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Računovodstveno odvajanje i
troškovno računovodstvo

Accounting Separation and Cost
Accounting

Dokument o metodi alokacije

**Document on the Allocation
Method**

**Podgorica,
Jun 2017. godine**

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Istorija dokumenta

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Dokument	Kratak naziv	Verzija	Datum	Status
Dokument o metodi alokacije	DMA	1.0	Decembar 2013	Predana na komentarisanje od strane Agencije za elektronske komunikacije

Definicije pojmova

AEK: Agencija za elektronske komunikacije
Metodologija: Metodologija računovodstvenog odvajanja i troškovnog računovodstva
RRD: Regulatorni računovodstveni dokument
ZEK: Zakon o elektronskim komunikacijama
SMP: Operater sa značajnom tržišnom snagom
FAR: Registar stalne imovine
OPEX: Operativni troškovi
CAPEX: Kapitalna, stalna imovina
HCC: Homogena mrežna komponenta (element)
Registar: Registar osnovnih sredstava
Opex – Operativni trošak
Amortizacija – Godišnji trošak amortizacije
WACC – Prosječna ponderisana cijena kapitala (definiše se od strane Agencije)
NBV_{sr} - Prosječna vrijednost neto sadašnje vrijednosti imovine (Nabavna vrijednost imovine – akumulirana amortizacija)
WC_{sr} – Prosječna vrijednost obrtnog kapitala (kratkoročna imovina – kratkoročne obaveze)
NRC- Net Replacement Cost – Neto trošak zamjene
NVR- Net value realizable – Neto prodajna vrijednost
EV- Economic Value- Ekonomska vrijednost
LRIC- Long Run Incremental cost- Dugoročni inkrementalni trošak
CVR- Cost Volume Relationship – Troškovan kriva

The background of documents

Table 1

Document	Short Name	Version	Date	Status
Document on the allocation method	DMA	1.0	December 2013	Submitted for comments by the Agency of Electronic Communications

Definitions

AEC: Agency of Electronic Communications
Methodology: Methodology of separation accounting and cost accounting
RRD: Regulatory accounting document
ZEK: Law on Electronic Communications
SMP: Operator with significant market power
FAR: Register of fixed assets
OPEX: Operating costs
CAPEX: Capital, fixed assets
HCC: Homogeneous network component (element)
Register: Register of fixed assets
Opex – Operating expenditure
Depreciation – Annual depreciation cost
WACC – Weighted average capital cost (to be defined by the Agency)
NBV_{sr} - Average value of net current asset value (Asset Cost Value / Accumulated Depreciation)
WC_{sr} – Average value of working capital (short-term assets / short-term liabilities)
NRC- Net Replacement Cost
NVR- Net Value Realizable
EV- Economic Value
LRIC- Long Run Incremental Cost
CVR- Cost Volume Relationship

1. UVOD

1.1. Zakonski okvir

Tržište elektronskih komunikacionih usluga u Crnoj Gori regulišu zakoni predstavljeni od strane regulatornih tijela, Vlade Crne Gore, Ministarstva za informaciono društvo i telekomunikacije i Agencija za elektronske komunikacije i poštansku djelatnost kao i Agencija za elektronske medije Crne Gore i Uprava za zaštitu konkurencije.

1.1.1. Zakon o elektronskim komunikacijama

Zakon o elektronskim komunikacijama je stupio na snagu u avgustu mjesecu 2008. godine i uz nekoliko izmjena i dopuna važi i danas. On prati sljedeće aktivnosti na telekomunikacionom tržištu: elektronske komunikacione aktivnosti, odgovornosti u oblasti elektronskih komunikacija, status, izvor finansiranja i aktivnosti Agencije, procedure za operatore i druge elektronske komunikacione usluge provajdera, sudske sporove među subjektima na elektronskom komunikacionom tržištu, univerzalne uslužne djelatnosti, procedure za racionalno korišćenje ograničenih resursa, zaštitu prava korisnika usluga, prava i obaveze u pogledu povjerljivosti podataka u oblasti elektronske komunikacije i drugih aktivnosti koje su vezane za elektronsku komunikaciju.

Agencija za elektronske komunikacije i poštansku djelatnost (Agencija) je regulatorno tijelo osnovano od strane Vlade Crne Gore 8. februara 2011. godine sa ovlaštenjima i nadležnostima koje su definisane u Zakonu o elektronskim komunikacijama (u daljem tekstu ZEK). Agencija predstavlja nezavisno tijelo čije odgovornosti su definisane članom 8 Zakona. Agencija u saradnji sa Upravom za zaštitu konkurencije odgovorna za tržišnu analizu. Član 40 ZEK određuje pravila koja se koriste pri analizi tržišta.

Uloga Agencije jeste da podstiče tržišnu konkurenciju i da osigura kvalitetno pružanje telekomunikacionih usluga po razumnim troškovima i cijenama uz podsticanje investicija u oblasti telekomunikacija.

1. INTRODUCTION

1.1. Legal framework

The market of electronic communication services in Montenegro is governed by the laws presented by regulatory bodies, the Government of Montenegro, the Ministry of Information Society and Telecommunications and the Agency for Electronic Communications and Postal Services, as well as the Agency for Electronic Media of Montenegro and the Competition Protection Administration.

1.1.1 The Law on Electronic Communications

The Law on Electronic Communications came into force in August 2008 and apart from several modifications and amendments thereto, it is still in force. It monitors the following activities on the telecommunication market: electronic communication activities, responsibilities in the field of electronic communications, status, financing source and activities of the Agency, procedures for operators and other electronic communication service providers, legal suits among subjects on the electronic communication market, universal service trades, procedures for rational use of limited resources, protection of service customer's rights, rights and responsibilities as regards data confidentiality in the area of electronic communications and other activities in connection with the electronic communication.

The Agency for Electronic Communications and Postal Services (Agency) is the regulatory body founded by the Government of Montenegro on February 8th, 2011 that has authorities and competences, which are defined by the Law on Electronic Communications (hereinafter referred to as the: ZEK). The Agency represents an independent body, whose responsibilities are specified by Article 8 of the Law. The Agency, in cooperation with the Administration for Competition Protection is responsible to carry out the market analysis. Article 40 of the ZEK stipulates the rules used for the market analysis.

The Agency's role is to encourage the market competition and to ensure good-quality providing of telecommunication services at reasonable costs and prices, in addition to encouraging investments in area of the telecommunication.

Analize relevantnog tržišta u skladu sa članom 41 ZEK vrše se nakon usvajanja metodologije za sprovođenje analize relevantnog tržišta, uzimajući u obzir EU praksu. Metodologija o sprovođenju analiza je usvojena jula 2009. godine u skladu sa Uputstvima za nacionalna regulatorna tijela na osnovu definicije relevantnih tržišta usvojenih od strane Evropske Komisije 2002. godine.

Nakon sprovedenih analiza, Agencija utvrđuje relevantna tržišta shodno članu 41 Zakona uzimajući u obzir EU praksu. Prilikom utvrđivanja relevantnih tržišta, Agencija razmatra preporuke Komisije o relevantnim tržištima proizvoda i usluga u okviru sektora elektronskih komunikacija podložna ex ante regulativi u skladu sa Direktivom 2002/21/EC Evropskog parlamenta i Savjeta o zajedničkom regulatornom okviru za elektronske komunikacione mreže i usluge (Sl. EK L 114/456 od 08. maja 2003. godine) i preporuka Komisije od 17. decembra 2007. godine o relevantnim tržištima proizvoda i usluga u okviru sektora elektronskih komunikacija podložna ex ante regulativi u skladu sa Direktivom 2002/21/EC Evropskog Parlamenta i Savjeta o zajedničkom regulatornom okviru za elektronske komunikacione mreže i usluge.

Agencija ima obavezu da preispita uslove na tržištu u cilju analiziranja tržišne pozicije operatora i da potvrdi da li se tržišna pozicija operatora može smatrati značajnom tržišnom snagom (Significant Market Power - SMP). Shodno članu 43 ZEK Na osnovu izvršene analize, Agencija određuje operatora sa značajnom tržišnom snagom za svako analizirano tržište. Nakon toga, Agencija propisuje neke od sljedećih mjera koje se odnose na relevantno tržište.

U skladu sa članom 46, ZEK-a propisuje se da Agencija može (u skladu sa rješenjem iz člana 43, stav 1, ZEK-a), narediti preduzimanje mjera u cilju odvojenog računovodstvenog praćenja poslovnih aktivnosti. Cilj ove obaveze jeste da se obezbijedi kontrola nad neosnovanom unakrsnom subvencionisanju između samih poslovnih aktivnosti.

Analyses of the relevant market complied with Article 41 of the ZEK are made after adopting of the methodology for conducting such analysis of the relevant market, taking into consideration the EU practices. The methodology on analysis conducting was adopted in July 2009 in accordance with the Instructions to the national regulatory bodies based on the definition of the relevant markets adopted by the European Commission in 2002.

After conducted analyses, the Agency determines the relevant markets complied with the Article 41 of the Law, taking into account the EU practices. At the time of determining relevant markets, the Agency considers recommendations of the Commission on relevant markets of products and services within the scope of the electronic communication sector subject to the ex ante regulations complied with the Directive 2002/21/EC of the European Parliament and the Council on the Common Regulatory Framework for Electronic Communication Networks and Services (Off. EC L 114/456 dated May 8th, 2003) and recommendations of the Commission dated December 17th, 2007 on relevant markets of products and services within the scope of electronic communications sector subject to the ex ante regulations in accordance with the Directive 2002/21/EC of the European Parliament and the Council on the Common Regulatory Framework for Electronic Communication Networks and Services.

The Agency is responsible to re-examine market conditions with the aim of analyzing the market position of an operator and to confirm if the operator's market position may be considered to be of the Significant Market Power (SMP). Complied with the Article 43 of the ZEK and based on the conducted analysis, the Agency designates an operator with the Significant Market Power for each analyzed market. Afterwards, the Agency stipulates some of the following measures relating to the relevant market.

In accordance with the Article 46, the ZEK stipulates that the Agency may (complied with the solution under the Article 43, paragraph 1, of the ZEK), order undertaking of measures in view of the separate accounting monitoring of business operations. The aim of such responsibility is to ensure the control over unfounded cross subsidizing among business operations themselves.

1. UVOD (nastavak)

1.1. Zakonski okvir (nastavak)

1.1.1. Zakon o elektronskim komunikacijama (nastavak)

U skladu sa stavom 1, člana 46 ZEK, operatori imaju obavezu da dostave odgovarajuće računovodstvene evidencije, uključujući i prihode od trećih lica na zahtjev agencije, a sve u cilju podsticanja konkurencije.

Obaveza nadzora cijena i troškovnog računovodstva

Član 48, ZEK-a reguliše obavezu nadzora cijena i troškovnog računovodstva na sljedeći način:

- Agencija (rješenjem iz člana 43 stav 1, ZEK-a), može narediti preduzimanje mjera u vezi sa pokrivanjem troškova i kontrolom cijena određenih usluga koje se pružaju u cilju obezbjeđivanja interkonekcije, odnosno operatorskog pristupa.
- Agencija može narediti preduzimanje mjera iz stava 1 ovog člana, ako na osnovu analize tržišta ocijeni da bi operator sa značajnom tržišnom snagom, zbog nedostatka efikasne konkurencije ili u cilju njenog suzbijanja, mogao zadržati ili previsoke cijene ili prenisku razliku između maloprodajnih i veleprodajnih cijena.
- Agencija, prilikom naređivanja mjera operatoru iz stava 1 ovog člana, mora uzimati u obzir rizike, ulaganja i obezbjeđenje prihvatljive stope prinosa na investiciona ulaganja operatora.
- Operator kojem je naređeno preduzimanje mjera troškovne orijentacije mora dokazati da su cijene obračunate na osnovu troškova uz prihvatljivu stopu prinosa na investiciona ulaganja. Prilikom provjeravanja ispunjavanja te obaveze Agencija može primijeniti metode troškovnog računovodstva koje su nezavisne od onih koje primjenjuje operator.

1. INTRODUCTION (continued)

1.1. Legal framework (continued)

1.1.1. Law on Electronic Communications (continued)

According to the paragraph 1, Article 46 of the ZEK, operators shall be responsible to present the appropriate accounting records, including also income from third parties upon a request of the Agency, and all that with the aim of encouraging the competition.

The responsibility of prices and cost accounting supervision

Article 48, ZEK governs the responsibility of prices and cost accounting supervision in the bellow manner:

- The Agency (based on the decision under the Article 43, paragraph 1, of the ZEK) may order undertaking of measures in connection with covering costs and prices control of specified services provided for the purpose of ensuring the interconnection or the operator's access.
- The Agency may order undertaking of measures under paragraph 1 of the present Article if, based on the market analysis, it evaluates that due to the lack of efficient competition or in view of its keeping under control, an operator with the significant market power might retain either too high prices or too low difference between retail and wholesale prices.
- The Agency, at the time of ordering measures to the operator under paragraph 1 of the present Article, must take into consideration any differences, investments and ensuring of an acceptable return ratio of such operator's capital investments.
- The operator ordered to undertake measures of the cost orientation must prove that prices have been calculated based on costs, along with an acceptable return ratio of capital investments. Where it checks if such responsibility is met, the Agency may apply methods of cost accounting, being independent from those applied by the operator.

Agencija može od operatora rješenjem takođe zahtijevati da obrazloži i po potrebi koriguje cijene, pri čemu teret eventualnog dokazivanja snosi operator.

- Agencija može propisati mehanizam pokrivanja troškova ili metodologiju određivanja cijena po osnovu ovog člana, što mora biti primjereno cilju unaprijeđenja efikasnosti i održive konkurencije, ciljeva razvoja i povećanja dobrobiti za potrošača. Agencija može koristiti i upoređenja sa cijenama na uporedivim tržištima ili tržištima sa razvijenom konkurencijom, uzimajući u obzir specifičnosti domaćeg tržišta.
- Agencija određuje model primjene troškovnog računovodstva, koji operator mora primijeniti. Takođe, Agencija može odrediti oblik i metodologiju vođenje računovodstva, kao i kategorizaciju i vođenje troškova koje operator mora primijeniti.

1.1.2. Zahtjevi regulatornog izvještavanja

Regulatorne obaveze finansijskog izvještavanja su definisane Metodologijom računovodstvenog razdvajanja za mobilne telefonske mreže (u daljem tekstu: "Metodologija"), koja je usvojena od strane Agencije u septembru 2012. godine. Agencija je Metodologijom utvrdila obavezu pripreme i objavljivanja regulatornih finansijskih izvještaja.

Ove obaveze se odnose samo na SMP mobilne operatore – sa značajnom tržišnom snagom. Savjet Agencije za elektronske komunikacije i poštansku djelatnost je 11.11.2010. godine Rješenjem br. 0902-4217/2 odredio Telenor d.o.o. Podgorica kao operatora sa značajnom tržišnom snagom (SMP) na tržištu završavanja (terminacije) poziva u sopstvenoj mreži i 10.05.2012. godine Rješenjem br. 01-6169/19-2011 odredio Telenor d.o.o. Podgorica kao operatora sa značajnom tržišnom snagom (SMP) na tržištu "Veleprodajno tržište pristupa i započinjanja (originacije) poziva iz javnih mobilnih telefonskih mreža". S tim u skladu Telenoru se određuje sprovođenje računovodstvenog odvajanja i troškovnog računovodstva na način i u rokovima kako je to određeno dokumentom „Metodologija računovodstvenog razdvajanja za mobilne mreže“.

The Agency may also, by virtue of the decision, request from an operator to explain and, if required, to correct prices, where the burden of potential evidencing shall be borne by the operator.

- The Agency may prescribe the mechanism of covering costs or the methodology of price estimations based on the present Article, which must be suitable to the goal of improving the efficiency and sustainable competition, development goals and increasing of benefits to consumers. The Agency may also apply comparisons with prices on comparable markets or markets with developed competition, taking into account specific qualities of the domestic market.
- The Agency decides on the cost accounting model, which an operator must apply. Moreover, the Agency may determine the form and methodology of accounting keeping, as well as the categorization and recording of costs, which an operator must apply.

1.1.2 Requirements of the regulatory reporting

Regulatory responsibilities of the financial reporting are specified by the Methodology of separation accounting for mobile telephone networks (hereinafter referred to as the: "Methodology"), which was adopted by the Agency in September 2012. By the Methodology, the Agency has set up the responsibilities of preparing and publishing regulatory financial statements.

Such responsibilities refer only to SMP mobile operators – with significant market power. The Council of the Agency for Electronic Communications and Postal Services, based on the Decision No. 0902-4217/2 of Nov 11, 2010 determined Telenor d.o.o. Podgorica as the operator with significant market power (SMP) on the market of call termination in its own network, and by the Decision No. 01-6169/19-2011 of May 10, 2012 it determined Telenor d.o.o. Podgorica as the operator with significant market power (SMP) on the market "Wholesale Market Access and Call Origination from Public Mobile Telephone Networks". Complied therewith, Telenor has been ordered to conduct the separation accounting and cost accounting in the manner and within time periods as stipulated by the document entitled "Methodology of Separation Accounting for Mobile Networks".

1. UVOD (nastavak)

1.2 Rješenje o računovodstvenom odvajanju i troškovnom računovodstvu

AEK je izdala Rješenje kojim se određuje kompaniji Telenor d.o.o. , priprema niza regulatornih finansijskih izvještaja (RFI) na način i u rokovima kako je određeno dokumentom „Metodologija računovodstvenog razdvajanja za mobilne telefonske mreže“, Septembar 2012. Pomenuti regulatorni finansijski izvještaji su dio obaveze propisane ZEK, te su zasebne u odnosu na zvanične finansijske izvještaje koji se pripremaju u skladu sa Zakonom o računovodstvu i reviziji.

Regulatorni finansijski izvještaji koji su Rješenjem AEK (odjeljak 2.2.1) uključuju:

- Regulatorne Finansijske izvještaje:
 - Račun dobitka i gubitka
 - Izvještaj o prosječno angažovanom kapitalu
 - Izvještaj o usklađivanju
 - Izvještaj o jediničnim cijenama
 - Izjava o odgovornosti
 - Izvještaj nezavisnog revizora
 - Izvještaj o transfernim naknadama
 - Ostali podaci
- Računovodstvena dokumenta:
 - Računovodstvene principe
 - Metode vrednovanja
 - Opis troškovnog modela
 - Detaljan opis WACC kalkulacije (u slučaju da izračun treba da radi Telenor)
- Dokument o metodologiji alokacije
- Ad hoc izvještaje po zahtjevu agencije

1. INTRODUCTION (continued)

1.2 Decision on the separation accounting and the cost accounting

The AEC issued the Decision whereby it has been determined that the Telenor Company d.o.o. prepares a series of Regulatory Financial Statements (RFI) in the manner and within terms as stipulated by the document entitled "Methodology of Separation Accounting for Mobile Networks" dated September 2012. The said regulatory financial statements constitute a portion of responsibilities stipulated by the ZEK and therefore, they are separate in relation to official financial reports to be prepared complied with the Law on Accounting and Auditing.

The regulatory financial reports compulsory based on the AEC Decision (Section 2.2.1) include:

- Regulatory Financial Statements:
 - Profit-and-Loss Account
 - Report on the mean capital employed
 - Report on reconciliation
 - Report on unit costs
 - Statement of responsibility
 - Auditor's report
 - Report on Transfer Charges
- Accounting documents:
 - Accounting principles
 - Revaluation methods
 - Cost model description
 - Detailed description of WACC calculation (if it has to be performed by Telenor)
- Document on the allocation methodology
- Ad hoc reports as requested by the agency

Izvještaji će se dostaviti Agenciji radi davanja saglasnosti nakon čega ostaju na snazi do trenutka izmjene ili stavljanja van snage od strane kompanije Telenor d.o.o. Regulatorni finansijski izvještaji treba da budu sastavljeni na osnovu tekućeg troškovnog računovodstva (Current Cost Accounting - CCA) kao troškovne osnovice i dugoročno inkrementalnih troškova (Long Run Incremental Costs - LRIC) kao računovodstvene metodologije za godine koje završavaju 31.12.2016

i za godine koje slijede za veleprodajne usluge. Dok će se za maloprodajne usluge primenjivati tekuće troškovno računovodstvo (CCA) kao računovodstvenu osnovicu i metodologiju potpuno raspodeljenih troškova (FAC). Kako je prikazano u Tabeli korišćenih metoda alokacije po uslugama.

