounting).

In 2014, analyses were performed in accordance with the annual working program of the Agency for 2014. The ones that affect MKT's operations are the analyses on Market 8 – Broadband market, Market 1 – Access to public telephone networks at a fixed location for residential and business customers, Market 9 Terminating segments and 10 – Transmission segments of Leased Lines (LL).

The final document for the Broadband market (Market 8) analysis was published on 1 August 2014. It was for the first time that the Agency imposed a regulation for the access to broadband services over optical access network. All existing obligations for the copper network remain unchanged.

The new regulated services are: Bit Stream Access over Next Generation Access, Virtual Unbundled Local Access, Service Level Agreement, Service Level Guaranty (BSA over NGA, VULA, SLA, SLG), equivalence of the inputs and the additional parameters for an efficient monitoring of the provisioning of wholesale access are imposed (KPIs, service level agreements and guarantees). There is no cost orientation obligation for optic products; only margin squeeze tests will be implemented.

On 30 December 2014, the Agency adopted a Decision for the designation of MKT as a SMP operator on Market 8 - Access to broadband services based on copper pairs and broadband services fully or partly based on optic, including the following services:

- Point of access on IP level
- Point of access on Ethernet level, virtual unbundling local access
- Bit-stream access which MKT provides for its own needs based partly or fully on optics

The third analysis of Markets 9 and 10 – Transmission and termination segments of Leased Lines (LL) and Market 7 – Physical access to network infrastructure, was finished in November 2014. As a result of the analysis, on Markets 9 and 10 the transmission segments of the LL were deregulated and on Market 7 the regulations of fibre-based products of MKT were included. On 30 December 2014, the Agency adopted a Decision for the designation of MKT as a SMP operator on Market 9 – Terminating segments of leased lines in the geographical area of the Republic of Macedonia.

The final document of the second market analysis on the relevant retail Market 1 – Access to public telephone networks at a fixed location for residential and business customers including all types of networks- technology neutral was published on 7 October 2014. The Agency regulated the fibre-based products of MKT with margin squeeze tests which are already implemented for copper-based product regulation. The decision for the designation of MKT as a SMP operator on Market 1 was adopted on 30 December 2014.

Regulation of the Mobile Business

In July 2015, the Competition Authority approved the merger of the business of VIP and ONE in Macedonia, consisted of mobile, fixed, Internet and transmission of audiovisual content services, in the new entity ONE.Vip. The merger was approved with the following conditions:

- Obligation to enable access to applicants as Full MVNO on a wholesale basis
- Obligation to enable access to applicants as MVNO (resale) on a wholesale basis
- Obligation to offer the spectrum for sale
- Obligation to offer redundant locations for sale
- Obligation to offer the current “Boom TV packages“ of ONE on the basis of a resale

After the merger between MKT and TMMK, all radiofrequency licenses awarded and used by TMMK were transferred to MKT. 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)

Based on a company decision, in 2014, TMMK returned 5 MHz of the spectrum it owned in the 2100 MHz band. The 5 MHz spectrum assigned for the Time Division Duplex (TDD) operation mode had not been used since the assignment in 2008 and it was not planned to be used in the future either.

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

Thus, the spectrum for public mobile communications in the 800 MHz, 900 MHz and 1800 MHz bands is fully assigned to the 2 mobile operators. There is a remaining available spectrum in the 2100 MHz band, while the 2600

MHz band is not assigned for public mobile services at all.

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

Since 2007, TMMK and ONE have been designated with a SMP status on the wholesale market for voice call termination services in mobile communications networks, whereby several obligations were imposed on them, such as: interconnection and access, non-discrimination in interconnection and access, accounting separation and price control and cost accounting.