Za 2012 i 2013 godinu po Rješenju Agencije je bilo određeno da se pripreme isti izvještaji sastavljeni na osnovu istrijskog troškovnog računovodstva (Historic cost Accounting- HCA) kao troškovne osnovice i potpuno raspodijeljenih troškova (Fully Allocated Costs- FAC) kao računovodstvene metodologije za godine koje završavaju 31.12.2012 i 31.12.2013. Agencija je izvjestaje za 2012. godinu usvojila 31.07.2013. i oni su kako je Rješenjem Agencije predviđeno, objavljeni.

Reports/Statements shall be forwarded to the Agency for purposes of obtaining approvals and afterwards, they shall remain in force by the moment of any modifications or their announcing null and void by the Telenor Company d.o.o. Regulatory Financial Statements/Reports shall be prepared based on Current Cost Accounting (CCA) as cost bases and Long Run Incremental Costs (LRIC) as the accounting methodology for years ending on December 31st, 2016 and for years which follow, for wholesale services. For retail services, the Current Cost Accounting (CCA) shall be applied as accounting basis and the methodology of Fully Allocated Costs (FAC), as presented in the Table of used allocation methods as per services.

For the years of 2012 and 2013, it was determined, based on the Agency's Decision, to prepare same reports compiled pursuant to the Historical Cost Accounting (HCA) as a cost base, and Fully Allocated Costs (FAC) as the accounting methodology for years that end on Dec 31, 2012 and Dec 31, 2013. The Agency adopted reports for the year of 2012 on July 31, 2013 and they were published, as stipulated by the Decision of the Agency.

2. METODOLOGIJA ALOKACIJE

U ovom odjeljku ćemo sažeto opisati metodologiju koju Telenor d.o.o. namjerava da koristi za alokaciju ove troškovne osnovice na regulisane aktivnosti prema Metodologiji Agencije.

Predmet regulacije biće veleprodajno tržište pristupa i originacije i terminacije poziva. Pod ostalim nereguliranim uslugama podrazumjevaće se ostalo veleprodajno tržište, maloprodajno tržište i ostale netelekomunikacione usluge po osnovu kojih Telenor d.o.o. ostvaruje prihod.

2.1. Troškovna osnovica na bazi tekuće vrijednosti imovine i izračun neto troška zamjene

Vrijednovanje sredstava u okviru računovodstva tekućih troškova je zasnovano na takozvanom metodu vrijednovanja izgubljene, uklonjene vrijednosti. Teorija tekućeg računovodstva poznaje nekoliko metoda različitih načina kojim možemo pristupiti vrednovanju sredstava, kako slijedi:

- Zamjena, odnosno metod neto troška zamjene (**NRC**) kao mogućnost nabavke drugog sličnog sredstva . Ovaj metod predstavlja trošak zamjene jednog sredstva drugim sličnih karakteristika i starosti.
- Prodaja, odnosno metod neto prodajne vrijednosti (**NVR**) koja predstavlja vrijednost sredstava koja bi se realizovala ukoliko bi sredstva bila prodana (umanjena za sve popuste i troškove prodaje)
- Uotrebna vrijednost, odnosno metoda ekonomske vrijednosti (**EV**), koja predstavlja neto sadašnju vrijednost svih budućih novčanih tokova koja bi imovina generisala tokom svog ekonomskog vijeka trajanja.

2. ALLOCATION METHODOLOGY

In the present Chapter, we are going to briefly describe the methodology that Telenor d.o.o. intends to use for allocating such cost base to the regulated activities according to the Agency's Methodology.

The subject matter of regulating will be wholesale market access, and origination and termination of calls. Other non-regulated services shall imply other wholesale market, retail trade market and further non-telecommunication services, based on which Telenor d.o.o. realizes income.

2.1. Cost basis on grounds of Asset Current Value and calculation of the Net Replacement Cost

The valuation of assets within the scope of the current costs accounting is based on the so-called valuation method of lost, eliminated value. The theory of the current accounting includes several methods of various manners we may take up the valuation of assets, as follows:

- Replacement or the method of Net Replacement Cost (**NRC**), as a potential of purchasing another similar asset. Such method represents the cost of replacing one asset with another one of similar characteristics and age.
- Sale or the method of Net Realizable Value (**NRV**) that represents the value of assets, which would have been realized if such assets had been sold (decreased by all discounts and sale expenses).
- Use value or the method of Economic Value (**EV**) that represents net present value of all future cash flows to be generated by such assets in the course of its economic life span.

U svim situacijama gdje se utvrdi da je neto trošak zamjene viši od 150% pripadajuće vrijednosti, u tom slučaju se prema Metodologiji Agencije, moraju uzeti u obzir druga dva pristupa, tj, metod Prodaje ili Metod Upotrebne Vrijednosti, i to tako što se od ta dva u obzir uzima viši iznos, tj. *Nadokandivi iznos*.

Do vrijednosti imovine će se dolaziti primjenom nekoliko metoda vrednovanja imovine kako slijedi:

- Istorijski troškovi, koja se primjenjuje kada imovina ima nisku vrijednost ili kratak vijek trajanja. Kada imovina nije izložena značajnim promjenama cijena, kada nije bilo većih tehnoloških promjena cijena i kada efekat procjene vrijednosti imovine po tekućem trošku ne dostiže granice materijalnosti
- Metoda indeksacije, koja se primjenjuje kada nije bilo većih tehnoloških promjena vezanih za imovinu čija se vrijednost procjenjuje, kada baze podataka i registar dugotrajne imovine pružaju dovoljno tačnih informacija o imovini koja je predmet procjene i kada je imovina homogena sa aspekta promjene cijena.
- Metoda potpune procjene vrijednosti koja se koristi kada imovina čija se vrijednost procjenjuje nije homogena sa aspekta promjene cijena. Kada je kod imovine čija se vrijednost procjenjuje došlo značajnih tehnoloških promjena kada baze podataka i registar dugotrajne imovine ne pružaju dovoljno tačnih informacija o imovini koja je predmet procjene.
Moderni ekvivalent zamjene, koja se koristi u situaciji kada postojeća imovina ne može da se zamijeni za istovjetnu i kada operater namjerava da imovinu zamjeni u okviru definisanog planiranog perioda

In all situations where it is determined that the Net Replacement Cost is higher than 150% of the pertaining value, according to the Agency's Methodology, other two approaches must be taken in such a case, i.e. Sale Method or Use Value Method thus, that a higher amount shall be taken into consideration, that is, *Recoverable Amount*.

The asset value shall be obtained by way of applying several methods of asset valuation, as follows:

- The historic costs method that is applied when assets have a low value or short life span. Where assets are not subject to significant changes in prices, where no major technological changes in prices have not occurred and where the value assessment effect of assets as per the current cost does not reach substantive/materiality limits.
- The indexing method, which is applied where no major technological changes have occurred to assets, the value of which is valued, where databases and the register of long run assets offer sufficiently precise information on assets subject to the valuation, and where the assets are homogeneous from the price changes standpoint.
- The method of full value valuation that is used where assets, the value of which is valued, are not homogeneous from the price changes standpoint. Where assets, the value of which is valued, have undergone significant technological changes, when databases and the register of long run assets do not offer sufficiently correct information on assets subject to valuation.
A modern replacement equivalent is used in the situation where the existing assets cannot be replaced for the identical ones and where the operator intends to replace assets within the framework of a defined planned period.

Metod indeksacije podrazumjeva primjenu indeksa rasta cijena na vrijednost sredstava utvrđenih na osnovu računovodstvenih podataka kao i datuma aktiviranja sredstava. Telenor će prilikom vrijednovanja koristiti indekse Zavoda za statistiku Crne Gore. Indeksi rasta cijena koji će se koristiti su specifični za pojedinu vrstu imovine ukoliko je takav indeks dostupan od strane Zavoda za statistiku Crne Gore, ukoliko takav indeks nije dostupan, koristiće se neki od opštih cijenovnih indeksa.

Za sledeće vrste imovine se prema Metodologiji Agencije mora primjeniti Metoda Indeksacije:

- Pomoćni sistemi i sistemi upravljanja zalihama
- Kancelarijska oprema i potrošni materijal
- Računarska i informatička oprema

Za sledeće vrste imovine se prema Metodologiji Agencije mora primjeniti Metoda potpune procenjene vrijednosti:

- Antenski tornjevi
- Oprema baznih stanica (MSC)
- Transmisiona oprema
- Oprema za napajanje

U slučaju da indentifikujemo imovinu za koju se mora primjeniti Metoda modernog ekvivalenta zamjene i u slučaju kada se utvrdi da se moderni ekvivalent zamjene te imovine razlikuje od postojeće imovine u smislu operativnih troškova, vijeka trajanja ili vrste usluge koje pruža, potrebno je te razlike uzeti u obzir i izvršiti određena usklađivanja:

The indexing method involves applying the price growth index to the value of assets established based on accounting data, as well as the date of putting such assets in operation. In the valuation, Telenor will use indices of the Statistics Institute of Montenegro. Price growth indices to be used shall be specific for an individual type of assets if such index is available with the Statistics Institute of Montenegro and if such index is not available, any of general price indices will be applied.

According to the Agency's Methodology, the Indexing Method shall be applied to the below listed types of assets:

- Auxiliary systems and stock management systems
- Office equipment and consumables
- Computer and information technology equipment

According to the Agency's Methodology, the Full Value Valuation Method shall be applied to the below listed types of assets:

- Antenna towers
- Equipment of Base Stations (MSC)
- Transmission equipment
- Power supply equipment

In case that we identify the assets, for which the Modern Equivalent Replacement Method must be applied and in case where it is established that a modern equivalent replacement of such assets differs from the existing assets in terms of operating costs, life span or the type of service provided, it is required to take into account such differences and to conduct specified harmonization:

- Usklađivanja operativnih troškova (Kada je operativni trošak nove opreme niži od postojeće opreme, trošak modernog ekvivalenta potrebno je umanjiti za sadašnju vrijednost dodatnih troškova nastalih tokom preostalog vijeka trajanja postojeće opreme)
- Usklađivanja vezana za funkcionalnost opreme (Kada je nova oprema višeg nivoa funkcionalnosti, trošak modernog ekvivalenta imovine potrebno je umanjiti uzimajući u obzir razliku u kapacitetu i/ili funkcionalnosti između postojeće imovine i njenog modernog ekvivalenta)
- Usklađivanja vezana za višak kapaciteta (Kada postoji višak kapaciteta (koji nije trenutno u upotrebi i ne očekuje se da bude u upotrebi u dogledno vrijeme), procijenjena vrijednost bi trebalo da bude manja u odnosu na vrijednost pri punoj iskorišćenosti)
- Adjustments of operating costs (Where operating cost of new equipment is lower than of the existing equipment, the cost of a modern equivalent is to be decreased by the current value of additional costs incurred during the remaining life span of the existing equipment)
- Adjustments concerning the equipment functionality (Where new equipment is of higher functionality level, cost of asset modern equivalents is to be decreased by taking into consideration a difference in the capacity and/or functionality between the existing asset and its modern equivalent)
- Adjustments as regards a capacity surplus (Where there is a surplus of capacities /not currently in use and it is not expected to be in use for the foreseeable time period/, the evaluated value should be less in relation to the value at full utilization)

Model troškovnog računovodstva mora da sadrži specifikaciju MEA tehnologije uzetih u obzir pri definisanju modernih ekvivalenata imovine upotrebljenih pri proceni vrednosti imovine u skladu sa CCA metodologijom. Izbor pojedinog modernog ekvivalenta imovine treba da bude jasno objašnjen i dokumentovan, a u slučaju razlika u funkcionalnosti i iskorišćenosti između postojeće imovine i njenog modernog ekvivalenta potrebno je izvršiti usklađivanja nabavne vrednosti i operativnih troškova.

The cost accounting model must contain the MEA technology specification, having been taken into consideration where modern equivalents of assets are defined, which have been applied when assets are valued in compliance with the CCA methodology. The selection of an individual modern equivalent of assets is to be clearly explained and documented and in case of any differences in the functionality and utilization between the existing assets and their modern equivalents, it is necessary to harmonize the cost value and operating costs.

Primjenom ovih metoda, po svakoj homogenoj grupi imovine, doći ćemo do vrijednosti *Bruto Troška Zamjene*.

By applying such methods, we are going to obtain the value of *Replacement Gross Cost* as per each homogeneous group of assets.

2.2. Metodologija Dugoročnih Inkrementalnih troškova

Pošto utvrdimo osnovicu za izradu modela na bazi tekućeg troškovnog modela, kako je opisano u prethodnom odjeljku, alokaciju na usluge i poslovne jedinice smo u obavezi vršiti na osnovu metodologije dugoročnih inkrementalnih troškova.

Ovom metodologijom će se zapravo svi troškovi raspodjeljivati na mrežne komponente korišćenjem krivih između ukupnih troškova i uzročnika troškova (eng. Cost Volume Relationship- CVRs, ili troškovnih krivih), što će rezultirati iznosom troška po pojedinačnoj mrežnoj komponenti. Zatim se mrežne komponente raspodjeljuju na pojedine usluge, putem faktora usmjeravanja (eng. Routing factors).

Proces alokacije će početi sa formiranjem homogenih troškovnih kategorija. Svaka kategorija će imati jedinstvenog uzročnika troška, kretanja cijena i troškovne krive.

Tabela A 8 u Aneksu daje listu homogenih troškovnih kategorija (HCC).

U okviru troškovnog modela potrebno je definisati opšte vrste troškova i u skladu sa njima kategorizovati homogene troškovne kategorije. To obuhvata dugotrajnu imovinu, amortizaciju, operativne troškove i obrtni kapital.

2.2. The Methodology of Long Run Incremental Costs

After we establish the basis of elaborating the model based on the current cost model, as described in the previous section, we are responsible to make the allocation to services and operating units based on the methodology of long run incremental costs.

By such methodology, all costs shall be actually allocated to network components by way of using Cost Volume Relationships (CVRs) or cost curves, which will result in the amount of costs as per an individual network component. Afterwards, network components are allocated to individual services by way of Routing Factors.

The allocation process will be started by forming homogeneous cost categories. Each category will have a unique cost cause, price flows and cost volume relationships.

Table A 8 in the Annex lists the Homogenous Cost Categories (HCCs)

Within the scope of the cost model, it is required to define general cost types and, complied therewith, to categorize homogeneous cost categories. It includes long run assets, depreciation, operating costs and working capital.

Obrtni kapital ćemo izraziti kao srednju vrijednost između iznosa obrtnog kapitala na početku i na kraju posmatranog razdoblja.

Za potrebe modela, potrebno je i odrediti mrežnu tipologiju, gdje će se koristiti geografski, takozvani *Scorched node* pristup.

Sadašnja struktura mreže odražava istorijski obrazac razvoja mreže i kao takva ne znači da pokazuje optimalnu mrežnu strukturu ako bismo zamislili da mreža treba da se gradi od nule i da treba da zadovoljava trenutne tržišne potrebe za kvalitetom i da je u skladu sa modernim tehnologijama.

Budući da LRIC podrazumjeva izračun kretanja troškova u slučaju mijenjanja obima usluga, potrebno je odrediti kako mreža treba da izgleda u slučaju da je opterećena manjim obimom saobraćaja.

Koraci pri izradi tipologije mreže, po *Scorched node* pristupu su sledeći:

- Definicija postojećih čvorova u mreži
- Analiza opterećenja pojedinog čvora odnosno dijela mreže
- Prilagođavanje kapaciteta odabranog čvora ili dijela mreže, uzimajući u obzir postojeće nivoe pružanja usluga

Kao konačan rezultat dobija se mreža iste arhitekture i topologije kao početna mreža, ali uz usklađenja pojedinih čvorova i veza radi optimizacije iskorišćavanja kapaciteta i funkcionalnosti.

The working capital will be expressed as a mean value between the working capital amount at the beginning and at the end of the considered period.

For the model requirements, it is also necessary to determine the network typology where, in terms of geography, the so-called *Scorched node* approach shall be used.

The present network structure reflects the historic model of network development and, as such, it does not mean to indicate an optimal network structure if we conceive that the network is to be constructed starting at zero, and that it has to meet the current market needs of the quality and that it is in accordance with modern technologies.

Since the LRIC implies calculation of cost trends in case of changing the scope of services, it is needed to determine how the network is to look like in case that it is loaded by a marginal traffic volume.

The steps of elaborating the network typology as per the *Scorched node approach* involve as follows:

- The definition of existing nodes in the network
- The analysis of an individual node load, or a network section
- Conforming / Adjusting of the selected node capacity or network section, taking into consideration the existing level of service providing

As a final result, the network architecture and topology identical to the starting network, but in addition to adjusting individual nodes and links in view of optimizing the capacity and functionality utilization.

Takođe, pružićemo opravdanje za postignut nivo iskorišćenosti mreže, i formiraćemo usklađivanja uzimajući u obzir sledeće faktore:

- Uticaj gubitka korisnika
- Potreba za rastom poslovanja
- Potreba za nadogradnjom opreme u skladu sa razvojem tehnologije
- Potreba za pružanjem zadovoljavajućeg nivoa usluga i
- Distribucija, odnosno gustina korisnika na pojedinim lokacijama.

Troškovne krive će se modelirati za svaku homogenu grupu troškova. Konstruisaće se primjenom:

- Inženjerskih modela
- Statističkih analiza i pregleda
- Intervju, istraživanja tržišta

Na zahtjev Agencije dostavićemo i sve modele i dokumentaciju vezanu za konstrukciju troškovnih krivi.

Dokumentacija vezana za troškovne krive sadržaće sledeći opis:

- Uzročnika troška
- Oblika troškovne krive
- Iznosa fiksnih, zajedničkih i združenih troškova,
- Metode kojom se došlo do troškovne krive i
- Klasifikaciju na nezavisnu i zavisnu troškovnu krivu

Tokom pripreme troškovnih krivih (CVR) za Telenor Crna Gora, izvršene su sledeće stavke:

1. Pripremljene su projekcije o saobraćaju za narednih 20 godina (do 2034). Ukupan saobraćaj je konvertovan u GBs, koristeći sledeće faktore konverzije
 - a. 1 SMS jedanako je 160 bita
 - b. Za govorne minute smo koristili kode GSM-AMR 12.2
2. Pripremljene su takodje i projekcije o broju korisnika za narednih 20 godina (do 2034). Mobilna penetracija

Moreover, we will provide a justification of the achieved level of the network utilization, and we will form adjustment, taking into account the below listed factors:

- Impact on customers' loss
- Necessity of operation growth
- Necessity of equipment adding complied with the technology development
- Necessity of providing the satisfactory service level, and
- Distribution or density of customers at individual locations.

Cost volume relationships shall be modeled for each homogeneous cost group. It will be designed by way of applying:

- Engineering models
- Statistical analyses and surveys
- Interviews, market researches

Upon the Agency's request, we will also present all models and the documentation as regards structuring of cost volume relationships.