TMMK's first RIO was approved by the Agency in July 2008. Based on the second round analysis of wholesale call termination services in public mobile communications networks, on 30 July 2010, TMMK received a Decision for changing the RIO by which the Mobile Termination Rate (MTR) was defined with a glide path decrease in a timeframe of four years (until 2013). In September 2011, the price for the national MTR was decreased to 3.1 MKD/min. and was planned to continue decreasing by 0.1 MKD/min. each year, down to 2.9 MKD/min. by September 2013. At the same time, the Agency regulated the MTRs for ONE and VIP (VIP was designated with a SMP status on this market in the second round analysis) with a four year glide path. In May 2012, the Agency made a revision of the calculation of MTR of all three mobile operators and imposed a new glide path. As of 1 June 2012 until 31 August 2013, TMMK's MTRs were set at 3.0 MKD/min., while ONE's and VIP's MTRs were set at 4.0 MKD/min. MTR symmetry to 1.2 MKD/min. calculated using Bottom-up LRIC+ were applied from 1 November 2013 (based on a new Agency Decision adopted in August 2013), and a further decrease to 0.9 MKD/min. calculated using Bottom-up pure LRIC was applied on 1 September 2014. MTRs were additionally decreased to 0.63 MKD/min starting from 1 December 2016, based on a new Agency Decision adopted in November 2016.

After the first analysis of the wholesale SMS termination market in 2011, all 3 mobile operators were designated with SMP status. In 2013, the Agency conducted a second round analysis on this market and imposed new regulated prices – symmetrical for all 3 operators and 75% lower than the previous ones. The prices became effective on 1 January 2014. The new wholesale prices for SMS termination were introduced starting from 1 December 2016, based on a new Agency Decision adopted in November 2016, on the level of 0.3 MKD/SMS.

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 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). The new wholesale prices for mobile originating calls, originating SMS/MMS and wholesale mobile data services are effective from 1 July 2016.

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

In May 2013, the Macedonian Parliament adopted a Law on Film Production, amended in January 2014, imposing obligations for the payment of an annual fee by all cable operators (retransmission) and operators that provide Internet services. The fees are defined as follows:

- 1% of the revenue of cable operators which are operating with TV broadcasting program services
- 1 % of the revenue of the entities that provide Internet services
- 2% of the revenue of the legal entities which are operating in the distribution, rental and sale of movies

The above-mentioned fees are applicable as of 2014, calculated on the level of the related revenues from the

previous year.

The Law on Audio and Audiovisual Media Services entered into force on 3 January 2014. The Agency for Audio and Audiovisual Media Services, the legal successor of the Broadcasting Council, has the right and obligation to conduct program supervision of the program packages that are retransmitted by the operators of public electronic communications networks.

MKT, as a provider of audio or audiovisual media services on demand, has an editorial responsibility regarding the selection or the content of the service. It is obliged to keep the audiovisual media service on demand unchanged for at least 30 days after its being made available to the users.

Additional obligations imposed by the law and affecting MKT are:

- If a program is subtitled in a language different from the language used originally when the program was produced, it has to be subtitled in Macedonian or in the language of the community that is not a majority, but is spoken by at least 20% of the population in the Republic of Macedonia, except for teleshopping and advertising programs.
- The annual fee for the surveillance carried out by the Agency for Audio and Audiovisual Media, in the amount of 0.5% of the total revenues earned by the retransmission and 0.5% of the total revenues earned for on-demand activity, has to be paid to the Agency for Audio and Audiovisual Media.
- Local program services can be transmitted within their service area and public broadcasting services funded by the broadcasting fee have to be transmitted and free of charge.
- In its subscription agreements, MKT has to specify the list of program services which are currently being retransmitted in its program package.
- The internal television channel output, i.e. the signal of that channel, has to be recorded fully and without any interruption and the recording has to be available at least 30 days after broadcasting.
- MKT is obliged to keep the catalogue and the content of the audiovisual media service on demand for at least 30 days after its being made available to the users.
- Obligation for the promotion of European audiovisual works.
- MKT is obliged to deliver the output signal continuously to the location for collecting signals for monitoring purposes.

Macedonia and the European Union

The Republic of Macedonia signed the Stabilization and Association Agreement with the EU and its Member States on 9 April 2001. The Macedonian Parliament ratified the Agreement on 12 April 2001, reaffirming the strategic interest and the political commitment to the integration with the EU. The Stabilization and Association Agreement was ratified and it has been in force since 1 April 2004.