The documentation in connection with cost volume relationships shall include the following description of:

- Cost cause
- Cost volume relationships shape
- Amounts of fixed, common and joint costs,
- The method applied to obtain the cost volume relationship, and
- Classification into independent and dependent cost volume relationships

When preparing the Cost Volume Relationship (CVR) functions for Telenor Montenegro the following tasks were performed:

1. Traffic projections for the next 20 years (to 2034) were prepared. All traffic was converted to GBs using the following conversion factors
 - a. 1 SMS is 160 bits
 - b. For voice minutes we used GSM-AMR 12.2 codec
2. The subscriber number projections for the next 20 years were also estimated. The mobile penetration in

Je jako visoka u Crnoj Gori u ovom trenutku. Pretpostavka koja je korištena je da će se penetracija u budućnosti smanjiti, kao što se to može vidjeti u zemljama sa više razvijenim mobilnim ekosistemom. Sljedeći reperi su razmatrani:

Zemlja	Penetracija
UK	131,5%
Irska	122,6%
Njemacka	141,3%
Japan	111,9%
Koreja	105,7%
Prosjeak	122,6%
Crna Gora	161,3%

Pretpostavka je da će se do 2034. godine, penetracija u Crnoj Gori opasti do trenutnog prosjeka u razvijenim zemljama, a da će Telenor zadržati svojih ~40% udjela na tržištu.

3. Prvo smo koristili kao troškovne kategorije, Homogene troškovne kategorije (HCC), kao troškovne kategorije FAC modela. Nakon što je odradjena detaljna analiza, lista je morala biti dopunjena sa određenim novim HCC-ovima (npr. pristup mrežnim microwave linkovima, ili optička kabela u transmisiji), ali također, izstavili smo neke koje više nisu relevantne (npr. WIMAX).

4. Za svaku CAPEX vrstu troškovne krive, minimalna mreža je definisana kao: mreža koja je potrebna kako bi se pružile postojeće usluge dvojici korisnika u cijeloj Crnoj Gori. Minimalna mreža i broj pretplatnika su korišteni za ostale HCC-ove, kako bi se odredila minimalno potrebna količina (npr. minimum jedno prodajno mjesto). Dalje, stvarne količine u Telenor Crna Gora moraju biti određene i bazirane na projekciji izračunate maksimalno potrebne količine. Gdje postoje ugovori moguće je da su korištene različite jedinичne cijene za različite količine i konfiguracije, a gdje cijene ne postoje, korišteni su troškovi prilikom posljednjeg sticanja, ili procjene eksperata. Na osnovu analize cijene dolazimo do sledećeg zaključka:

Odnos jedinичne cijene i količine u Telenoru Crna Gora je linearan. Razlozi su sledeći:

a. Minimalna količina kako bi se dobio popust od dobavljača je veća od potrebne količine za Telenor

Montenegro is very high at the moment. The assumption used was that the penetration will decrease in future as it can be seen in countries with a more developed mobile ecosystem. The following benchmarks were considered:

Country	Penetration
UK	131,5%
Ireland	122,6%
Germany	141,3%
Japan	111,9%
Korea	105,7%
Average	122,6%
Montenegro	161,3%

The assumption used was that the penetration in Montenegro will decrease to the current average of developed countries by 2034 and Telenor will maintain its ~40% market share.

- The homogeneous cost categories (HCC) as the cost categories of the FAC model were first used as cost categories. After having done the detailed analysis the list had to be updated with some new HCCs (e.g. access network microwave links or dark fibre in transmission, Brand fee or Fixed telephony (transferred from MnNews)) and also omitted some that are not relevant anymore (e.g. WIMAX).
- For each of the CAPEX type of CVRs the minimum network was defined as: the network required to serve two subscribers with the existing services in entire Montenegro. The minimum network and subscriber number was used for other HCCs to determine the minimum necessary quantity (e.g. minimum 1 sales outlet is necessary). Further the actual quantities in Telenor Montenegro had to be determined and based on the projections the maximum necessary quantities were calculated. Where contracts made it possible the different unit prices for the different quantities and configurations were used, where prices were not available the last used acquisition costs or expert estimates had to be used. Based on this price analysis following conclusion had to be drawn:

Montenegro (npr. Velicina mreze je toliko mala da dobavljalci nisu zainteresovani daju popust I dalje)

b.Telenor Crna Gora je dio Telenor Grupe, I kao takva, clan je mnogih ugovora o globalnim nabavkama (npr. IT hardver). Ponovo, I u ovim globalnim ugovorima kolicine koje su potrebne Crnoj Gori ne mogu dovesti do povecanja popusta (npr. Telenor Grupa narucuje 10.000 lap topova, a od toga 2-300 laptopova se odnosi na Crnu goru sto nema nikakvog uticaja na jedinicnu cijenu)

c.Mnogi troškovi mreznih komponenti su konstantni (npr. Skoro cijela core mreza), buduci da minimalna kolicina moze da odradi sve aktuelne I buduće potrebe kapaciteta (1 SMSC moze da podrzi slanje svih poruka u mrezi, bilo da imaju 2 ili 500.000 korisnika)

5.Nakon sto se doslo do ovog zakljucka, I kako smo identifikovali tri tacke kljucne (minimum, actual , maximum) CVR-ova, EXCEL TREND funkcija je koristena da se izracuna svaka tacka svakog CVR-a.

6.Za OPEX HCC-ove koji su bili slicni CAPEXU (npr. OPEX troškovi odredenog osnovnog sredstva), pretpostavka je da ovi troškove prate isti trend kao I CAPEX dio (npr. OPEX troškovi osnovnog sredstva su u linearnoj vezi I sa njegovim CAPEX troškovima – buduci da CAPEX troškovi takodje imaju linearan trend). Na osnovu ovoga a I cinjenice da se procenti koriste na obje ose, CAPEX funkcija moze biti koristena I za OPEX troškove. Npr. OPEX troškovi infrastrukture baznih stanica, prate isti trend kao I CAPEX troškovi, I ne postoje dalji popusti sa rastom obima, buduci da su bazne stanice nezavisne.

7.Na osnovu pojedinih fajlova CVR-ova, napravljen je sumarni pregled- sacinjen od svih CVR-ova, kako bismo omogucili bolju analizu CVR-ova.

Unit price and volume relationships in Telenor Montenegro are linear. The reason for that is that:

- a. The minimum quantities for discount of the vendors is higher than the necessary quantity for Telenor Montenegro (i.e. the network size is so small that vendors are not willing to give further discounts)
 - b. Telenor Montenegro is part of the Telenor group and as such member of many global purchasing agreements (e.g. IT hardware). In these global agreements again the quantities of Telenor Montenegro do not lead to further discounts (e.g. Telenor group is buying 10.000s of notebooks in this contract the 2-300 notebooks of Telenor Montenegro does not impact the unit price)
 - c. Many network components' costs are constant (e.g. almost the entire core network) as the minimum quantity can handle all actual and future capacity needs (1 SMSC can handle all the SMS' sent in the network by 2 or 500.000 subscribers)
5. After having come to this conclusion and having identified the three sample points (minimum, actual, maximum) of the CVRs Excel's TREND function was used to calculate each point of each CVR.
6. For the OPEX HCCs that were similar to the CAPEX (i.e. the OPEX costs of the relevant assets) the assumption used was that their cost follows the same trend as the CAPEX part. (i.e. the OPEX costs of the assets is also in linear relationship with the CAPEX costs – as the capex costs also follow a linear trend). Based on this and on the fact that percentages are used on both axis' the CAPEX functions can be used for the OPEX costs too. E.g.: the OPEX costs of site infrastructure also follows the same trend as the CAPEX costs and there is no further discount with volume growth as the sites are independent.
7. Based on the individual files of the CVR a summary workbook – that contains all the CVRs – to be able to better analyse the CVRs was prepared.

Primjer CVR krive je prikazan ispod:

Primjer opisa troškovne krive

Oznaka CVR

CV002

Naziv CVR

Prijenosna mreža – SDH tehnologija*

Opis CVR

Troškovi prijenosne mreže u zavisnosti o rastu kapaciteta mreže temeljene na korisničkim vezama

Tip CVR

Djelomično linearna sa elementima fiksnih troškova

CVR tabela

Inženjerski model računa troškove po CVR krivulji za slijedeće točke:

CV002	Volume	Trošak
0%	57%	
25%	74%	
50%	83%	
75%	92%	
100%	100%	

CV002

Opis troškova i volumena

U ovom CVR-u troškovi predstavljaju sve direktne troškove vezane za rad prijenosne mreže. Volumen predstavlja broj korisnika i propusnost (kapacitet mreže).

Izvor podataka

Informacije o Prijenosnoj mreži - SDH tehnologiji, je dobivena iz Operatorovih baza podataka aktivne opreme te interne studije troškova mrežne opreme.

Također se koriste baze podataka koje sadrže evidencije fizičkih i ekonomskih podataka (troškovi) vezanih za prijenosnu mrežu.

Navedeni izvještaji i navedene baze podataka se koriste za mrežno planiranje i odlučivanje prilikom širenja mreže klijenata.

Metodologija izrade CVR

Unutar inženjerskog modela kalkulacija se bazira na slijedećim postavkama:

- Za sve čvorove u mreži se prema lokaciji i uređaju sumiraju postojeći kapaciteti koji se smatraju početnom točkom za skaliranje.
- Kapaciteti koji se skaliraju su:
 - o Broj spojenih korisnika na portove različitih propusnosti (E1, E3/T3, STM-1, STM-4, STM-16, STM-64)
 - o Propusnost agregatnih portova koji služe za spajanje uređaja prema ostatku mreže.
- Broj linijskih portova se ne mijenja čime se osigurava zadržavanje postojeće strukture mreže.
- Skaliranje agregatnih portova se provodi tako da se skalira broj klijentskih putova različite propusnosti koji prolaze danim agregatnim portom.
- U proračun ulaze samo lokacije na kojima postoje navedeni kapaciteti.
- Prilikom skaliranja mreže zadržava se postojeće iskorisćenje broja klijentskih portova po uređaju i kapacitetu.
- Nakon skaliranja broja klijentskih portova i propusnosti agregatnih portova, računa se broj potrebnih kartica i ostalih komponenti, kao i usluga za instalaciju i puštanje uređaja u rad.
- Prilikom skaliranja u konfiguraciju čvorova i njihovu skalabilnost ugrađena su inženjerska pravila koja se koriste unutar operatora.

Opis minimalne mreže

Minimalna mreža je definirana kao mreža minimalnog kapaciteta koja podržava postojeće usluge koje su prisutne na pojedinoj lokaciji. Osnovna obilježja minimalne mreže su:

- Na svakoj lokaciji na kojoj postoji mogućnost spajanja korisnika na port određene propusnosti, ista mogućnost je zadržana i u minimalnoj mreži.
- Ukoliko pojedini čvor ne podržava portove određene propusnosti ta mogućnost ne postoji ni u minimalnoj mreži.
- Cijela struktura mreže (putovi) su zadržani u minimalnoj mreži čime se osigurava ostvarivanje postojećih usluga.

An example of CVR documentation is presented below:

Description of CVRs- Example

CVR's ID	CV002
Name of CVRs	Transmission network - SDH technology
CVR's description	CVR costs of the transmission network, depending on the growth capacity of the network based on user connections
CVR's Type	Partially linear with elements of fixed costs

CVR's Table

The engineering model calculates the cost per CVR curve to the following points:

CV002	
Volume	Cost
0%	57%
25%	74%
50%	83%
75%	92%
100%	100%

Description of the Costs and Volumes

In this CVR the costs represent all direct spend related to the operation of the transmission network.

The volume represents the number of users and bandwidth (network capacity).

Source of data

Data on the transmission network - SDH technology, is derived from the operator's database of active equipment and internal studies of the costs of network expansion.

We also used a database containing records of the physical and economic data (costs) related to the transmission network.

The above mentioned reports and databases are used for network planning and decision-making in expanding the network of clients.

Methodology of making the CVRs

Within the engineering model calculations are based on the following assumptions:

- For all nodes in the network, existing capacity that is considered as a starting point for scaling, are summarized according to location and device type.

->

- Capacities that are scaled are:

o The number of users connected to the ports of different bandwidth (E1, E3/T3, STM-1, STM-4, STM-16, STM-64)

o Throughput of aggregated ports which are used to connect devices to the rest of the network.

- The number of line ports are not changed thereby ensuring the retention of the existing network structure.

- Scaling of aggregate ports is carried out so that the scaled number of different pathways client bandwidth that pass a given aggregate port.

- The budget included only locations where there are listed capacity.

- When scaling the network retains the existing utilization of the number of client ports per device and capacity.

- After scaling the number of client ports and bandwidth aggregate ports, the number of required cards, and other components is counted, as well as services for the installation and commissioning of the unit in operation.

- When scaling the configuration of nodes and their scalability are integrated engineering rules that are used within the operator.

Description minimal network

The minimum is defined as the minimum capacity of the network that supports existing services that are present at each location. Basic features of the minimal network are:

- At each location where there is the possibility of connecting users to the port specified bandwidth, the same facility was maintained in minimal network.

- If an individual node does not support a certain bandwidth ports that possibility does not exist in a minimal network.

- Complete network structure (roads) are kept to the minimum network ensuring the realization of existing services.

Izračunavanje jediničnog troška usluge

Koristeci troškovne krive-CVR-, LRIC trosak mrezne komponenete se racuna tako sto se odredi iznos Specificnig fiksnog troska komponente (CSFC) kao i varijabilni trosak (VC).

Jedinični trošak mrežnih komponenti se izračunava tako što se LRIC trošak svake komponente podeli sa pripadajućim obimom usluge.

Jedinični trošak usluge se izvodi alociranjem LRIC jediničnog troška mrežnih komponenti na osnovu relevantnog faktora usmeravanja. Ukupni trošak pojedine usluge je zbir troškova usluge za svaku mrežnu komponentu

Faktori usmeravanja treba da se baziraju na dvogodišnjim prognozama saobraćaja. Potrebno je Agenciji priložiti odgovarajuće informacije i statističke podatke koji potvrđuju tačnost navedenih prognoza saobraćaja.

Zajednički i združeni troškovi

Udio zajedničkih i združenih troškova biće iskazan i dokumentovan za svaku homogenu troškovnu kategoriju s tim da će se objasniti po čemu su navedeni troškovi zajednički.

Zajednički troškovi će se raspodeljivati primjenom metode jednako proporcionalnog dodatka

The calculation of a service unit cost

Using the CVRs the network components' LRIC cost is calculated by determining the Component Specific Fixed Costs (CSFC) as well as their variable cost (VC).

The unit cost of network components is calculated thus that each components' LRIC cost is divided by the pertaining service scope.

The service unit cost is obtained by allocating the LRIC unit costs of network components based on the relevant routing factor. The total cost of an individual service is the sum of service costs for each network component.

Routing factors are to be based on biannual traffic forecasts. It is necessary to attach to the Agency the appropriate information and statistical data, which confirm the accuracy of the stated traffic forecasts.

Common and joint costs

A share of common and joint costs will be indicated and documented for each homogeneous cost category, provided that it is explained what makes the stated costs common.

The common costs will be allocated by way of applying the method of equal proportional mark-up.

2.3. Izvori podataka za model troškovnog računovodstva

Izvori podataka koje će Telenor d.o.o. koristiti za model troškovnog računovodstva su sledeći:

Finansijski podaci sadrže glavnu knjigu i registar stalne imovine- FAR. Oni će se dobiti izvlačenjem iz ERP-ja kompanije koji se koristi za tekuće vođenje knjiga, izveštavanje kao i za izradu zvaničnih finansijskih izveštaja. Finansijski podaci se pripremaju u skladu sa Zakonom o računovodstvu i reviziji Crne Gore. Finansijske podatke koji se odnose na mrežu ćemo uključiti shodno zahtevima modela i zahtevima Metodologije.

Podaci koji se koriste za vrednovanje su bazirani na stavljenim ugovorima Telenora Crna Gora, i procjenama eksperata.

- **Operativni podaci** se dobijaju iz postojećih informacionih sistema kompanije, Billing sistema i Data Warehouse sistema. Billing sistem će nam obezbediti podatke o saobraćaju (minutama, data saobraćaju itd.) Data Warehouse sistem će biti dodatni izvor operativnih podataka (broj korisnika, saobraćaj po segmentima itd.).
- **Inžinjski podaci** će doći u vidu podrške iz sektora Tehnike, u smislu detaljne analize mrežne infrastrukture i njene podjele na mrežne elemente.

Svi podaci će se odnositi na isto razdoblje. Projekcije koje se tiču saobraćaja, korisnika i broja zaposlenih će se pripremiti kako bi se osiguralo da kapacitet mreže odražava zahtjeve za povećanjem kapaciteta.

2.3. Izvori podataka za model troškovnog računovodstva

Data sources to be used by Telenor d.o.o. for the cost accounting model include the following ones:

The financial data include general ledger and Fixed Assets Register - FAR. They will be obtained by way of extracting them from the Company's ERP used for the current bookkeeping, reporting, as well as for working out the official financial statements. The financial data are prepared in compliance with the Law on Accounting and Auditing of Montenegro. The financial data concerning the network will be included complied with the Model and Methodology requirements.

Data for revaluations are based on actual contracts of Telenor Montenegro and expert estimates

Operating data are obtained out of the existing information systems of the Company, Billing System and Data Warehouse System. The Billing System will ensure us the data on traffic (minutes, traffic data, etc.)

The Warehouse Data System will be an additional source of operating data (number of customers, traffic per segments, etc.).

- **Engineering data** will be in a form of the support from the Technical Division in terms of the detailed analysis of the network infrastructure and its dividing into network elements.

All data will refer to the same period. Traffic, subscriber and headcount projections will be also elaborated in order to ensure that the network capacity reflects any requirements for a capacity increase.

2. METODOLOGIJA ALOKACIJE (nastavak)

2.3. Izvori podataka za model troškovnog računovodstva (nastavak)

Grafički prikaz izvora podataka prikazan je na Slici br.1

Slučaj: Telekomunikacije u Srbiji

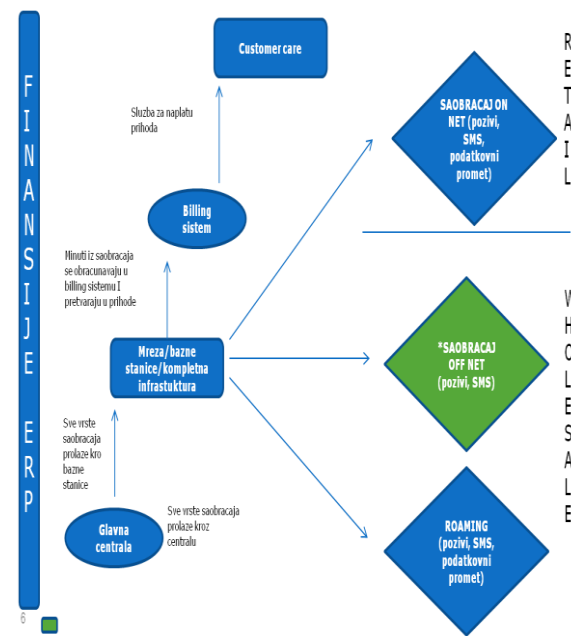
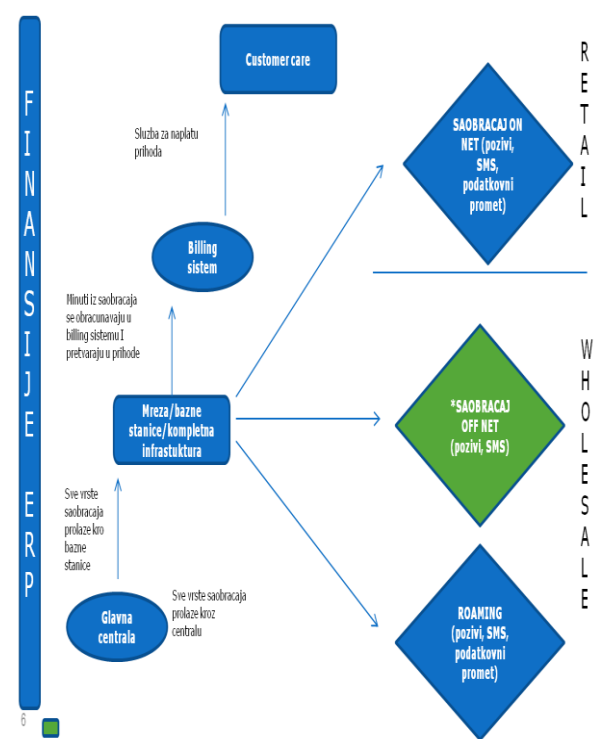


Figure No. 1 - Graphic presentation of data sources

Služ. za naplatu incomea-Income Collection Service;
Minuti iz saobracaja se obrac...-Minutes of traffic are calculated by the Billing System and convert in income; Sve vrste saobrac. prolaze kroz baz. stan.- All types of traffic pass through base stations; Glavna centrala-Main Exchange; Sve vrste saobrac. prolaze kroz centralu-All types of traffic pass through the Exchange;

2. METODOLOGIJA ALOKACIJE (nastavak)

2.4. Klasifikacija troškovnih kategorija prema metodologiji

U skladu sa Metodologijom troškovi se mogu podijeliti u sledeće četiri kategorije, kako slijedi:

- **Direktni troškovi** su troškovi koji se direktno mogu alocirati na uslugu koja je predmet regulacije. Za alokaciju ovakvih troškova nije potrebno tražiti poseban ključ za alokaciju, već su oni direktno vezani uz odgovarajuću uslugu po osnovu koje se ostvaruje prihod. Ovakvi troškovi su i računovodstveno evidentirani uz odgovarajući proizvod, uslugu, imovinu ili funkciju.
- **Direktno alocirani troškovi** su troškovi po opisu isti kao i direktni troškovi, ali sa jednom razlikom, da nisu direktno računovodstveno evidentirani uz odgovarajući proizvod, uslugu, imovinu ili funkciju.
- **Indirektno alocirani troškovi** su troškovi koji nisu direktno vezani uz odgovarajuću uslugu ali se po osnovu određene indirektna veze mogu pripisati odgovarajućem proizvodu, usluzi, imovini ili funkciji. Ta veza se može objasniti nekim jasno utvrđenim i opravdanim odnosom.
- **Nealocirani troškovi** su troškovi koji čine dio ukupnih troškova ali se za njih ne može naći nikakva veza niti odnos po osnovu koje bi se mogli pripisati odgovarajućoj usluzi, proizvodu, imovini ili funkciji.