On 17 December 2005, the EU decided to grant the Republic of Macedonia an EU candidate status.

Following the candidate status, the EU must set a date for the start of the negotiations regarding the full accession, encompassing all aspects of the EU membership, including trade, environment, competition and health. Macedonia, as a candidate country, should harmonize its legislation with the EU.

On 14 October 2009, the European Commission issued the 2009 Progress Report. Macedonia received a recommendation from the European Commission for the opening of the accession negotiations. The country made significant progress and substantially addressed the key reform priorities, known as eight plus one benchmarks.

Based on the Progress Report issued in November 2016, there is a good level of preparation in the field of electronic communications and information society. No progress was made during the reporting period. . In the coming year, the country should in particular:

- ensure correct implementation of the legal framework on electronic communications and audio-visual media;
- strengthen the independence and capacity of the media regulator and the public service broadcaster;

- ensure that the necessary preparation is done to introduce the 112 emergency number by the end of 2018, including allocating the necessary financial resources.

The EU supports the good functioning of the internal market for electronic communications, electronic commerce and audio-visual services. The rules protect the consumers and support the universal availability of modern services.

Competition

The competition in the telecommunications business is well-developed in almost all segments. The significant changes that happened during 2015 lead to market consolidation, with two main integrated players that shape the telecommunications market in Macedonia.

In 2015, 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.

Previously, in the first half of 2015, the Telekom Austria Group acquired 100% of eight cable operators in Macedonia

New MVNO Lyca-mobile entered the market in July 2016, on the network of Vip, but reached very low market share by year end 2016 (according internal estimation). They are limited to prepaid offers only, and focus on international calls.

The Balkan lower roaming fees agreed by the regulators of Macedonia, Serbia, Montenegro and Bosnia and Hercegovina in 2015 were further decreased as of July 2016.

Vip, as an integrated operator, was offering various services mobile and fixed voice, mobile and fixed broadband Internet and TV. The company operated with offers under the former brands Vip, One and Blizoo until May 2016, when they rebranded into the single Vip brand. Along with the rebranding, a new, simplified portfolio for all services was launched and promoted. The main focus was put on mobile postpaid as well as on bundled FMC offers. The lowest priced prepaid offer on the market Dzabest (previously prepaid form One) was removed from the portfolio. The mobile segment Vip continued to increase the contract ratio, which reached 58% in Q4 2016 but total base declined by 5.1% YoY, as customers move from multiple prepaid to single contract subscriptions (source: Telekom Austria Q4 2016 report). The pricing policy remained stable until November 2016, when the New Year campaign with an aggressive offer for the postpaid portfolio was launched. The market share declined to 49.5% in Q4 2016 (source: Telekom Austria Q4 2016 report).

VIP, as well as MKT, includes 4G/LTE products in the offers.

In the fixed segment, Vip offers triple play bundles (fixed voice/Internet/TV). They are also present on the FMC market with their combined offer Mobile+Fixed and the message 'Combine and Save'.

The 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. Telekabel and VIP are the biggest cable providers among over 70 active cable operators. CaTV operators offer Hybrid Fibre Coaxial (HFC) services – optic near your home with a very high data rate for Internet services and digital television.

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 2016, for both mobile and fixed numbers. By the end of Q2 2016, there were 185,644 mobile and 166,989 fixed ported numbers in total (source: Report for electronic communications development Q2 2016, the Agency).

As at 31 December 2016, MKT has a retail fixed voice market share of 60%, retail fixed broadband Internet market share of 42% and TV market share of 26% (source: internal best estimates). In the mobile market, the market share of MKT was 50% (source: internal calculations based on the Telekom Austria Q4'16 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 the up-sales to bundled converged services, as well as on the acquiring of new customers on the fixed and mobile market, for both the residential and the business segment.

MKT successfully continued the growth of Magenta 1 product which reached 6% of the households in the country. Magenta 1 portfolio was enriched with new product – Cool tariff as additional SIM. As a part of the complete household approach, the innovative feature offering child security was introduced in order to cover the needs of all family members.

A new Smart portfolio was introduced in 2016 with the simple principle of “more for more” for postpaid customers. MKT is the first operator on the market introducing the roll-over concept - non-used bundled data from this month to be used in the next month. This concept was very well perceived by the customers and increased their satisfaction with the new option.

A new fixed portfolio was introduced in the last quarter of 2016 with a simple and flexible approach, offering stable Internet on the best fixed network with a combination of IPTV with an exclusive content, to contribute in sustaining the customer base as well as to attract new households.

In the prepaid segment, the active base was increased by stimulating activity with tailor made offers for different segments. Different communication activities were executed, mainly driven by direct SMS instead of big ATL campaigns. Excellent results in the summer period were achieved by attracting visitors to MKT's offer. New weekly and monthly tariff options were introduced with positive results both on the customer and the financial side.

Customer retention and satisfaction as a main strategic direction continued also in 2016. Marketing activities based on the customer needs and habits are performed in order to build strong customer relations and provide the best customer experience. The value based approach continues in order to provide an excellent customer experience for the most valuable customers.

MKT's focus product during 2016 was Magenta 1 Business, a top premium business solution created for dynamic market trends. This solution includes fixed and mobile services with unlimited calls to all national networks, LTE in all mobile options, broadband connectivity, superior Cloud services and a possibility to buy the Max TV service as a soft bundle option. The product gives the customer a unique possibility to procure integrated services and to build up an individual offer according to their needs. A Smart working campaign was executed in Q4 2016, with an emphasis on Cloud services that enhance companies to increase their productivity.

The business portfolio for mobile only services that was launched in October 2015 was a mass market offering during 2016. There are five tariff options that are suitable for all levels of the company's employees, from starting positions to executives. All options have LTE access with higher data volumes accompanied with smart phones at attractive prices.

MKT repositioned the two play broadband portfolio (Office Complete) for Business customers. The Office Complete portfolio was significantly simplified and fully aligned with the Magenta 1 Business fixed voice and Internet components, providing a clear migration and up-sale path towards Magenta 1 Business.

Managed and cyber security continued to be one of the main development focuses for the Business Customers. Following the key trends, MKT was positioned as an active player on this market not only as a custom solution provider, but also when robust coverage on the topic is needed. Third year in a row, MKT is providing a cloud security solution for all state schools and dormitories.

FTTH roll-out continued in 2016 with 26% homes passed with fiber technology giving the opportunity to the customers to have super fast Internet within the new portfolio.

The communication strategy that was executed in 2016 supported and promoted the best network image of the company, as well as the unique and improved portfolio of services to suit the demands of different age target groups.

The image campaign with which MKT started the year relied on the best network in Macedonia attribute, as it was confirmed by the citizens in the research for the overall perception among the telco operators. For the post-paid customers, the new Smart post-paid portfolio, with more data and a unique feature-data rollover was communicated. The flagship portfolio Magenta 1 continued to be in the focus of communication, with the simplified and improved portfolio and the "Cool" option for the youth. All of the executed campaigns launched in 2016 aimed to strengthen the image as the best network operator and increase the awareness of the benefits provided with the services/products

An integrated marketing communication strategy using the available and adequate channels (TV, radio, print, out-of-home advertising, social media channels) was used to achieve a high-impact reach to all target groups. However, in 2016, the bigger focus and exploit was on digital communication as a fast developing communication trend with targeted digital campaigns to generate higher reach and customer engagement. With the focus on the digital aspect, social media was the pushed channel for interaction and engagement with the customers by delivering relevant and authentic content in line with the brand promise "Life is for sharing". This approach aims at enhancing brand likeability and acceptance among all target groups. MKT was the first operator in Macedonia that introduced Viber communication and the first one that opened the Snapchat channel. All of the integrated communication activities are aimed at strengthening the relation with the brand in the era of digital communication.

In the business sector, the communication focus was placed on strengthening the image of MKT as an innovative operator offering integrated communication services, with an emphasis on the Magenta 1 Business portfolio, combining communication and innovative services in one package and a reliable partner for building a long-term partnership.

Furthermore, special attention was paid to the ICT segment and the image of MKT as an innovator and driver of smart ICT solutions.