ALLOCATION METHODOLOGY (continued)

2.4. Classification of cost categories according to the Methodology

According to the Methodology, costs may be divided in the following four categories, as stated below:

- **Direct costs** are the costs, which may be directly allocated to a service subject to regulating. For purposes of allocating such costs, it is not required to request a separate allocation key, since they are directly related to the appropriate service, based on which the income is realized. Such costs are also accounting entries next to a suitable product, service, asset or function.
- **Directly allocated costs** are the costs equivalent, in terms of the description, to direct costs, but with a single difference that they are not direct accounting entries next to a suitable product, service, service, asset or function.
- **Indirectly allocated costs** are the costs, which are not directly related to a suitable service, but based on a specified indirect relation, they may be ascribed to a suitable product, service, asset or function. Such relation may be explained by some clearly determined and justified relationship.
- **Non-allocated costs** are the costs, which represent a portion of total costs, but no connection or relation can be found for them that could be ascribed to a suitable service, product, asset or function.

2.5. Hijerarhija alociranja prema Metodologiji

U sistemu alokacija troškova treba imati u vidu realne tokove i mogućnosti evidentiranja troškova u svakoj fazi njihovog kretanja. Samim tim, potpuno je razumljivo da se alokacija ne može uvijek izvršiti direktno do konačnog mjesta troška, kao ni uvijek direktno do samog nosioca troška (usluga koja donosi prihod, u ovom slučaju regulisana usluga). Prema modelu troškovnog računovodstva alokaciju troškova najbolje je raditi tako što će se oni dijeliti na sledeće:

- **Usluge** – Ovdje će se pripisivati troškovi direktno zato što se procijenilo da se oni mogu direktno povezati sa uslugom koja je predmet regulacije. Uključuje usluge krajnjim korisnicima i mrežne usluge.
- **Mrežne komponente** – Ovdje će se pripisivati svi troškovi koji se mogu direktno alocirati na neku mrežnu komponentu (djelovi mreže, sajтови, djelovi prenosa...). Mrežne komponente ćemo odrediti na osnovu registra stalne imovine i njih ćemo potom po već utvrđenom ključu alocirati na usluge koje su predmet regulacije.
- **Povezane funkcije** – Ovdje će se pripisivati svi troškovi vezani za neke funkcije neophodne za obavljanje usluge (npr. naplata, održavanje...). Povezane funkcije po jasno definisanom ključu odnosno definisanoj troškovnoj krivoj, treba uvezati sa mrežnim komponentama, a komponente po već utvrđenom na krajnje usluge.
- **Ostale funkcije** – Ovdje će se pripisivati svi troškovi funkcija koji nisu povezani sa uslugama koje su predmet regulacije ali se ipak po nekom ključu moraju dovesti do njih. Primjeri ovakvih troškova su administracija, finansije.

The allocation hierarchy according to the Methodology

In the system of costs allocation, real flows and cost recording potentials are to be taken into consideration in each phase of their tendency. Inherently, it is quite understandable that the allocation can neither be always carried directly to the final cost position, nor can it always be carried directly to the cost bearer itself (service that brings income, a regulated service in this case). As per the Cost Accounting Model, the cost allocation is preferably to be done so that they are divided into following ones:

- **Service** – Costs shall be ascribed directly here because it has been assessed that they may be directly related to a service, which is the regulation subject. Such services include services to end customers and network services.
- **Network components** – All costs, which may be directly allocated to some network component (parts of the network, sites, transmission portions, etc.), shall be ascribed here. Network components will be set based on fixed assets register and they will be afterwards allocated to services, being the subject of regulation, according to the already determined key.
- **Related functions** – All costs related to some functions indispensable for providing of services (such as, billing, maintenance, etc.) shall be ascribed here. Related functions as per the clearly defined key or defined cost volume relationship should be tied with network components, and components with end services as already defined.
- **Other functions** – All function costs, which are not related to services being the subject of regulating, shall be ascribed here, but as per some key such costs must lead to those services. Examples of such costs include the administration, finances.

2. METODOLOGIJA ALOKACIJE (nastavak)

2.6. Vrste troškova

Troškovna osnovica se određuje tako što se koriste i HCA i CCA metodologija, a troškovi usluga se računaju na način da se koristi LRIC troškovni pristup.

FCM je CCA računovodstvena konvencija, gdje amortizacija u bilansu uspjeha uključuje revalorizacioni prihod/trosak usled promjena u cijeni imovine, kao dodatak OCM amortizaciji. OCM je CCA računovodstvena konvencija gdje se amortizacija u bilancu uspjeha odnosi na trenutnu cijenu zamjene imovine firme, uzimajući u obzir pojedinačni i opšti rast cijena. Tako da je CCA troškovna osnovica :

CCA troškovna osnovica= OPEX + DEP_{cca} - HG+ WACC*(NRC_{av} + NRV_{av} + W_{cav}) gdje su:

Opex= operativni troškovi

DEP_{cca}= amortizacija odgovarajućeg perioda bazirana na tekućim troškovima sredstva

DEP_{CCA} = GRC * DEPHCA/GBV gdje se koristi neto trošak zamjene (GRC je bruto trošak zamjene, DEP_{hca} je knjižena amortizacija za odgovarajući period, a GBV je bruto knjigovodstvena vrijednost)

HG= revalorizacioni prihod = NBV_t/GBV_t*(GRC_t - ACQ_t - GRC_{t-1})

T= odgovarajući period

ACQ_t= Book value of acquisitions in the reference year

WACC= Prosječna ponedersana vrijednost kapitala

NRV_{av} = prosječna neto prodajna vrijednost za imovinu gdje je tekuća vrijednost imovine izračunata pomoću metode neto prodajne vrijednosti.

NRC_{av} = Prosječni trošak neto zamjene za imovinu gdje je tekuća vrijednost izračunata pomoću metode neto troška zamjene.

Za individualne grupe imovine, bilo da se koristi NRC ili NRV, nema dupliranja vrijednosti.

WC_{av} = Prosjecan obrtni kapital

CCA prilagođavanja se odnose na dopunsku amortizaciju i revalorizacioni prihod.

Dopunska amortizacija : SDEP = DEP_{CCA}-DEP_{HCA}

Nisu potrebna OPEX usklađivanja zato što trenutni broj zaposlenih u Tehnici je jednak minimumu broja zaposlenih potrebnih za pokretanje mreže, nezavisno od njenog kapaciteta, a ostali operativni troškovi nisu uvećani bez obzira na ogromno

povećanje očekivanog saobraćaja.

ALLOCATION METHODOLOGY (continued)

2.6. Types of costs

The cost base is determined using the both HCA and CCA methodology, the service costs are calculated using the LRIC costing approach. Using CCA approach the Financial Capital Maintenance is used as prescribed by the Agency.

CM is a CCA accounting convention, where the depreciation charge to the profit and loss account includes holding gains or losses due to changes in asset prices, in addition to the OCM depreciation charge. OCM is a CCA accounting convention, where the depreciation charge to the profit and loss account relates to the current replacement cost of the firm's assets, taking account of specific and general price inflation. Thus the CCA cost base is:

CCA Cost base = OPEX + DEP_{CCA}- HG+ WACC*(NRC_{AV}+NRV_{AV} + WC_{AV}) where

Opex = operating costs

DEP_{CCA}= depreciation in the reference period based on current costs of the asset

- DEP_{CCA} = GRC * DEPHCA/GBV where net replacement cost is used (GRC means gross replacement cost, DEP_{HCA} is the booked depreciation for the reference period and GBV stands for gross book value)

HG = holding gain = NBV_t/GBV_t*(GRC_t - ACQ_t - GRC_{t-1})

t = reference period

ACQ_t= Book value of acquisitions in the reference year

WACC = Weighted Average Cost of Capital

NRV_{AV} = Average Net Realizable Value for assets where the current cost of the asset has been determined using the net realizable value method

NRC_{AV} = Average Net Replacement Cost for assets where the current cost was determined using the net replacement cost method.

For the individual asset group either NRC or NRV was used, there is no duplication in the value.

WC_{AV} = Average Working Capital

CCA adjustments are the supplementary depreciation and the holding gain.

Supplementary depreciation: SDEP = DEP_{CCA}-DEP_{HCA}

No OPEX adjustments are necessary because the current technical headcount is equal to the headcount minimally required to run the network independently from its capacity and other operating expenses were not increased either despite the enormous increase in expected traffic.

DMA obuhvata šest vrsta troškovnih informacija:

- OPEX- Operativni troškovi uključujući troškove zarada zaposlenih
- Amortizacija (HCA i CCA)
- FAR- Stalna imovina
- Dugoročne obaveze
- Kratkoročna imovina
- Kratkoročne obaveze

Opex se odnosi na operativne troškove koji nastaju kao rezultat redovnih tekućih aktivnosti kompanije koje Telenor nabavlja i koristi radi ostvarivanja svoje djelatnosti. Ovi troškovi se ponavljaju u svakom obračunskom periodu. Primjer ovakvih troškova su: zarade zaposlenih, troškovi održavanja, zakupa, osiguranja, električne energije i sl. Opex troškovi se priznaju u bilansu uspjeha odgovarajućeg perioda.

Nematerijalna ulaganja Društva primarno se sastoje od licence za upotrebu frekvencijskog spektra i eksterno stečenog operativnog software-a.

Nekretnine, postrojenja i oprema su iskazane u visini nabavne vrijednosti, umanjene za akumuliranu amortizaciju i nastalo obezvrjeđenje. Nabavnu vrijednost čini fakturisana vrijednost, uvećana za sve troškove nastale do dovođenja sredstva u odgovarajuće stanje i lokaciju.

Nekretnine, postrojenja i oprema su stalna sredstva koja se priznaju kao sredstvo ukoliko se očekuju buduće ekonomske koristi od upotrebe tog sredstva, a nabavna vrijednost datog sredstva se može pouzdano utvrditi.

Amortizacija nekretnina, postrojenja i opreme priznaje se u bilansu uspjeha perioda i izračunava se primjenom proporcionalne metode u toku procijenjenog korisnog vijeka upotrebe, koji se periodično procjenjuje.

DMA involves six types of cost information:

- OPEX- Operating costs, including costs employees' earning
- Depreciation (HCA and CCA)
- FAR- Fixed Assets
- Long Run Liabilities
- Short-Term Assets
- Short-Term Liabilities

OPEX relates to operating costs incurred as a result of regular current operations of the Company, which Telenor purchases and uses for purposes of realizing its business activity. Such costs repeat in each accounting period. An example of such costs are earnings of employees, expenses of maintenance, leasing, insurance, electric power and alike. OPEX costs are recognized in the Profit-and-Loss Statement of a corresponding period.

Intangible investments of the Company primarily consist of the License to use the frequency spectrum and externally acquired operating software.

Property, plants and equipment are disclosed in the amount of a cost value, decreased by the accumulated depreciation and occurred impairment. A cost value is made of the invoiced value increased for all costs incurred by the time of setting the asset into an appropriate state and to the location.

Property, plants and equipment are fixed assets recognized as an asset if any future economic benefits are expected from the use of such asset, while the cost value of a given asset cannot be determined reliably.

The depreciation of property, plants and equipment is recognized in the Profit-and-Loss Statement of the period and it is calculated by way of applying the proportional method during the estimated useful life span that is assessed periodically.

Procijenjeni korisni vijek upotrebe je kao što slijedi:

Grupa imovine	Vijek trajanja	Amortizacija %
Zgrade/postrojenja	40	2,67%
Opticka Kabla	15	6,67%
Bazne stanice, Swithevi, antene	7	14,29%
Kabine	20	5,00%
Namjestaj	8	12,50%
Vozila	4	25,00%
Kancelarijska i druga oprema	3	33,33%

Predviđeni životni vijek aktive u tabeli iznad potiče iz računovodstvene politike Telenora i zasniva se na zakonskim propisima o računovodstvu. Tokom promjene vrijednosti imovine stvarni životni vijek imovine će biti pregledan.

Amortizacija nematerijalnih sredstava izračunava se primjenom proporcionalne metode u toku procijenjenog korisnog vijeka upotrebe sredstava. Licenca za upotrebu frekvencijskog spektra se amortizuju u periodu trajanja licence od petnaest godina. Procijenjen preostali vijek upotrebe eksterno stečenog software-a i ostalih nematerijalnih sredstava je tri godine.

Dugoročne obaveze obuhvataju obaveze prema povezanim pravnim licima, dugoročne kredite, obaveze po osnovu dugoročnih hartija od vrijednosti i ostale dugoročne obaveze. Dugoročne obaveze su obaveze koje dospijevaju u roku dužem od godinu dana od dana njihovog nastanka. Dugoročne obaveze su dio Bilansa Stanja.

Kratkoročna imovina je pozicija Bilansa Stanja. Ako njenu vrijednost umanjimo za iznos kratkoročnih obaveza (takođe pozicija Bilansa Stanja) dobijamo obrtni kapital. Pozitivni obrtni kapital označava neto kratkoročnu imovinu.

The assessed useful life span amounts to as follows:

Asset group	Useful lifetime	Depreciation %
Building/facility structures	40	2,67%
Optical fibers	15	6,67%
Base stations, Switches and antennas	7	14,29%
Cabins	20	5,00%
Furniture	8	12,50%
Vehicles	4	25,00%
Office and other equipment	3	33,33%

The estimated lifetime of assets in the table above derives from Telenor's accounting policy and is based on statutory accounting regulations. During the revaluation of assets the actual lifespan of assets will be reviewed.

The depreciation of intangible assets is calculated by way of applying the proportional method in the course of the assessed useful life span of assets. The License for the use of the frequency spectrum is depreciated within the period the License duration of fifteen years. The assessed remaining life span of the externally acquired software use and other intangible assets amounts to three years.

Long run liabilities include the liabilities to associated legal entities, long run loans, liabilities based on long run securities and other long run liabilities. Long run liabilities are the liabilities, which are due within the period longer than one year as from the date of their occurrence. Long run liabilities constitute a portion of the Statement of Accounts.

Short-term assets is an item of the Statement of Accounts. If its value is decreased by the amount of short-term liabilities (also an item of the Statement of Accounts), we obtain the working capital. The positive working capital assets indicates the net short-term assets.

2. METODOLOGIJA ALOKACIJE (nastavak)

2.6. Vrste troškova (nastavak)

2.6.1. Alokacija troškova amortizacije na mrežne elemente

Registar osnovnih sredstava ("Registar") predstavlja pomoćnu evidenciju u kojoj se vodi evidencija svih osnovnih sredstava koje Telenor koristi u svom poslovanju. Sva osnovna sredstva su mapirana na mrežne komponente i samim tim troškovi amortizacije se sumiraju na nivou mrežnih komponentata. Prema metodologiji tekućeg računovodstva vrednovanje sredstava se zasniva na takozvanom metodu vrednovanja izgubljene, uklonjene vrijednosti. Kako će se prethodno objašnjenim metodama doći do preračunate vrijednosti neto sadašnje imovine, tako će se za alokaciju koristiti, ovim putem preračunata amortizacija. Ovo znači da će se trošak amortizacije korigovan za rezervnu (backlog) ili dopunsku amortizaciju dobijenu izračunom tekuće vrijednosti imovine, alocirati direktno na mrežne elemente. Rezervna amortizacija predstavlja korekciju akumulirane amortizacije iz prethodnog perioda sa ciljem njenog izjednačavanja sa tekućom bruto vrijednošću osnovnih sredstava dobijenih na bilansni dan, tj. Dan nove procjene. Drugim riječima, ako utvrdimo da je bruto vrijednost imovine povećana u odnosu na prethodnu godinu, pojaviće se kapitalni dobitak (revalorizacioni prihod), koji treba da bude dijelom amortizovan i rezervna amortizacija će se zaračunati. Obrnuto, u slučaju kapitalnog gubitka (Revalorizacioni trosak), bruto vrijednost osnovnih sredstava je smanjena i to znači da je prethodno zaračunata amortizacija prevelika i da ćemo je smanjiti kroz rezervnu amortizaciju..

CAPEX čine troškovi koji su grupisani u sledeće mrežne komponente:

- BSS mreža
- Prenos
- Core CS mreža
- Core PS mreža
- Licenca za frekvenciju
- IT sistemi
- Servisne platforme
- Mrežna podrška
- Zgrade
- Vozila
- Maloprodaja-ostalo

Detaljan pregled mrežnih elemenata prikazan je u tabeli dolje:

ALLOCATION METHODOLOGY (continued)

2.6 Types of costs (continue)

2.6.1 Depreciation costs allocation to network elements

The Fixed Assets Register ("Register") is auxiliary record where all fixed assets are recorded, which Telenor uses in its business operations. All fixed assets are mapped onto network components and therefore, depreciation costs are summed at the level of network components. Complied with the Current Accounting Methodology, valuation of assets is based on the so-called method of valuating a lost, eliminated value. Since the previously explained methods will enable us to obtain the calculated value of net present assets, the depreciation calculated in such manner shall be used for the allocation. That means that a depreciation cost restated for the backlog (or supplementary) depreciation obtained by the calculation of the assets current value will be allocated directly to network elements. The backlog depreciation represents restatement of the accumulated depreciation of the previous period with the aim of leveling it with the current gross value of fixed assets obtained as on the date of Statement, i.e. on the New Valuation Date. In other words, if we find out that the assets gross value has been increased as compared with the previous year, a capital gain (holding gain) will emerge, which is to be partially depreciated and a backlog depreciation will be charged. Reversely, in case of a capital loss (holding loss), the fixed assets gross value is decreased and it means that the previously charged depreciation is too high, and that we are going to decrease it through the backlog depreciation.

CAPEX consists of costs grouped in the below listed network components:

- BSS network
- Transmission
- Core CS network
- Core PS network
- Frequency License
- IT systems
- Service platforms
- Network support
- Buildings/facilities
- Vehicles
- Retail trade-other

A detailed survey of network elements is presented in the Table below:

Tabela 1 Kratki opis mrežnih elemenata

ID mrežnog elementa	Grupa ME	Kratak opis mrežnog elementa
	Naziv mrežnog elementa	
BSS Mreža		
AM_ME1	Antenski stubovi i lokacije	Pasivna mrežna infrastruktura koja uključuje antenske stubove i lokacije, krovove i kontejnere koje koriste BTS, NodeB, eNodeB i radiolink opremu.
AM_ME2	Bazna stanica BTS	Bazna stanica uključujući BTS (Base Transceiver Station) - GSM mrežna oprema koja pruža radio interfejs između opreme krajnjih korisnika i core mreže
AM_ME3	Bazna stanica-BTS/NodeB	Bazne stanice uključujući BTS i NodeB - zajednička GSM i UMTS mrežna oprema koja pruža radio interfejs između korisnika i core mreže
AM_ME4	Bazna stanica-BTS/NodeB/eNodeB	Bazna stanica BTS, NodeB i eNodeB - zajednička GSM, UMTS i LTE mrežna oprema koja pruža radio interfejs između opreme krajnjih korisnika i core mreže
AM_ME5	Bazna stanica WiMAX	Wimax mrežna oprema koja pruža radio interfejs između opreme krajnjih korisnika i core mreže

Table 1 Brief description of network elements

Table 2-2-1: Detailed description of network elements		
ID network element	ME Group	Brief description of a network element
	Network element name	
BSS Network		
AM_ME1	Tower and site infrastructure	Passive network infrastructure that includes antenna masts and locations, roofs and containers used by BTS, NodeB, eNodeB and radio link equipment.
AM_ME2	Base station BTS	Base station, including BTS (Base Transceiver Station) - GSM network equipment that provides the radio interface between the equipment of end customers and core network
AM_ME3	Base station - BTS/NodeB	Base stations, including BTS and NodeB - common GSM and UMTS network equipment that provides the radio interface between customers and core network
AM_ME4	Base station-BTS/NodeB/eNodeB	Base station BTS, NodeB and eNodeB - common GSM, UMTS and LTE network equipment that provides the radio interface between the equipment of end customers and core network
AM_ME5	Base station WiMAX	Wimax network equipment that provides the radio interface between the equipment of end customers and core network

AM_ME6	Kontroler - BSC	BSC (Base Station Controller) - GSM mrežni element koji se koristi za upravljanje i alokaciju radio kanala, kotrolu kvaliteta radio linkova, preuzimanja između BTS.
AM_ME7	Kontroler - RNC	RNC (Base Station Controller) - UMTS mrežni element koji se bavi upravljanje i alokacijom radio izvora, kontrolom kvaliteta radio linkova, preuzimanjima između NodeB.
Prenos		
AM_ME8	Prenos - backhaul microwave linkovi	Mrežna oprema koja se koristi za microwave između BSC/RNC kontrolera i Core mreža - MSC/MSS
AM_ME44	Prenos - access microwave linkovi	Mrežna oprema koja se koristi za microwave između Bazne stanice i BSC/RNC kontrolera
AM_ME9	Prenos - core DWDM	Mrežna oprema koja se koristi za optički DWDM prenos u core mreži
AM_ME10	Prenos - core SDH	Mrežna oprema koja se koristi za optički SDH prenos u core mreži

AM_ME6	Controller - BSC	BSC (Base Station Controller) - GSM network element used for the management and allocation of radio channels, the quality control of radio links, taking over between BTS.
AM_ME7	Controller - RNC	RNC (Base Station Controller) - UMTS network element, dealing with management and allocation of radio sources, the quality control of radio links, taking over between NodeB.
Transmission		
AM_ME8	Transmission - backhaul microwave links	Network equipment used for microwave between BSC/RNC Controller and MSCs
AM_ME44	Transmission - access microwave links	Network equipment used for microwave between Base Station and BSC/RNC Controller
AM_ME9	Transmission - core DWDM	Network equipment used for the optical DWDM transmission in the core network
AM_ME10	Transmission - core SDH	Network equipment used for the optical SDH transmission in the core network

ID mrežnog elementa	Grupa ME	Kratak opis mrežnog elementa
	Naziv mrežnog elementa	
Core CS mreža		
AM_ME11	Core mreža - MSC/MSS	MSC (Mobile Switching Centre) i MSS (Mobile Switching Server) - GSM/UMTS core mrežna oprema koja služi za routing CS (Circuit Switched) saobraćaja u mreži.

AM_ME12	Core mreža - MGW	MGW (Media Gateway) - UMTS core mrežna oprema zajedno sa MSS, za routing CS (Circuit Switched) saobraćaja u mreži.
AM_ME13	Core mreža - HLR	HLR (Home Location Register) - GSM/UMTS centralna baza podataka koja sadrži detaljne informacije o svakom mobilnom korisniku koji je autorizovan da koristi GSM/UMTS mrežu.
AM_ME14	Core mreža - IMS	IMS (IP Multimedia Subsystem) - core mrežna oprema koja se koristi za VoIP usluge
Core PS mreža		
AM_ME15	IP routeri	IP ruteri - core mrežna oprema koja se koristi za routing (Packet Switched) saobraćaja u core mreži
AM_ME16	SGSN / GGSN	SGSN (Serving GPRS Support Node) i GGSN (Gateway GPRS Support Node) - core PS (Packet Switched) mrežni elementi koji služe za pružanje usluge prenosa podataka za GSM/UMTS korisnike
AM_ME17	Wimax	Core mrežna oprema za Wimax mrežu

ID network element	ME Group	Brief description of a network element
	Network element name	
Core CS network		
AM_ME11	Core network - MSC/MSS	MSC (Mobile Switching Centre) and MSS (Mobile Switching Server) - GSM/UMTS core network equipment used for CS (Circuit Switched) routing of traffic in the network.

AM_ME12	Core network – MGW	MGW (Media Gateway) - UMTS core network equipment, complete with MSS, for CS (Circuit Switched) routing of traffic in the network.
AM_ME13	Core network - HLR	HLR (Home Location Register) - GSM/UMTS Central Database that includes detailed information on every mobile customer authorized to use the GSM/UMTS network.
AM_ME14	Core network - IMS	IMS (IP Multimedia Subsystem) - core network equipment used for VoIP service
Core PS network		
AM_ME15	IP routers	IP routers - core network equipment used for (Packet Switched) traffic routing in the core network
AM_ME16	SGSN / GGSN	SGSN (Serving GPRS Support Node) and GGSN (Gateway GPRS Support Node) - core PS (Packet Switched) network elements used for providing of data transmission services to GSM/UMTS customers
AM_ME17	Wimax	Core network equipment for Wimax network

Licence za frekvenciju

AM_ME18	Licence za frekvenciju 900/1800	Licenca za korišćenje 900MHz i 1800 MHz
AM_ME19	Licence za frekvenciju 2100	Licenca za korišćenje 2100MHz
AM_ME20	Licence za frekvenciju Wimax	Licenca za korišćenje Wimax sistema.

Frequency License		
AM_ME18	License of frequency 900/1800	License to use 900MHz and 1800 MHz
AM_ME19	License of frequency 2100	License to use 2100MHz
AM_ME20	License of frequency Wimax	License to use Wimax systems.

ID mrežnog elementa	Grupa ME Naziv mrežnog elementa	Kratak opis mrežnog elementa
IT sistem		
AM_ME21	Biling Sistem – HW	Elementi hardvera koji se odnose na Biling Sistema koji se koriste za tarifiranje maloprodajnog i veleprodajnog saobraćaja
AM_ME45	Biling Sistem – SW	Elementi softvera koji se odnose na Biling Sistema koji se koriste za tarifiranje maloprodajnog i veleprodajnog saobraćaja
AM_ME22	NMS Sistem	Elementi hardvera i softvera koji se odnose na NMS (Network Management System) sistem koji se koristi za upravljanje, konfiguraciju i monitoring mrežnih elemenata
AM_ME23	CRM Sistem	Elementi softvera koji se odnose na CRM (Customer Relationship Management) sistem koji koriste sektori Prodaje, Marketinga i Brige o korisnicima.
AM_ME46	CRM Sistem – HW	Elementi hardvera koji se odnose na CRM (Customer Relationship Management) sistem koji koriste sektori Prodaje, Marketinga i Brige o korisnicima.
AM_ME24	Finansijski Sistem	Elementi hardvera i softvera koji se odnose na sistem finansija i računovodstva
AM_ME25	Personalni računari	Personalni računari i oprema koju koriste zaposleni
AM_ME26	Opšti IT	Hardver koji se koriste za opštu IT mrežu (npr. Kompanijska računarska mreža, intranet, IT help desk).
AM_ME47	Opšti IT -SW	Softver koji se koriste za opštu IT mrežu (npr. Kompanijska računarska mreža, intranet, IT help desk).

ID network element	ME Group Network element name	Brief description of a network element
IT system		
AM_ME21	Billing System - HW	Hardware elements related to Billing Systems used for charge rating of the retail and wholesale traffic
AM_ME45	Billing System – SW	Software elements related to Billing Systems used for charge rating of the retail and wholesale traffic
AM_ME22	NMS System	Hardware and software elements related to NMS (Network Management System), System used for the management, configuration and monitoring of network elements
AM_ME23	CRM Software	Software related to CRM (Customer Relationship Management), System used by Sales, Marketing and Customer Care Sectors
AM_ME46	CRM System HW	Hardware related to CRM (Customer Relationship Management), System used by Sales, Marketing and Customer Care Sectors
AM_ME24	Financial System	Hardware and software elements related to finances and accounting system
AM_ME25	Personal Computers	PCs and equipment used by employees
AM_ME26	General IT	Hardware used for the General IT Network (e.g. Company's PC Network, Internet, IT Help Desk).
AM_ME47	General IT - SW	Software used for the General IT Network (e.g. Company's PC Network, Internet, IT Help Desk).

Servisne platforme

AM_ME27	Servisne platforme – SMSC	Hardver i softver koji se odnose na SMSC (Shorts Messaging Services Centre) koji se koristi za pružanje usluge SMS korisnicima GSM/UMTS mreže.
AM_ME28	Servisne platforme- MMSC	Hardver i softver koji se odnose na MMSC (Multimedia Messaging Services Centre) koji se koristi za pružanje usluge MMS korisnicima GSM/UMTS mreže.
AM_ME29	Servisne platforme - CS mreža	Hardver i softver koji se koriste kao podrška operacijama na core CS (Circuit Switched) mreži
AM_ME30	Servisne platforme - PS mreža	Hardver i softver koji se koriste kao podrška operacijama na core PS (Packet Switched) mreži
AM_ME31	Servisne platforme - IN	Hardver i softver koji se koriste kao podrška operacijama na core IN (Intelligent Network) sistemu koji se koristi za pružanje prepaid usluga
AM_ME32	Servisne platforme- VAS	Hardver i softver koji se odnose na VAS (Value Added Services) sistem i koji služe za pružanje usluga kao što su voice mail i USSD (Unstructured Supplementary Service Data) usluge.
AM_ME33	Servisne platforme – opšte	Hardver i elementi softvera koji koriste sve platforme

Service platform

AM_ME27	Service platforms - SMSC	Hardware and software related to the SMSC (Shorts Messaging Services Centre) used for providing of services to SMS customers of the GSM/UMTS network.
AM_ME28	Service platforms - MMSC	Hardware and software related to the MMSC (Multimedia Messaging Services Centre) used for providing of services to MMS customers of the GSM/UMTS network.
AM_ME29	Service platforms - CS network	Hardware and software used as a support to operations on the Core CS (Circuit Switched) network
AM_ME30	Service platforms - PS network	Hardware and software used as a support to operations on the Core PS (Packet Switched) network
AM_ME31	Service platforms - IN	Hardware and software used as a support to operations on the Core IN (Intelligent Network), the System for providing of prepaid services
AM_ME32	Service platforms - VAS	Hardware and software related to the VAS (Value Added Services), Systems used for providing of services, such as voice mail and USSD (Unstructured Supplementary Service Data) Services.
AM_ME33	Service platforms - General	Hardware and elements of software used for all platforms

Ostalo - podrška mreži

AM_ME34	Napajanje	Elementi sistema napajanja (baterije, UPS, agregati, rektifajeri) koje koriste mrežni elementi.
AM_ME35	Klimatizacija	Elementi sistema klimatizacije koji se koristi u cilju obezbeđenja adekvatnih uslova za rad mrežne opreme
AM_ME36	Radio planiranje i testna oprema	Hardver i softver koji se odnose na planiranje i testiranje radio mreže
Zgrade		
AM_ME37	Zgrade u kojima su kancelarije (administrativne funkcije)	Zgrade u kojima su kancelarije (administrativne funkcije)
AM_ME38	Zgrade- prodavnice u maloprodaji	Maloprodajni objekti i oprema u njima (npr. nameštaj, fiskalne kase i sl).
AM_ME39	Tehničke zgrade	Tehničke zgrade i oprema u njima
AM_ME48	Zgrade u kojima su kancelarije- oprema u zgradama	Oprema u kancelarijama, npr. Namjestaj
AM_ME49	Zgrade u kojima su kancelarije (SW i licence)	SW licence koje se odnose na softer namjenjen facility upravljanju
AM_ME50	Zgrade-prodavnice u maloprodaji- tehnicka oprema	Tehnicka oprema u maloprodajnim objektima
AM_ME51	Tehnicke zgrade- oprema u zgradama	Tehnicka oprema u tehnickim postrojenjima

Other - Network Support

AM_ME34	Power supply	Power supply system elements (batteries, UPS, generator sets, rectifiers) used by network elements.
AM_ME35	Air-conditioning	Air-conditioning system elements used for the purpose of providing adequate conditions for the network equipment operation
AM_ME36	Radio planning and test equipment	Hardware and software related to planning and testing of the radio network
Buildings / Facilities		
AM_ME37	Buildings - office	Buildings where office premises are located (administrative functions)
AM_ME38	Buildings –retail stores - equipment in buildings	Retail facilities and equipment therein (e.g. furniture, cash registers and alike).
AM_ME39	Buildings - Technical	Technical real estates
AM_ME48	Buildings - office - equipment in buildings	Equipment in office buildings e.g. furniture
AM_ME49	Buildings - office (SW & licenses)	SW license related to facility management software
AM_ME50	Buildings - retail stores - technical equipment	Technical equipment in retail stores
AM_ME51	Buildings - technical - equipment in buildings	Technical equipment in technical facilities

Vozila		
AM_ME40	Vozila –tehnička	Vozila i povezana oprema koju koristi odeljenje Tehnike
AM_ME41	Vozila-prodaja	Vozila i povezana oprema koju koristi odeljenje Prodaje
AM_ME42	Vozila-opšte	Vozila i povezana oprema koju koristi odeljenje Menadžment i odeljenje Logistike
Ostalo maloprodaja		
AM_ME43	Telefonski aparati	Terminali koji se koriste u maloprodajnim objektima za dopunu prepaid brojeva
AM_ME52	Fiksna Telefonija (Preneto iz MnNews)	Fiksna telefonija (preneto iz MnNews)
AM_ME53	Brand fee	

Vehicles		
AM_ME40	Cars -technical	Vehicles and transport equipment used by the Technical Department
AM_ME41	Cars-sales	Vehicle and transport equipment used by the Sales Department
AM_ME42	Cars-general	Vehicle and transport equipment used by the Management and Logistics Department
Other Retail Trade		
AM_ME43	Phones- Sales	Terminals used in retail outlets for topping up of prepaid numbers
AM_ME52	Fixed telephony (transferred from MnNews)	Fixed telephony (transferred from MnNews)
AM_ME53	Brand fee	Fees paid for using the "Telenor" brand name

Na osnovu Metodologije, imovina je vrednovana na osnovu odgovarajuće metode vrednovanja. Jedino je odabrana imovina sa pozitivnom neto sadašnjom vrijednosću. Identifikovana je prvo imovina gdje je morala da se koristi istorijska knjigovodstvena vrijednost. U sledecem koraku sredstva za vrednovanje sa cjenovnim indeksima (SAPI) su revalorizovana. Cjenovni indeksi su uzeti iz Crnogorskog Zavoda za Statistiku. U slucaju da je sva imovina vrednovana SAPI metodom, Neto Trosak Zamjene (NRC)/ Neto knjigovodstvena vrijednost (NBV) odnos bi ostao ispod 150%. U sledecem koraku je definisana imovina sa apsolutnim vrednovanjem. U ovim slucajevima, trosak zamjene imovine je odredjen tako sto se koristila tekuća cijena koštanja, na osnovu Telenorovih ugovora, ili na osnovu poslednjih javno objavljenih cijena (npr. za automobile, zgrade). Mnogi tekuće cijene sa brojem unita iz registra imovine Telenora, izracunat je tekuci bruto trosak zamjene (GRC). Za imovinu gdje NRC/NBV odnos iznosi preko 150%, kao i za nekretnine, nadoknadivi iznos imovine mora da bude odredjena. (Po metodologiji, viša vrijednost između neto prodajne vrijednosti i ekonomske vrijednosti je nadoknadivi iznos.

Nakon sto je odredjen nadoknadivi iznos, on je uporedjen sa NRC. Nizi iznos je koriscen kao CCA vrijednost imovine.

Svi mrežni elementi su vrednovani pomocu DAR/MEA reevaluacije (EV gdje je bilo potrebno) koristeći analogiju iz odjeljka 4.3.2 (16)- u kom su izlistani mrežni elementi operatora fiksne mreže. HCA je koriscena za nematerijalnu imovinu (softver i radio licence), neto prodajna vrednost za nepokretnosti, i SAPI za svu ostalu imovinu. Tokom MEA evaluacije razmotren je popust za nabavke velike vrednosti (tj. Cena za 383 sajta nabavljena tokom 2017. godine izracunata je sa plaćenom cenom za ukupan paket, umesto primenom jediničnih cena za pojedinačne kupovine). Za imovinu RAN-a, GBV imovine u upotrebi smatran je GRC-om, jer se kupovina te imovine dogodila 2017. godine i od tada nije bilo dostupnog cenovnih promena (nije bilo novih ugovorenih cena). Sredstva sa 0 NBV su zanemarena.

Metoda vrednovanja koristena za svaku vrstu imovine je detaljno prikazana u sledecoj tabeli:

Based on the Methodology the assets were analysed with regard to their appropriate revaluation method. Only assets with a positive net book value were selected. First assets were identified where historic booked values had to be used. In the next step assets for revaluation with price indices (SAPI) were revalued. Price indices were taken from the Montenegrin Statistical Office. In case of all assets revalued with SAPI methodology the Net Replacement Cost (NRC) / Net Book Value (NBV) ratio remained under 150 %. In the next step Assets for absolute valuation have been defined. In these cases the replacement costs of the assets was determined using the current purchase price of the assets as per Telenor's contracts or last available public prices were used (e.g. in the cases of cars and buildings). Multiplying the current prices with the number of units in Telenor's asset register the current replacement value (GRC) has been calculated. For assets where the NRC/NBV ratio exceeded 150 % as well as for the real estates recoverable amount of the assets had to be determined. (Based on the methodology the higher amount of net realisable value and economic value is the recoverable amount.

After determining the recoverable amount it was compared to the NRC and the lower amount was used as CCA value of the asset

All network elements were revalued using DAR/MEA valuation (EV where necessary) using an analogy on section 4.3.2(16) – that lists the network elements of a fixed operator. HCA was used for intangible assets (software and radio licenses), net realisable value for buildings and SAPI for all other assets. During the MEA valuation the discount for major volume sourcing was considered (i.e. the price for the 383 sites acquired during 2017 was calculated with the package price paid, instead of applying unit prices for individual purchases). For the RAN assets the GBV of assets in use was considered as GRC as the purchase of those assets happened in 2017 and no price decrease (no new contracted prices) since then was available. Assets with 0 NBV were neglected.