MKT has developed different sales channels in order to serve the customers from different segments. The direct sales channels comprise: own retail network, telesales, on-line sales channel, technicians, direct sales agents, account managers (for Institutional and Large Accounts) and a multichannel logic in the sales and service of the SME (Small & medium Enterprises) SOHO (Small-Office-Home-Office) segment. The development and sale of ICT solutions is performed for different types of business customers. The indirect sales channel is based on indirect master dealers with their own network of shops, partner shops and kiosks. An external company engaged in 2014 continues with telesales activities (proactive retention and loyalty activities were also introduced). The same external company is engaging people for newly established D2D sales channel.

The main sales channels are MKT's shops. There are 36 shops as at 31 December 2016. All shops are offering the complete mobile and fixed product portfolio under the same conditions and with the same customer service level. In addition to the sales, the employees in the shops were also focused on service excellence. By using the boost tools, they achieved the sales targets for 2016, with the main focus on Magenta 1 and post-paid packages. The biggest portion of the Magenta 1 sales transactions were done over shops.

The partners' presentation in the own shops continues in 2016 with the implementation of a new content on m-Walls and Window Digits. The partners' stages in the refurbished shops were used for the same purpose.

The existing channel of direct sales agents was replaced with D2D channel in June, 2016. The staff in this channel was engaged through an external company with the main focus on FTTH sale. In order to achieve a high level of service excellence, trainings with DT support were organized.

Sales activities that include home delivery via telesales were used in 2016 for the retention of fixed and mobile subscribers.

The e-business provided an upgraded Telekom MK self-care mobile application. The user experience of mobile version of www.telekom.mk was improved according to the highest standards. The online sales channel was further developed with the introduction of new features (such as payment with loyalty points and an online calculator for the customization of Magenta 1 according to the customers' needs) which increased the transactions through web shop. Several online sales campaigns were launched in 2016 to increase the online sales results. We introduced a Single Sign-on which provides a unique account sign-in credentials and a user centricity model for the authentication and authorization that allows a seamless interaction with all existing and future Telekom applications and e-services.

Another channel of the distribution network of MKT is the dealers' cooperation. As at 31 December 2016, the network consisted of 6 master dealers with 61 shops as MKT partners. The majority of the MKT master dealers' shops are offering the full MKT portfolio. In all master dealer's shops bill payment was fully implemented in 2016. In addition, prepaid vouchers are also available in 4,015 kiosks. More than 3,000 kiosks are performing top-up over MKT's processing centre. Additionally in Q4 2016 two new Master Dealers were introduced in the network, one authorized for Vouchers only, other for Vouchers and Business Segment.

A part of the MKT product portfolio (e.g. telephone sets, TV sets, computers, printers, network equipment and home appliances) is available to the customers using payment by instalments through their telephone bill.

Research and Development

The competitive pressure in conjunction with the saturated Telco market, the complexity of the business environment with multiple and more sophisticated customer segments, multiple vendors and complex service offerings, fast changes in the technology with a new technology paradigm targeting one universal IP network and a 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 a 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 the technology leadership position and ensure growth through service improvement and innovation by continuously developing its infrastructure.

Development of the infrastructure and investment in the 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 2016, we 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 high quality Broad Band (BB) performance, BB market and technology leadership, MKT is continuously investing in fixed and mobile access development. At the end of 2016, capacity was installed for more than 147,000 homes passed or 26.6% MKT network households' coverage with FTTH was reached. A significant improvement was also achieved in LTE rollout, reaching 60% territory coverage and 80% population coverage.

Alongside the extensive mobile BB access rollout, during 2016, a strong focus was put on the network quality, which is confirmed by the P3 "Best in Test" certificate which represents an internationally recognized acknowledgement for mobile network quality, as well as by the National Report for Network Quality Parameters prepared by the Agency.

The growth of BB access and the continuous traffic increase are supported with the further development of the IP Core and the transport network as a cornerstone of all services. In 2016, the implementation of the IP Core &

Transport Network Modernization” project started, which includes modernization, reorganization and extension of all IP Core Network elements, Transport and Aggregation systems. MKT managed to install a full DWDM network and finalize the IP Core implementation in one half of territory of Macedonia. After the successful Proof of Concept, an initial migration of services was performed. In the mobile segment, SW upgrade of MGW and SGSN were performed in order to extend the support of MSS and EPC. Additional PGW/GGSN and MSC-BC SW upgrades are planned and will be conducted in Q1 2017. In this timeframe, the CUDB project for upgrade of HLR/FNR and HSS-EPC on a joint CUDB platform was started and will continue in 2017.

Also project for improvement of transport network redundancy based on building redundancy of all major cities based on 3 sided physical and logical path protection, creation of smaller protection rings by implementing new fiber optical routes between major sites and introduction of 2 sided network redundancy on all other IP Core sites as started.

The increased mobile Internet traffic. is also supported with the modernization of the backhaul solutions for mobile base stations through fibre connections or radio links.

In terms of the Service Platforms, during 2016, the IPTV server platform was upgraded and the IPTV storage was replaced and extended with a higher capacity for deploying new VoD (Video on Demand) assets. The project for IPTV Headend enhancement and extension was based on replacing encoders with HD capabilities and implementing a new management system. A new OTT TV platform was implemented and, for the first time, a new service was launched for the Magenta customers to provide a better customer TV experience. The implementation of a Single Sign-on (SSO) system was finished, providing a possibility to the MKT customers to log in with a single ID and password and gain access to connected systems. A Hybrid Access Solution was implemented, which aggregates the bandwidth of both DSL and LTE transmission links and creates a single, powerful broadband pipe between the network service node and customer’s Broadband CPE.

A new SMS GW was implemented and a migration of content providers was performed. Also, during 2016, the Starhome platform for Inbound Roaming management was fully upgraded. Furthermore, improvement of the existing payment services and features, as well as integration of a new bank as an issuer and acquirer with the mobile payment platform, was performed.

In order to provide higher efficiency, better flexibility and fast response in the provisioning, fault clearance and other processes in technology domain, we: finalized the implementation of the New Generation OSS, Broad Band Service Assurance (BBSA), and Trouble Ticketing (TT) extension.

Based on the most advanced network infrastructure and service platforms, MKT continues with its determination and its work to be an innovation and technology leader on the market. This year, we continued our successful Smart City story by upgrading the Automatic vehicle location and Smart ticketing system for the public transport providers in the City of Skopje. With this project, MKT helps to lead the transformation of Skopje into a modern and smart city. As a proof for our dedication and competences in this area, on the 2016 World Congress on Information Technology (WCIT) in Brazil, our smart public transportation solution was awarded with the WITSA Global ICT Excellence Award in the “sustainable growth” category.

Further to this project, MKT is continuously pursuing other opportunities in the area of Smart City. In particular, in 2016 we put into demo operation a project for the smart light system in the MKT premises, with the aim to show and prove that the implementation of such a smart light system would bring electricity and maintenance costs savings for the cities, while maintaining the street lighting according to the required standards.

Apart from the Smart City business area, we are thoroughly exploring 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 in general.

In 2016, MKT, as a firm supporter of the new era of smart, connected way of life and working, also started a pilot project in the area of Smart school. The Hybrid Classroom pilot project is about the implementation of an ICT assisted solution for interactive learning at classes and at a distance, in two secondary schools in the City of Skopje. The implementation of this project aims at a creating positive change of the way of education, providing an

advanced, self-driven, collaborative and interactive classroom experience for youngsters. Furthermore, its aim is to demonstrate how the use of technology could support the quality and efficiency of education, thus impacting the long-term development of the educational system, as well as the society and economy.

Also, the utilizing of the potential arising from the EU funded projects in the smart Internet of Things (IoT) solutions, e-government, etc., was under a close loop as well.

In addition to the business development activities explained above, in 2016 we put our focus on the development of the projects and products for digitalization and smart working for the business segment, which we believe constitutes a growing market potential in the forthcoming years, expected to be driven by the advantages of the efficiency of ICT in the daily workflow systems and networks, as well as by the transparency and accountability of such solutions.