The valuation methods used for each asset type are detailed in the following table.

Tabela 2 Metode vrijednovanja

Asset name in alphabetical order	Valuation method
Klima uredjaji	SAPI
Bazne stanice-BTS	MEA/Apsolutna
Bazne stanice -BTS/NodeB	MEA/Apsolutna
Bazne stanice -BTS/NodeB/eNodeB	MEA/Apsolutna
Bazne stanice –WiMAX	HCA
Biling Sistem – HW	SAPI
Biling Sistem – SW	HCA
Zgrade - kancelarija	NRV
Zgrade - kancelarija – oprema u zgradi	SAPI
Zgrade - kancelarija (SW & licence)	HCA
Zgrade – maloprodajni objekti	MEA/Absolute
Zgrade - rmaloprodajni objekti – oprema u zgradi	SAPI
Zgrade – maloprodajni objekti – technicka oprema	SAPI
Zgrade – technicke	MEA/Absolute
Zgrade - technicke – oprema u zgradi	SAPI
Automobili- opta	SAPI
Automobili- prodaja	SAPI
Automobili – technicka	SAPI
Kontroler – BSC	MEA/Apsolutna

Table 2 Valuation Methods

Asset name in alphabetical order	Valuation method
Air conditioning	SAPI
Base Station - BTS	MEA/Absolute
Base Station-BTS/NodeB	MEA/Absolute
Base Station-BTS/NodeB/eNodeB	MEA/Absolute
Base Station-WiMAX	HCA
Billing System - HW	SAPI
Billing System - SW	HCA
Buildings - office	NRV
Buildings - office - equipment in buildings	SAPI
Buildings - office (SW & licenses)	HCA
Buildings - retail stores	MEA/Absolute
Buildings - retail stores - equipment in buildings	SAPI
Buildings - retail stores - technical equipment	SAPI
Buildings - technical	MEA/Absolute
Buildings - technical - equipment in buildings	SAPI
Cars - general	SAPI
Cars - sales	SAPI
Cars - technical	SAPI
Controller - BSC	MEA/Absolute

Asset name in alphabetical order	Valuation method
Kontroler-RNC	MEA/Apsolutna
Core mreza- HLR	MEA/Apsolutna
Core mreza - IMS	MEA/Apsolutna
Core mreza - IP routers	MEA/Apsolutna
Core mreza - MGW	MEA/Apsolutna
Core mreza - MSC/MSS	MEA/Apsolutna
Core mreza - Wimax	MEA/Apsolutna
Core mreza- SGSN / GGSN	MEA/Apsolutna
CRM Softwer	HCA
CRM Sistem -HW	SAPI
Finansijski Sistem	HCA
Frekvencija licence 2100	HCA
Frekvencija licence 900/1800	HCA
Frekvencija licence Wimax	HCA
Opsta IT oprema	SAPI
NMS Sistem	MEA/Apsolutna
Personalni Racunari	SAPI
Telefoni –Prodaja	SAPI
Eletricni sistemi za napajanje	MEA/Apsolutna

Asset name in alphabetical order	Valuation method
Controller - RNC	MEA/Absolute
Core network - HLR	MEA/Absolute
Core network - IMS	MEA/Absolute
Core network - IP routers	MEA/Absolute
Core network - MGW	MEA/Absolute
Core network - MSC/MSS	MEA/Absolute
Core network - Wimax	MEA/Apsolutna
Core network- SGSN / GGSN	MEA/Absolute
CRM Software	HCA
CRM System -HW	SAPI
Finance System	HCA
Frequency licence 2100	HCA
Frequency licence 900/1800	HCA
Frequency licence Wimax	HCA
General IT	SAPI
NMS System	MEA/Absolute
Personal Computers	SAPI
Phones- Sales	SAPI
Power Supply	MEA/Absolute

Asset name in alphabetical order	Valuation method
Radio planiranje and testna oprema	MEA/Apsolutna
Servisne platforme - CS mreza	MEA/Apsolutna
Servisne platforme- opste	MEA/Apsolutna
Servisne platforme IN	MEA/Apsolutna
Servisne platforme - PS mreza	MEA/Apsolutna
Servisne platforme - SMSC	MEA/Apsolutna
Servisne platforme - VAS	MEA/Apsolutna
Servisne platforme - MMSC	MEA/Apsolutna
Tower and site infrastructure	MEA/Apsolutna
Transmisija – pristup microwave linkovima	MEA/Apsolutna
Transmisija - backhaul microwave links	MEA/Apsolutna
Transmisija- core DWDM	MEA/Apsolutna
Transmisija - core SDH	MEA/Apsolutna
Opsta IT oprema – SW	HCA
Fiksna telefonija (Prenešeno iz MnNews)	HCA
Brand fee	HCA

Asset name in alphabetical order	Valuation method
Radio planning and test equipment	MEA/Absolute
Service platforms - CS network	MEA/Absolute
Service platforms - general	MEA/Absolute
Service platforms - IN	MEA/Absolute
Service platforms - PS network	MEA/Absolute
Service platforms - SMSC	MEA/Absolute
Service platforms - VAS	MEA/Absolute
Service platforms- MMSC	MEA/Absolute
Tower and site infrastructure	MEA/Absolute
Transmission - access microwave links	MEA/Absolute
Transmission - backhaul microwave links	MEA/Absolute
Transmission - core DWDM	MEA/Absolute
Transmission - core SDH	MEA/Absolute
General IT - SW	HCA
Fixed telephony (transferred from MnNews)	HCA
Brand fee	HCA

2. METODOLOGIJA ALOKACIJE (nastavak)

2.6. Vrste troškova (nastavak)

2.6.2. Alokacija troškova mrežnim elementima

Bruto bilans predstavlja osnovni izvještaj izveden iz glavne knjige koja predstavlja jedan od izvora transakcija. Sve stavke troškova (osim amortizacije osnovnih sredstava i nematerijalnih ulaganja) se izdvajaju u dve grupe: operativne troškove koje se odnose na trošak zaposlenih i ostale operativne troškove. Budući da su ove grupe troškova svakako tekuće vrijednosti, za potrebe tekućeg troškovnog računovodstva ih nije potrebno dalje usklađivati. Svaka grupa sadrži više različitih kategorija troškova kao što je prikazano niže:

2.6.3. Operativni troškovi – troškovi zaposlenih

Pregled operativnih troškova koji se odnose na troškove zaposlenih prikazan je u tabeli dolje:

Tabela 3 operativni troškovi koji se odnose na troškove zaposlenih

Troškovi zarade zaposlenih u sektoru Tehnike	Troškovi zarade zaposlenih u sektoru Komercijale (Prodaja, marketing i brige o korisnicima)
Troškovi zarade zaposlenih u sektoru Corporate affairs (Regulatorni sektor)	Troškovi zarade zaposlenih u sektoru Ljudskih resursa (Administracija i ljudski resursi), sektoru Finansija (računovodstvo, finansije, kontroling i sourcing) i sektor CEO (Rukovodstvo)
Ostali troškovi zarade zaposlenih	

2.6. Types of costs (continued)

2.6.2. Allocation of costs to network elements

The trial balance represents a basic statement derived from the general ledger that constitutes one of the transaction sources. All cost items (except the fixed assets depreciation and intangible investments) are divided into two groups: operating costs, which relate to costs of employees and other operating costs. Since such cost groups are certainly current values, they are not to be further corrected for needs of the current cost accounting. Each group includes various categories of costs, as presented below:

2.6.3. Operating Costs – costs of employees

The survey of operating costs, which relate to costs of employees are presented in the Table below:

Table 3 Operating Costs relating to costs of employees

Costs of employees' earning in the Engineering Department	Costs of employees' earning in the Commercial Department (Sales, Marketing and Customer Care)
Costs of employees' earning in the Corporate Affairs Department (Regulatory Sector)	Costs of employees' earning in the Human Resources Department (Administration and Human Resources), Financial Department (Accounting, Finances, Controlling and Sourcing) and CEO Department (Management)
Other costs of employees' earning	

2.6.4. Operativni troškovi – osim troškova zaposlenih

Pregled operativnih troškova osim operativnih troškova koji se odnose na troškove zaposlenih prikazan je u tabeli dolje:

Tabela 4 operativni troškovi osim operativnih troškova koji se odnose na troškove zaposlenih

Operativni troškovi vezani za aktivnosti održavanja, podrške, testiranje, konfiguracija i sličnih aktivnosti	Operativni troškovi vezani za sektor Komercijale u vezi prodaje, marketinga i brige o korisnicima
Operativni troškovi vezani za regulatorne naknade	Operativni troškovi sektora Ljudskih resursa (Administracija i ljudski resursi), sektora Finansija (računovodstvo, finansije, kontroling i sourcing) i sektora CEO (Rukovodstvo)
Troškovi licenci za frekvencije	Troškovi Zakupa
Troškovi električne energije	Troškovi koji se odnose na Biling
Interkonekcija i roving troškovi	Troškovi koji se odnose na korisničku opremu
Ostali operativni troškovi	

Table 4 Operating Costs except operating costs, which relate to costs of employees

Operating costs in connection with activities of the maintenance, support, testing, configuration and similar activities	Operating costs in connection with the Commercial Department as regards Sales, Marketing and Customer Care
Operating costs in connection with regulatory fees	Operating costs of the Human Resources Department (Administration and Human Resources), Financial Department (Accounting, Finances, Controlling and Sourcing) and CEO Department (Management)
Costs of Frequency License	Costs of leasing
Expenses of electric power	Costs relating to Billing
Interconnection and roaming costs	Costs relating to the customer equipment
Other operating costs	

2.6.4 Operating costs – except costs of employees

The survey of operating costs except operating costs, which relate to costs of employees is presented in the Table below:

2. METODOLOGIJA ALOKACIJE (nastavak)

2.7. Alokacija obrtne imovine mrežnim elementima

Osnovu za alokaciju obrtne imovine čini bruto bilans, formiran iz glavne knjige (izvor informacija). Sve stavke kratkoročne imovine i obaveza se preispituju u smislu identifikovanja imovine/obaveza koje se odnose na telekomunikacionu delatnost i netelekomunikacionu delatnost. Nakon preispitivanja, stavke kratkoročne imovine i obaveza se alociraju na pojedine poslovne jedinice.

Opis kratkoročne imovine i kratkoročnih obaveza je dat u nastavku:

Tabela 5 Kratak opis obrtne imovine

OI šifra	Naziv	Kratki opis
Obrtna sredstva		
OI_1	Zalihe – mobilni telefoni	Zalihe se vrednuju po nabavnoj vrijednosti ili prodajnoj vrijednosti u zavisnosti od toga koja je niza. Zalihe – mobilni telefoni predstavljaju poziciju u okviru koje se evidentiraju mobilni telefoni nabavljeni od drugih preduzeća a u svrhu dalje prodaje bez namere dodatne obrade.
OI_2	Zalihe – SIM kartice i vaučeri	Zalihe se vrednuju po neto prodajnoj vrijednosti. Neto prodajna vrednost je procenjena prodajna vrednost usled normalnih uslova prodaje, smanjena za procenjene troškove prodaje. Zalihe – SIM Kartice i vaučeri predstavljaju poziciju u okviru koje se evidentiraju mobilni telefoni nabavljeni od drugih preduzeća a u svrhu dalje prodaje bez namere dodatne obrade.

ALLOCATION METHODOLOGY (continued)

2.7 Allocation of current assets to network elements

The basis for allocation of current assets is the trial balance, formed from the main ledger (source of information). All the items of current assets and liabilities are re-examined in terms of identification of assets/liabilities that are related to the telecommunication activity and the non-telecommunication activity. After re-examination, items of current assets and liabilities are allocated to individual business units.

The description of current assets and short-term liabilities is given below:

Table 5. Brief description of current assets

OI code	Name	Brief description
Current assets		
OI_1	Inventories – mobile telephones	Inventories are valued at cost or net realizable value, the lower of the two. Inventories – mobile telephones represent the item within which mobile telephones are recorded, which are procured from other companies for the purpose of further sale without the intention of additional processing.
OI_2	Inventories – SIM cards and vouchers	Inventories are valued at net sales value. Net sales value is assessed sales price under normal conditions of business operation, reduced by assessed costs of sale. Inventories – SIM cards and vouchers represent the item within which mobile telephones are recorded that are procured from other companies for the purpose of further sale without the intention of additional processing.

OI_3	Ostale zalihe	Zalihe se vrednuju po nabavnoj vrijednosti ili prodajnoj vrijednosti u zavisnosti od toga koja je niza.. Ostale zalihe predstavljaju sve ostale zalihe robe nabavljene od drugih preduzeća a namenjene su daljoj prodaji bez namere njihove dodatne obrade.
OI_4	Dati avansi za zalihe	Dati avansi predstavljaju unaprijed plaćeni iznosi dobavljačima ili pružaocima usluga za nabavku zaliha
OI_5	Potraživanja od pretplatnika	Potraživanja od pretplate predstavljaju iznose koji se mjesečno fakturišu postpaid korisnicima nezavisno od stvarno ostvarenog saobraćaja. Prihodi od pretplata se priznaju pravolinijski u toku trajanja pretplatničkog odnosa.
OI_6	Potraživanja od distributera	Potraživanja od distributera predstavljaju iznose koji se fakturišu distirbuterima.
OI_7	Potraživanja – interkonekcija	Potraživanja interkonekcije proizilaze iz saobraćaja ostvarenog između pretplatnika fiksne telefonije, ili drugih mobilnih operatera i pretplatnika Društva. Potraživanja/Prihodi od interkonekcije priznaju se na bazi ostvarenog dolaznog saobraćaja pretplatnika drugih operatera u toku perioda.

OI_3	Other Inventories	Inventories are valued at cost or net realizable value, the lower of the two.. Other inventories are all other inventories of goods procured from other companies and are intended for further sale without the intention of their additional processing.
OI_4	Prepayments for inventories	Prepayments are prepaid amounts to suppliers or service providers for procurement of inventories.
OI_5	Receivables from subscribers	Receivables from subscription are amounts that are invoiced on monthly basis to postpaid users irrespective of the actually realized traffic. Income from subscriptions is lineary recognized in the course of duration of a subscriber relationship.
OI_6	Receivables from distributors	Receivables from distributors are amounts that are invoiced to distributors.
OI_7	Receivables – interconnection	Receivables for interconnection result from the traffic realized between fixed telephony subscribers, or other mobile operators and subscribers of the Company. Receivables/income from interconnection are/is recognized on the basis of the realized incoming traffic of subscribers of other operators within the period.

2. METODOLOGIJA ALOKACIJE (nastavak)

Allocation of current assets to network elements (Continued)

2.7. Alokacija obrtne imovine mrežnim elementima (nastavak)

O I š i f r a	Naziv	Kratki opis	O I c o d e	Nam e	Brief description
O I – 8	Potraživ anja – roming	Potraživanja od izlaznog rominga nastaju po osnovu saobraćaja koji ostvaruje pretplatnik u mreži inostranog operatera prilikom boravka u toj zemlji. Potraživanja od ulaznog rominga nastaje kada pretplatnici inostranih operatera koriste mrežu Društva.	O I – 8	Recei vable	Receivables from outgoing roaming occur on the ground of traffic realized by a subscriber in the network of a foreign operator while staying in their country. Receivables from incoming roaming occur when subscribers of foreign operators use the network of the Company.
O I – 9	Potraživ anja od inostrani h lica	Potraživanja na osnovu pruženih usluga kupcima iz inostranstva.	O I – 9	Recei vable	Receivables on the basis of services provided to buyers from abroad.
O I – 1 0	Potraživ anja – ostala potraživ anja	Ostala potraživanja odnose se na potraživanja za plaćene sudske takse, potraživanja za neosnovane naplate opštinskih taksi, kao i za troškove koji se prefakturišu drugom pravnom licu	O I – 1 0	Recei vable	Other receivables are related to receivables for paid court fees, receivables for unfounded collection of municipal taxes, as well as for costs that are re-invoiced to another legal entity
O I – 1 1	Potraživ anja od zaposlen ih	Potraživanja na ime akontacija, prodaje telefona na rate kao i tekući dio dugoročnih kredita.	O I – 1 1	Recei vable	Receivables for advance pays, sales of telephones in installments as well as current portion of long-term loans.
O I – 1 2	Obračun ati prihodi	Obračunati prihodi predstavljaju poziciju u okviru koje se evidentiraju prihodi ostvareni pružanjem usluga ili prodajom proizvoda a koji na dan finansijskih izveštaja još nisu fakturisani kupcima	O I – 1 2	Accru ed inco me	Accrued income represents the item within which income is recorded that is realized by providing services or sales of products, which, on the date of financial reports, have not as yet been invoiced to buyers
O I – 1 3	Gotovina i gotovins ki ekvival enti	Gotovina i gotovinski ekvivalenti prikazani u bilansu stanja obuhvataju gotovinu na računu kod banaka, gotovinu u blagajni i kratkoročne depozite kod banaka sa rokom dospelja do tri mjeseca	O I – 1 3	Cash and cash equi valents	Cash and cash equivalents presented in the balance sheet include cash in accounts with banks, cash in hand and short-term deposits in banks with the maturity period of up to three months

Kratkoročne obaveze		
0 – 1 4	Obaveze iz poslovanja – povezana pravna lica	Odnosi se na obaveze prema drugim članicama Telenor Grupe (npr Telenor Direct, Konsultantske usluge i sl.)
0 – 1 5	Obaveze iz poslovanja-roming	Predstavlja poziciju u okviru koje se evidentiraju nastale obaveze po osnovu rominga, koje nisu izmirene na datum bilansa.
0 – 1 6	Obaveze iz poslovanja-interkonekcija	Predstavlja poziciju u okviru koje se evidentiraju nastale obaveze po osnovu interkonekcije, koje nisu izmirene na datum bilansa.
0 – 1 7	Obaveze iz poslovanja - dobavljači u zemlji	Predstavlja poziciju u okviru koje se evidentiraju nastale obaveze prema dobavljačima u zemlji, koje nisu izmirene na datum bilansa.

Short-term liabilities		
OI_14	Liabilities from operations – linked legal entities	Are related to liabilities towards other members of the Telenor Group (e.g. Telenor Direct, Consultancy Services, etc.)
OI_15	Liabilities from operations - roaming	Represent the item within which incurred liabilities on the ground of roaming are recorded, which have not been settled on the date of the balance sheet.
OI_16	Liabilities from operations - interconnection	Represent the item within which incurred liabilities on the ground of interconnection are recorded, which have not been settled on the date of the balance sheet.
OI_17	Liabilities from operations – trade payable – domestic	Represent the item within which incurred liabilities towards suppliers in the country are recorded, which have not been settled on the date of the balance sheet.

018	Obaveze iz poslovanja - dobavljači u inostranstvu	Predstavlja poziciju u okviru koje se evidentiraju nastale obaveze prema dobavljačima u inostranstvu, koje nisu izmirene na datum bilansa.
019	Ukalkulisani nefakturisani troškovi	Predstavlja poziciju u okviru koje se evidentiraju troškovi koji su priznati u poslovnim knjigama a za na dan bilansa dobavljači nisu dostavili fakture a očekuje se da će biti plaćeni.
020	Razgraničeni prihodi	Odnosi se na primer na pripaid dopune (vaučere).
021	Ostale ukalkulisane obaveze	Predstavlja poziciju u okviru koje se evidentiraju ostale gore nepomenute obračunate obaveze.
022	Ostale kratkoročne obaveze – PDV	Predstavlja poziciju u okviru koje se evidentiraju nastale obaveze na osnovu poreza na dodatu vrijednost.
023	Ostale kratkoročne obaveze - Obaveze za takse i doprinose	Predstavlja poziciju u okviru koje se evidentiraju nastale obaveze po osnovu ostalih taksa, poreza, doprinosa i drugih davanja uključujući i obaveze za obračunate bonuse zaposlenima.
024	Ukalkulisani troškovi	Odnosi se na obračunate a nefakturisane troškove na dan bilansa.

OI_18	Liabilities from operations - trade payable – foreign	Represent the item within which incurred liabilities towards suppliers abroad are recorded, which have not been settled on the date of the balance sheet.
OI_19	Accrued un invoiced costs	Represent the item within which the costs that are recognized in business books are recorded and, as at the date of the balance sheet, suppliers have not submitted invoices and which are expected to be paid.
OI_20	Deferred income	It is related, for example, to prepaid credits (vouchers).
OI_21	Other accrued liabilities	Represent the item within which other accrued liabilities not mentioned above are recorded.
OI_22	Other short-term liabilities – VAT	Represent the item within which incurred liabilities on the basis of value added tax are recorded.
OI_23	Other short-term liabilities - liabilities for taxes and contributions	Represent the item within which incurred liabilities on the ground of other taxes, levies, contributions and other outlays including liabilities for accrued bonuses to employees are recorded.
OI_24	Accrued costs	Are related to accrued and not invoiced costs as at the date of the balance sheet.

2. METODOLOGIJA ALOKACIJE (nastavak)

2.9. Prosječni angažovani kapital

Prema Metodologiji AEK, Telenor je obavezan u svoj model uključiti i prosječno angažovani kapital. Računaće se kao prosjek između angažovanog kapitala na kraju i na početku odgovarajućeg perioda.

Prilikom obračuna prosječnog angažovanog kapitala koristiće se sledeće stavke:

- Nekretnine i oprema (Trunk NW, Mob Phone Netw. and Exchange, Subscriber Equipment, Switches Installations, Radio Installations, Buildings, Machinery/Equipment, Transport Equipment, Computer Hardware). Radi se o imovini koja se koristi za pružanje telekomunikacionih usluga, čiji je korisni vijek trajanja određen na duže od godinu dana.
- Licence i ostala prava (Licenses i other rights). Ova imovina je nabavljena i kapitalizovana zajedno sa svim tekućim troškovima vezanim za nabavku. Vijek trajanja licenci je definisan rokom trajanja ugovora.
- Kompjuterski softver i ostala nematerijalna ulaganja (Computer Software and Other Intangible Assets). Radi se o stečenim pravima kompjuterskog softvera, kapitalizovana na bazi nastalih troškova nabavke kao i svih propratnih troškova. Vijek trajanja je određen rokom trajanja softvera.
- Obrtna imovina umanjena za kratkoročne obaveze.

ALLOCATION METHODOLOGY (Continued)

2.9. Mean capital employed

According to the AEK Methodology, Telenor is obliged to also include in its model the average capital employed. It shall be calculated as the average between the capital employed at the end and at the beginning of the corresponding period.

When calculating average capital employed, the following items shall be used:

- Immovable assets and equipment (Trunk NW, Mob Phone Netw. and Exchange, Subscriber Equipment, Switches Installations, Radio Installations, Buildings, Machinery/Equipment, Transport Equipment, Computer Hardware). Assets are in question, which are used to provide telecommunication services, the useful life of which is determined to be in excess of one year.
- Licenses and other rights. These assets are procured and capitalized together with all current costs related to procurement. Validity of licenses is defined by the term of the contracts.
- Computer Software and Other Intangible Assets. Acquired rights of computer software are in question, capitalized on the basis of incurred costs of procurement as well as all the associated costs. Life is determined by the life of software.
- Current assets reduced by short-term liabilities.

2.10. Alokacija prihoda poslovnim jedinicama

Prihode ćemo alocirati na regulisane aktivnosti odnosno usluge na osnovu izvještaja koje možemo dobiti posredstvom izvjestaja iz sistema za skladistenje podataka (DWH) i na osnovu izvjestaja koje nam omogućava računovodstveni program.

Prihode u najširem možemo podijeliti na:

- Prihode od maloprodaje
- Prihode od veleprodaje
- Prihodi od netelekomunikacionih usluga

Prema Metodologiji AEK, predmet regulacije će biti veleprodajni prihodi, i to oni koji nastaju povodom pristupa i originacije i terminacije poziva u našoj mreži. S tim u skladu naša, za malo šira podjela prihoda gledano po vrstama usluga kao uzročnicima biće sledeća:

Veleprodaja			Maloprodaja i Ostalo	
Originacija mobilnih poziva	Terminacija mobilnih poziva	Ostale usluge veleprodaja	Maloprodaja	neteletelekomunikacione usluge

Prihodi se sastoje od sledećih kategorija:

- Maloprodaja i interkonekcija
- Dolazeći i Odlazeći roming
- Prenos podataka
- Mesečne pretplate
- Prodaja opreme
- Aktivacija usluga
- Zakup mreže
- Ostali telekomunikacioni prihodi
- Ostali netelekomunikacioni prihodi

Svi navedeni prihodi se alociraju poslovnim jedinicama kako je prikazano u Tabeli A2

2.10 Allocation of income to business units

We shall allocate income to regulated activities and/or services on the basis of reports we can get by way of the reporting system – Data Warehouse and on the basis of reports that are enabled to us by the accounting program.

We can classify income in general as:

- Income from retail trade
- Income from wholesale
- Income from non-telecommunication services.

According to the AEK Methodology, the subject of regulation shall be wholesale income, specifically the one that occurs on the occasion of access and origination and termination of calls in our network. In line with that our, little wider classification of income viewed by types of services as causes shall be as follows:

Wholesale			Retail trade and other	
Origination of mobile calls	Termination of mobile calls	Other services Wholesale	Retail trade	Non-telecommunication services

Income consists of the following categories:

- Retail trade and interconnection
- Incoming and outgoing roaming
- Data transmission
- Monthly subscriptions
- Sale of equipment
- Activation of services
- Lease of network
- Other telecommunication income
- Other non-telecommunication income.

All the specified income is allocated to business units as shown in Table A2.

2. METODOLOGIJA ALOKACIJE (nastavak)

2.10. Alokacija prihoda poslovnim jedinicama

Definisanje poslovnih jedinica

Tržište 4 "Originacija poziva i pristup" definisano u Odluci od 31.03.2011. godine predstavlja Veleprodajno tržište pristupa i originacije poziva iz javne mreže mobilne telefonije. Sastoji se od sljedećih veleprodajnih usluga:

Pozivi u mreži (originacija)	Odlazni pozivi
Odlazni međunarodni pozivi	SMS u mreži (originacija)
Odlazni SMS	

Tabela veleprodajnih usluga - originacija poziva

Tržište 7 "Terminacija poziva poslovne jedinice" definisano u Odluci od 3. aprila 2009. godine predstavlja Veleprodajno tržište terminacije poziva u javnim mrežama mobilne telefonije. Sastoji se od sljedećih veleprodajnih usluga:

Pozivi u mreži (terminacija)	Dolazni pozivi
Dolazni međunarodni pozivi	Dolazni SMS
SMS u mreži (terminacija)	

Tabela veleprodajnih usluga – terminacija poziva

Ostale mrežne poslovne jedinice sastavljene su od veleprodajnih usluga koje nisu pružene od originacije mobilnih poziva i terminacije mobilnih poziva i odnose se na:

MMS u mreži	Odlazni MMS
Dolazni MMS	Saobraćaj podataka

Tabela veleprodajnih usluga - ostale mrežne poslovne jedinice

2.10. Allocation of income to business units

Definition of business units

Market 4 "Origination of calls and access" defined in the Decision, dated 31/03/2011, is the Wholesale market of access and origination of calls from public network of mobile telephony. It consists of the following wholesale services:

Calls within the network (origination)	Outgoing calls
Outgoing international calls	SMSs within the network (origination)
Outgoing SMSs	

Table of wholesale services – origination of calls

Market 7 "Termination of calls of a business unit" defined in the Decision, dated April 3, 2009, is the Wholesale market of termination of calls in public networks of mobile telephony. It consists of the following wholesale services:

Calls within the network (termination)	Incoming calls
Incoming international calls	Incoming SMSs
SMSs within the network (termination)	

Table of wholesale services – termination of calls

Other network business units include wholesale services that are not provided from origination of mobile calls and termination of mobile calls and they are related to:

MMSs within the network	Outgoing MMSs
Incoming MMSs	Data traffic

Table of wholesale services - other network business units

2.11. Alokacija obrtne imovine/obaveza poslovnim jedinicama

Bruto bilans Telenora predstavlja osnovu za identifikaciju obrtne imovine/obaveza koje se alociraju na poslovne jedinice. Sva navedena obrtna sredstva i kratkoročne obaveze alociraju se poslovnim jedinicama kao što je prikazano u Tabeli A3.

2.11 Allocation of current assets/liabilities to business units

Trial balance of Telenor represents the basis for identification of current assets/liabilities that are allocated to business units. All the specified current assets and short-term liabilities are allocated to business units as shown in Table A3.

3. TRANSFERNE NAKNADE

Transferne naknade koje se baziraju na eksternim cijenama

Osnovna pretpostavka za izračun naknada trenasfernih usluga jeste da one moraju biti jednake trzisnoj cijeni. S tim u vezi u slučaju da Telenor obezbjeđuje određene usluge i internom i eksternom veleprodajnom tržištu, cijena ovih usluga mora biti jednaka veleprodajnoj cijeni prema eksternim korisnicima. Prema tome, interni prihod veleprodajnog segmenta treba da bude jednak veleprodajnoj cijeni pomnoženoj sa količinom usluga pruženoj maloprodajnom segmentu.

Transferne naknade koje se baziraju na jedinicnoj cijeni usluge

U slučaju kada Telenor obezbjeđuje transferne usluge samo interno, transferne naknade za usluge će biti jednake jedinicnom trošku usluge izračunatom na osnovu računovodstvenog metoda (CC/LRIC) i izračunatoj troškovnoj osnovici. Stoga, interni prihod od transfernih usluga bi bio jednak transfernoj nakandi pomnoženoj sa obimom transakcija u toku godine.

Transferna matrica će biti primjenjena prilikom izračuna transfernih naknada među poslovnim jedinicama.

3. TRANSFER FEES

Transfer fee based on external prices

The basic assumption for calculating fees for transfer services is that they must be equal to the market price. Therefore, in case when Telenor provides certain services both internally and on external wholesale markets, the price of these services should be equivalent to the wholesale price for external customers. Consequently, the internal revenue of the wholesale segment shall equal the wholesale price multiplied by the quantity of services provided to the retail segment.

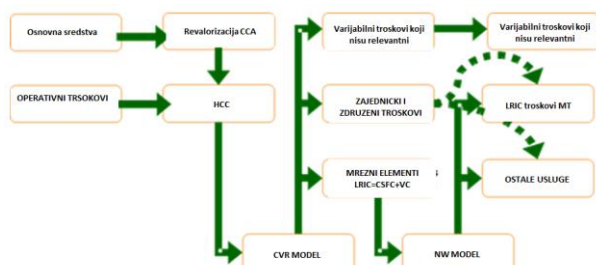
Transfer fee based on unit cost of service

In case when Telenor provides transfer services only internally, the transfer fees for services would equal the unit cost of service calculated on the basis of the accounting method (CCA/LRIC) and the cost base calculated. Therefore, internal revenues from transfer services would equal the transfer fee multiplied by the volume of transactions in a year.

A transfer matrix will be applied to calculate the transfer charges among the business units.

3.1. Konceptualni model

Koncept Telerovog modela je prikazan u sledecem pregledu:

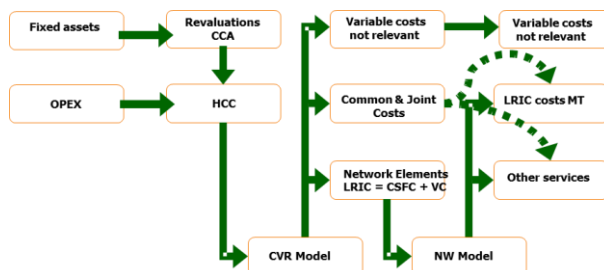


Troškove ćemo alocirati na osnovu sledećih koraka:

1. Prikupljanje i procesuiranje Opex podataka
 2. Prikupljanje i procesuiranje podataka o osnovnim sredstvima
 3. Priprema metodologije revalorizacije za svaku kategoriju imovine i dobijanje podataka. Za svako osnovno sredstvo (vrstu osnovnog sredstva), treba da se odredi odgovarajući metod revalorizacije (istorijski, apsolutni (takodje poznat i kao detaljna revalorizacija imovine ili DAR), MEA, SAPI (metoda specifičnog cjenovnog indeksa imovine)). Za imovinu za koju se mora primjeniti metoda Modernog ekvivalenta-MEA, neophodno je identifikovati MEA imovinu, kao i sve njene osobine i sećificnosti (dodatni kapacitet kao i ostale faktore rastuce efikasnosti), tekuci trosak imovine izracunat i dokumentovan.
 4. Grupisanje tipova troškova u homogene troškovne kategorije (HCC)
 5. Definisanje uzrocnika troska za svaku troškovnu kategoriju, i identifikovanje njihovih veza sa obimom (Troškovne krive- CVR)
 6. Prikupljanje podataka o uzrocnicima troska ukoliko su podaci dostupni.
 7. Sprovođenje anketa o uzrocnicima troska ukoliko je potrebno (npr. Anketa o aktivnostima)
 8. Priprema CVR modela u excel-u: Izracunati stvarnu alokaciju svake homogene troškovne kategorije na zajednicke i združene troškove (CJC), Specifčne Fiksne Troškove Komponentete(CSFC) i Varijabilne troškove (relevante/irelevantne).
 9. Alokacija troškova mreže:
- Telenor je u obavezi da izvrši alokaciju troškova na različite usluge i poslovne jedinice (veleprodaja i maloprodaja). Troškovi koji se odnose na mrežu moraju biti alocirani. Koristice pristup AKA- Network model:

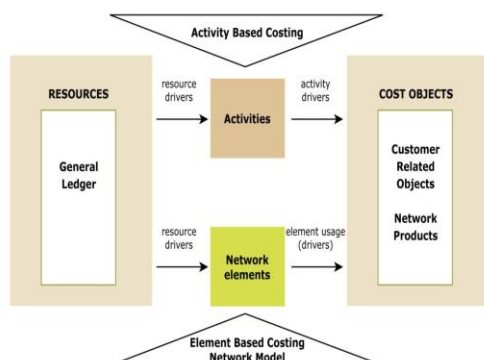
3.1. Conceptual model

Telenor's model concept is shown in the next figure:



We shall allocate costs on the basis of the following steps:

1. Collection and processing of OPEX data
2. Collection and processing of Fixed Asset data
3. Preparation of revaluation methodology for each asset category and data gathering (e.g. quotes of MEA assets, etc.). For each fixed asset (type) the proper revaluation method has to be determined (historic, absolute (also known as detailed asset revaluation or DAR), MEA, SAPI (specific asset price index)). For the assets where a Modern Equivalent Asset (MEA) has to be defined it is necessary to identify the MEA asset with all its features (additional capacity as well as other efficiency increasing factors), current costs of the assets have to be collected and documented.
4. Grouping of cost types into homogeneous cost categories (HCC)
5. Define cost drivers for each costs category, identify their relationship relating to their driver quantity (Cost volume relationship - CVR)
6. Collect cost driver information where available
7. Conduct cost driver surveys where necessary (e.g. activity surveys)
8. Prepare the CVR model in Excel: Calculate the actual allocation of each HCC to Common & Joint Costs (CJC), Component Specific Fixed Cost (CSFC) and Variable Costs (relevant / not-relevant)
9. Allocation of network costs:
Telenor has to prepare for the allocation of costs to the different services and business units (wholesale and retail). The costs related to the network have to be allocated. We are



Prikaz:teorijska struktura troškovnog modela u Telenoru

Tokom modeliranja, moramo da pripremimo metodologiju alociranja troškova mreže. Koristimo model pripremljen ranije za HCA model alokacije troškova sa sledecim dopunama:

- Definisanje LRIC troška mrežnih elemenata i aktivnosti koje se odnose na mrežu
- Izracun LRIC troška po vrstama poziva

using the element based costing¹ (AKA: Network Model) approach,

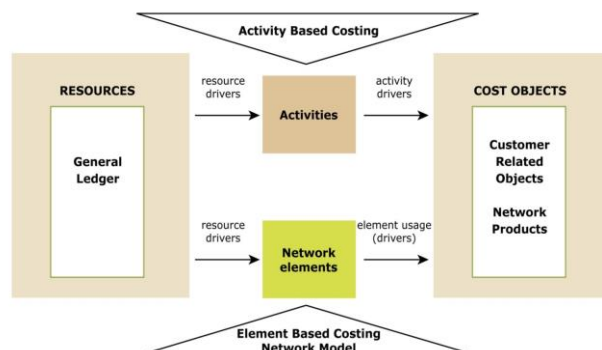


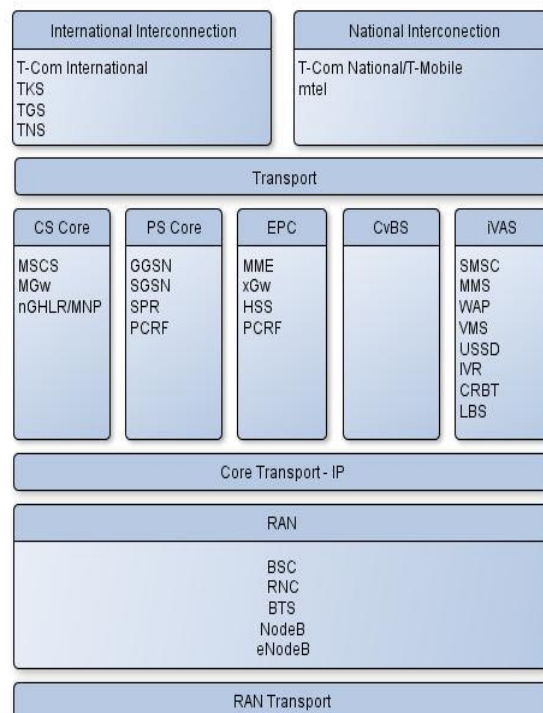
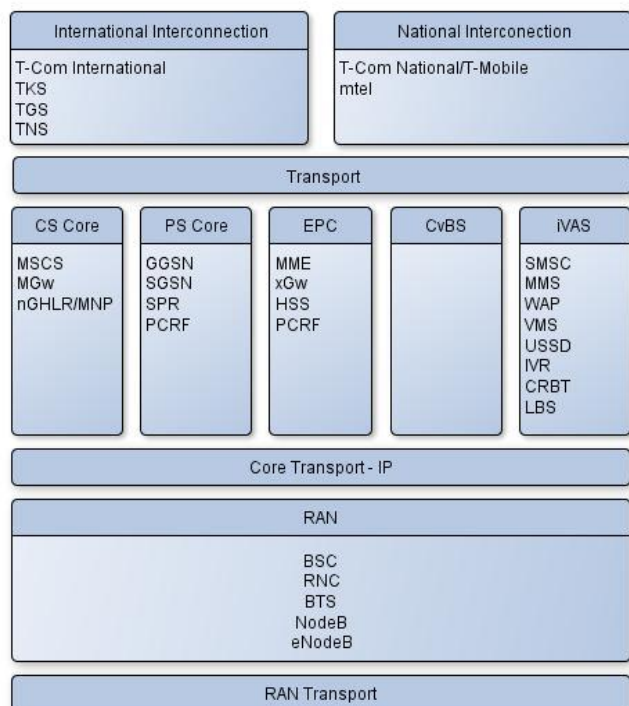
Figure: theoretic structure of cost modelling approach at Telenor

During the modelling we have to prepare the network cost allocation methodology. We are going to use the network allocation model prepared earlier for the HCA cost allocation model with the following amendments:

- Define the LRIC costs of network elements & network related activities
- Calculate the LRIC costs of call types

¹ Element-based costing (EBC) is a costing method used in companies running networks (telcos, utilities, railways, etc.). It identifies network elements used by the company and assigns the cost of each network element to all products and services according to the actual consumption by each. In this way an organization can establish the true network cost of its individual products and services. In these organizations, the EBC methodology assigns an organization's resource costs through logical network elements to the products and services provided to its customers/subscribers.