Under the motto - INNOVATION SYNERGIES – WIN WITH PARTNERS, concerning the technology partnerships, this year we got a recertification of our Cisco Gold and Microsoft Silver Data Center partnerships, and we also became an EMC Cloud solution provider, which confirms our competences in the areas of enterprise networks, collaborations, network securities and Data Center technologies. These competences are deemed to be crucial assets on which we can leverage further in our ICT business development activities.

Information technology

The project for the replacement of the existing (IVR) and Call Center Solutions, with new consolidated IVR and Call Center, was successfully completed and deployed in production in mid of June 2016. The system brings together the core capabilities of customer service, collections, blended interaction and workforce optimization in a unified enterprise-class solution stack. The new system will dynamically adjust to the business conditions, it improves productivity and increases customer satisfaction by providing a rich, consistent customer experience across multiple channels.

Project for implementation of new OSS system based on NetCracker solution has been successfully finished and deployed in production in mid of July 2016, together with the new CRM solution for fixed services. Newly implemented modules for Fulfilment, Inventory, Work Force Management and Outside Plant, brings the new benefits for the company by:

- Increasing automation of Fixed B2C Service Fulfilment processes
- Improving inventory data quality via automated network data reconciliation
- Improving Outside Plant data access to improve data quality and new regulation rules and
- Improving Workforce operations, works and human resources optimization

As part of the implementation of a new OSS system, there was big improvement of the material management process by integration of the BSS and OSS systems with the SAP system.

The Project for the Consolidation of the MKT and TMMK Data Warehouse and Business Intelligence (DWH/BI) systems in one system has been running, with the aim of being completed by end of Q1/2017. The new system will aggregate the data from the complete company portfolio and strengthen the company's possibilities for advanced analytics and data driven decisions to respond quickly to the market changes.

Besides the implementation of big transformation projects, we were successfully and efficiently supporting the business by means of the improvement of the operational activities and the implementation of changes in the IT systems, as well as the efficient implementation of a new fixed portfolio and new Magenta 1 products.

The project for redesigning the existing Customer Care system, based on the open source SugarCRM and JBPM platforms, was successfully finished and deployed in production in mid of July 2016, together with the new NetCracker OSS system for fixed services. The new web based CRM system, together with the all in one 360 degree view of the customer brought flexibility and swiftness in serving the customer needs in all the Sales Channels and for the first time a CRM system was used within our company for provisioning Data and ICT products for the Top

customer segments.

The newly implemented modules for the Sales Product Catalogue Configuration brought flexibility in the product offer definition, as well as independence from the other Billing and Provisioning platforms running in the background. Compared to the old Customer Care system, the Order Capture process has been decoupled from the Order Provisioning process which brought flexibility in the complex provisioning processes within our company. The newly defined Order Provisioning processes which are implemented on an open source JBPM platform enable easier integration with other ICT platforms besides the NetCracker OSS system.

In 2017 the system will be further enriched with SFA functionalities for the Top customer segments which will take us a step forward in having a unified CRM system for Fixed and Mobile customers.

The consolidation of the two Fraud Management Systems after the legal merger (one for fixed customers and one for mobile customers) is almost finished. Nearly all the streams for fixed and mobile are merged into one system and there is a new Customer Data import for all fixed and mobile subscribers. The migration of the alarms is in progress before the final end-to-end tests. After finishing the project, there will be only one Fraud Management System in MKT IT infrastructure.

The Project for consolidation of the business critical revenue management systems Net Cracker's Rating&Billing Manager 5.3 and Ericson's BSCS iX R2 in one billing system was also underway in 2016. The purpose is to have all lines of business consolidated in a single billing system with the current functionality. The expected benefits are:

- OPEX reduction: the support contract with one supplier will be terminated. OPEX related to database, hardware etc., can be reduced.
- The utilization of IT resources will be much better for operations and development activities.
- Future CAPEX reduction for upgrades of the systems, because only one system will be in production.
- The convergent customer database gives opportunities for new bundle services (fixed-mobile convergence).
- The IT security standards have been improved by implementing several security relevant systems that decrease the operational risks and improve customer and personal data protection.

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