1.



Slika 2

3. TRANSFERNE NAKNADE (nastavak)

3.1. Konceptualni model (nastavak)

Broj SMS-ova, MMS-ova i usluge podataka je potrebno konvertovati u ekvivalente u minutima, koji su homogeni za svaku uslugu. Konverzija jedinica se zasniva na poređenju iznosa mrežnog resursa potrebnog za pružanje usluge. Mrežni resursi u GSM mreži su definisani kao vremenski slotovi dok su mrežni resursi u UMTS mreži definisani kao kanalski elementi. Tačan iznos mrežnih resursa potrebnih za pružanje određene usluge zavisi od tehnologije koja se koristi. Sledeće tehnologije se koriste za pružanje određenih usluga:

1. GSM/UMTS – pozivi
2. GSM – SMS
3. GPRS i EDGE – usluge prenosa 2G podataka i MMS
4. UMTS, HSDPA, LTE – usluge prenosa 3G/4G podataka

Za svaku od gore navedenih tehnologija iznos mrežnih resursa potrebnih za pružanje jedne jedinice određene usluge se poredi sa iznosom mrežnog resursa potrebnog za pružanje jednog minuta poziva. Na ovaj način se određuje broj minuta koji odgovara jednoj jedinici određene usluge. Na osnovu tih parametara dalje se konvertuje ukupna količina usluge u broj minuta.

1 Konverzija SMS-a u minute se racuna kako je opisano u nastavku:

$$\frac{1}{\frac{SDCCH \text{ bit rate}}{\text{Prosječna dužina SMS} - a}}$$

Konverzija 1 GPRS MB minuta se racuna kako je opisano u nastavku:

$$\frac{1}{GPRS \text{ Bit rate po 1 timeslot} - u}$$

Konverzija MMS-a se racuna kako je opisano u nastavku:

$$\frac{1 \text{ GPRS MB u minute faktor konverzije} * \text{Prosječna dužina MMS [bytes]}}{10^6}$$

Konverzija 1 MB podataka:

$\frac{1}{\text{Podatkovni Bit rate po 1 timeslotu}}$ Gdje podatkovni bitrejt zavisi od tehnologije (EDGE, GSM, UMTS R99, HSDPA, UMTS, LTE) Ukupni podatkovni faktor konverzije se racuna tako sto se koristi ponderisani prosjek saobracaja po distribuciji tehnologije.

Conceptual model (Continued)

It is necessary to convert the number of SMSs, MMSs and data services into equivalents in minutes, which are homogeneous for each service. Conversion of units is based on comparison of the amount of network resource required to provide a service. Network resources in GSM network are defined as time slots while network resources in UMTS network are defined as channel elements. The exact amount of network resources required to provide certain service depends on the technology that is used. The following technologies are used to provide certain services:

1. GSM/UMTS – calls
2. GSM – SMS
3. GPRS and EDGE – services of transmission of 2G of data and MMSs
4. UMTS, HSDPA, LTE – services of transmission of 3G/4G of data.

For each of the above technologies the amount of network resources required to provide one unit of certain service is compared to the amount of network resource required to provide one minute of a call. In this way, the number of minutes is determined, which corresponds to one unit of certain service. Based on those parameters, the total quantity of service is further converted into the number of minutes.

1 SMS to minutes conversion is calculated as follows:

$$\frac{1}{\frac{SDCCH \text{ bit rate}}{\text{Average SMS length}}}$$

1 GPRS MB minutes conversion is calculated as follows:

$$\frac{1}{GPRS \text{ Bit rate per 1 timeslot}}$$

1 MMS to minutes conversion is calculated:

$$\frac{1 \text{ GPRS MB to minute conversion factor} * \text{Average MMS length [bytes]}}{10^6}$$

1 MB data to minute conversion:

$$\frac{1}{\text{Data Bit rate per 1 timeslot}}$$

Where data bitrate depends on technology (EDGE, GSM, UMTS R99, HSDPA, UMTS, LTE)

The total data conversion factor is calculated using the weighted average of traffic by technology distribution.

Uzimajući u obzir industrijski reper u mrežnoj statistici, sledeći faktori konverzije su korišteni:

Parameter	Unit	Values per total network
SMS/MMS conversion factors		
SDCCH bit rate	bit/s	782
Average SMS length [bytes] (max 160)	bytes	160
Average MMS length [bytes]	bytes	67 236
Data conversion factors		
GPRS Bit rate per 1 timeslot [kbit/s]	kbps	13
EDGE Bit rate per 1 timeslot [kbit/s]	kbps	36
UMTS Bit rate [kbit/s]	kbps	384
HSDPA Bit rate [kbit/s]	kbps	42 000
UMTS channel elements	pieces	16
HSDPA channel elements	pieces	64
LTE Bit rate [kbit/s]	kbps	153 128
LTE resource blocks	nbr	96
Traffic statistics		
Voice traffic share (proportion of of total voice traffic shared by GSM/UMTS radio network)		
GSM (GPRS and EDGE)	%	34,5%
UMTS (R99 and HSDPA)	%	65,5%
Data traffic share (proportion of of total data traffic shared by GSM/UMTS radio network)		
GSM		0,8%
UMTS		35,6%
LTE		63,6%
2G data traffic share		
GPRS data traffic in GSM network	%	0,1%
EDGE data traffic in GSM network	%	99,9%
3G data traffic share		
UMTS data traffic in UMTS network	%	1,1%
HSDPA data traffic in UMTS network	%	98,9%
LTE voice conversion factors		
VoLTE Bit rate [kbit/s]	kbps	-

Based on industry benchmarks and on network statistics the following conversion factors are used:

Parameter	Unit	Values per total network
SMS/MMS conversion factors		
SDCCH bit rate	bit/s	782
Average SMS length [bytes] (max 160)	bytes	160
Average MMS length [bytes]	bytes	67 236
Data conversion factors		
GPRS Bit rate per 1 timeslot [kbit/s]	kbps	13
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HSDPA Bit rate [kbit/s]	kbps	42 000
UMTS channel elements	pieces	16
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LTE Bit rate [kbit/s]	kbps	153 128
LTE resource blocks	nbr	96
Traffic statistics		
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GSM (GPRS and EDGE)	%	34,5%
UMTS (R99 and HSDPA)	%	65,5%
Data traffic share (proportion of of total data traffic shared by GSM/UMTS radio network)		
GSM		0,8%
UMTS		35,6%
LTE		63,6%
2G data traffic share		
GPRS data traffic in GSM network	%	0,1%
EDGE data traffic in GSM network	%	99,9%
3G data traffic share		
UMTS data traffic in UMTS network	%	1,1%
HSDPA data traffic in UMTS network	%	98,9%
LTE voice conversion factors		
VoLTE Bit rate [kbit/s]	kbps	-

Routing faktori

Broj ruting faktora je baziran na dvogodisnjoj prognozi saobracaja, u skladu sa poglavljem 5.7.2, paragraf (26), "Metodologija o racunovodstvenom odvajanju za mobilne telefonske mreze"

Uzimajući u obzir da se mreža Telenora sastoji iz jednog MSC/MGW, jednog BSC/RNC i jednog POI definisane su sledeće routing staze i routing faktori:

1. Pozivi/SMS/MMS u mreži koriste dve Bazne stanice (BTS/NodeB), kontrolor (BSC/RNC) dva puta, jedan MSC/MSS/MGW za pozive i SMS, jedan SMSC za SMS i jedan MMSC i jednu mrežu core podataka (GGSN/SGGN) za MMS;
2. Pozivi/SMS van mreže i dolazeći Pozivi/SMS koriste jednu Baznu stanicu (BTS/NodeB), jedan kontrolor (BSC/RNC), jedan MSC/MSS/MGW, jedan POI i jedan SMSC za SMS;
3. Pozivi, MMS van mreže i dolazeći MMS koriste jednu Baznu stanicu (BTS/NodeB), jedan kontrolor (BSC/RNC), jedan MMSC, jedna mreža core podataka (GGSN/SGGN) i jedan POI.
4. Usuge prenosa podataka koriste jednu Baznu stanicu (BTS/NodeB), jedan kontrolor (BSC/RNC) i jedna mreža core podataka (GGSN/SGGN).

Matrica routing faktora je predstavljena u Tabeli A7. U Tabeli A8 su prikazane routing staze.

The amounts of routing factors are based on two-year traffic forecasts, complied with Chapter 5.7.2, calculation of the service unit costs, paragraph (26) "Methodology of the separation accounting for mobile telephone networks"

Taking into account that the Telenor network consists of one MSC/MGW, one BSC/RNC, and one POI, the following routing paths and routing factors are defined:

1. Calls/SMSs/MMSs within the network use two Base Stations (BTS/NodeB), (BSC/RNC) controller twice, one MSC/MSS/MGW for calls and SMSs, one SMSC for SMSs and one MMSC and one core data network (GGSN/SGGN) for MMSs;
2. Calls/SMSs outside the network and incoming calls/SMSs use one Base Station (BTS/NodeB), one (BSC/RNC) controller, one MSC/MSS/MGW, one POI and one SMSC for SMSs;
3. Calls, MMSs outside the network and incoming MMSs use one Base station (BTS/NodeB), one (BSC/RNC) controller, one MMSC, one core data network (GGSN/SGGN) and one POI.
4. Data transmission services use one Base Station (BTS/NodeB), one (BSC/RNC) controller, and one core data network (GGSN/SGGN).

Matrix of routing factors is shown in Table A7. Table A8 shows routing paths.

Volume of calculated services

3. TRANSFERNE NAKNADE (nastavak)

3.2. Opseg obračunatih usluga

Originacija mobilnog poziva i pristup

1. Pozivi unutar mreže (dio originacije) – dio originacije poziva unutar mreže (originacija i terminacija u sopstvenoj mobilnoj mreži)
2. Originacija poziva – pozivi iz sopstvene mreže prema drugim mobilnim ili fiksnim mrežama (terminacija u drugoj mreži) na teritoriji Crne Gore.
3. SMS unutar mreže (dio originacije) – dio originacije SMS-a unutar mreže (originacija i terminacija u sopstvenoj mobilnoj mreži)
4. SMS originacija – SMS originacija na sopstvenoj mreži, a terminacija na drugoj mobilnoj mreži na teritoriji Crne Gore.
5. Odlazni međunarodni pozivi – originacija poziva unutar sopstvene mreže a terminacija na drugoj mobilnoj ili fiksnoj mreži van teritorije Crne Gore.

Terminacija mobilnog poziva

1. Pozivi unutar mreže (dio terminacije) – dio terminacije poziva unutar mreže (originacija i terminacija u sopstvenoj mobilnoj mreži)
2. Terminacija poziva – originacija poziva na drugoj mobilnoj ili fiksnoj mreži na teritoriji Crne Gore a terminacija u sopstvenoj mreži.
3. SMS unutar mreže (dio terminacije) – dio terminacije SMS-a unutar mreži (originacija i terminacija na sopstvenoj mobilnoj mreži)
4. SMS terminacija – originacija SMS-a na drugim mobilnim mrežama na teritoriji Crne Gore a terminacija na sopstvenoj mreži
5. Dolazni međunarodni pozivi – originacija poziva na drugoj mobilnoj ili fiksnoj mreži van teritorije Crne Gore, a terminacija na sopstvenoj mreži.

Origination of a mobile call and access

1. Calls within the network (a part of origination) – a part of origination of calls within the network (origination and termination in own mobile network)
2. Origination of calls – calls from own network to other mobile or fixed networks (termination in another network) in the territory of Montenegro.
3. SMSs within the network (a part of origination) – a part of origination of SMSs within the network (origination and termination in own mobile network)
4. SMS origination – SMS origination within own network, and termination in another mobile network in the territory of Montenegro.
5. Outgoing international calls – origination of calls within own network and termination in another mobile or fixed network outside the territory of Montenegro.

Termination of a mobile call

1. Calls within the network (a part of termination) – a part of termination of calls within the network (origination and termination in own mobile network)
2. Termination of calls – origination of calls in another mobile or fixed network in the territory of Montenegro and termination in own network.
3. SMSs within the network (a part of termination) – a part of termination of SMSs within the network (origination and termination in own mobile network)
4. SMS termination – origination of SMSs in other mobile networks in the territory of Montenegro and termination within own network.
5. Incoming international calls – origination of calls in another mobile or fixed network outside the territory of Montenegro, and termination within own network.

Transferi ostale mreže

1. MMS u mreži – MMS originacija i terminacija na sopstvenoj mobilnoj mreži.
2. MMS originacija – originacija MMS-a na sopstvenoj mreži a terminacija na drugoj mobilnoj mreži.
3. MMS terminacija – originacija MMS-a na drugoj mobilnoj mreži, a terminacija na sopstvenoj mreži.
4. Saobraćaj podataka – usluge prenosa podataka u sopstvenoj mreži.

Transfers of the rest of the network

1. MMSs within the network – MMS origination and termination in own mobile network.
2. MMS origination – origination of MMSs in own network and termination in another mobile network.
3. MMS termination – origination of MMSs in another mobile network, and termination in own network.
4. Data traffic – data transmission services within own network.

Tabela korišćenih metoda alokacije po uslugama (AS= Racunovodstveno odvajanje)

Usluge	Tip usluge	Regulatorni izvještaji		Izračunavanja jediničnog troška	
		Troškovna osnovica	Model alokacije	Troškovna osnovica	Model alokacije
Terminacija poziva	Veleprodaja	CCA	LRIC for AS	CCA	LRIC
Terminacija SMS-ova	Veleprodaja	CCA	LRIC for AS	CCA	LRIC
Originacija poziva u mreži	Maloprodaja	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Terminacija poziva u mreži	Maloprodaja	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Originacija poziva	Maloprodaja	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Originacija SMS-ova u mreži	Maloprodaja	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Terminacija SMS – ova u mreži	Maloprodaja	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Originacija SMS-ova	Maloprodaja	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Podaci	n/a	CCA	LRIC for AS	HCA/CCA	LRIC/LRIC for AS
MMS u mreži	n/a	CCA	LRIC for AS	HCA/CCA	LRIC/LRIC for AS
Originacija MMS	n/a	CCA	LRIC for AS	HCA/CCA	LRIC/LRIC for AS
Terminacija MMS	n/a	CCA	LRIC for AS	HCA/CCA	LRIC/LRIC for AS

Table of used methods of allocation by services (AS = Accounting Separation)

Services	Type of service	Regulatory reporting		Calculation of unit cost	
		Cost base	Allocation model	Cost base	Allocation model
Termination of calls	Wholesale	CCA	LRIC for AS	CCA	LRIC
Termination of SMSs	Wholesale	CCA	LRIC for AS	CCA	LRIC
Origination of calls within the network	Retail trade	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Termination of calls within the network	Retail trade	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Origination of calls	Retail trade	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Origination of SMSs within the network	Retail trade	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Termination of SMSs within the NW	Retail trade	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Origination of SMSs	Retail trade	CCA	LRIC for AS	HCA/CCA	LRIC for AS
Data	n/a	CCA	LRIC for AS	HCA/CCA	LRIC/LRIC for AS
MMSs within the network	n/a	CCA	LRIC for AS	HCA/CCA	LRIC/LRIC for AS
Origination of MMSs	n/a	CCA	LRIC for AS	HCA/CCA	LRIC/LRIC for AS
Termination of MMSs	n/a	CCA	LRIC for AS	HCA/CCA	LRIC/LRIC for AS

Tabela A1. Alokacija mrežnih elemenata poslovnim jedinicama

Šifra mrežnog elementa	Naziv mrežnog elementa	Alokacija				Allokacija
		Originacija poziva i pristup	Terminacija poziva	Ostale mreže	Maloprodaja i ostalo	
AM_ME1	Antenski stubovi i lokacije	X	X	X		Total traffic
AM_ME2	Bazna stanica BTS	X	X	X		Total GSM traffic
AM_ME3	Bazna stanica - BTS/NodeB	X	X	X		Total GSM/UMTS traffic
AM_ME4	Bazna stanica - BTS/NodeB/eNodeB	X	X	X		Total traffic
AM_ME5	Bazna stanica - Wimax			X		Direct-Other Network
AM_ME6	Kontrolor – BSC	X	X	X		Total GSM traffic
AM_ME7	Kontrolor – RNC	X	X	X		Total UMTS traffic
AM_ME8	Prenos- backhaul - microwave linkovi	X	X	X		Total traffic
AM_ME9	Prenos- core DWDM	X	X	X		Total traffic
AM_ME44	Prenos - access - microwave linkovi	X	X	X		Total traffic
AM_ME10	Prenos-core SDH	X	X	X		Total traffic
AM_ME11	Core mreža MSC / MSS	X	X	X		Total voice/SMS traffic
AM_ME12	Core mreža MGW	X	X	X		Total voice/SMS traffic
AM_ME13	Core mreža HLR	X	X	X		Total traffic
AM_ME14	Core mreža IMS	X	X	X		Total voice/SMS traffic
AM_ME15	IP routeri			X		Direct-Other Network
AM_ME16	SGSN/GGSN			X		Direct-Other Network
AM_ME17	Wimax			X		Direct-Other Network

Šifra mrežnog elementa	Naziv mrežnog elementa	Alokacija				
		Originacija poziva i pristup	Terminacija poziva	Ostale mreže	Maloprodaja i ostalo	
Licenca za frekvenciju						
AM_ME18	Licenca za frekvenciju 900/1800	X	X	X		Total GSM traffic
AM_ME19	Licenca za frekvenciju 2100	X	X	X		Total UMTS traffic
AM_ME20	Licenca za frekvenciju Wimax			X		Direct-Other Network
IT sistem						
AM_ME21	Biling Sistem	X	X	X	X	Total wholesale/retail traffic
AM_ME22	NMS Sistem	X	X	X		NRC of network equipment assigned to each business unit
AM_ME23	CRM Sistem				X	Direct-Retail
AM_ME24	Finansijski sistem	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME25	Personalni računari	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME26	Opšti IT	X	X	X	X	Number of headcounts assigned to each business unit
Servisne platforme						
AM_ME27	Servisne platforme – SMSC	X	X			Total SMS
AM_ME28	Servisne platforme- MMSC			X		Direct-Other Network
AM_ME29	Servisne platforme - CS mreža	X	X			Total voice/SMS traffic
AM_ME30	Servisne platforme - PS mreža			X		Direct-Other Network
AM_ME31	Servisne platforme - IN	x	X	X		Total traffic
AM_ME32	Servisne platforme- VAS				X	Direct-Retail
AM_ME33	Servisne platforme – opšte	X	X	X	X	NRC of service platforms assigned to each business unit
Ostalo – podrška mreži						

AM_ME34	Napajanje	X	X	X		NRC of network equipment assigned to each business unit
AM_ME35	Klimatizacija	X	X	X		NRC of network equipment assigned to each business unit
AM_ME36	Radio planiranje i testna oprema	X	X	X		NRC of Base Stations and radiolinks assigned to each business unit
Šifra mrežnog elementa	Naziv mrežnog elementa	Alokacija				
		Originacija poziva i pristup	Terminacija poziva	Ostale mreže	Maloprodaja i ostalo	
Zgrade						
AM_ME37	Zgrade u kojima su kancelarije (administrativne funkcije)	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME38	Zgrade- prodavnice u maloprodaji				X	Direct-Retail
AM_ME39	Tehničke zgrade	X	X	X		NRC of network equipment assigned to each business unit
AM_ME48	Zgrade u kojima su kancelarije- oprema u kacelarijama	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME49	Zgrade u kojima su kancelarije (softver I licence)	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME50	Zgrade-maloprodajni objekti-tehnicka oprema				X	Direct-Retail
AM_ME51	Tehnicka zgada-oprema u zgrdama	X	X	X		NRC of network equipment assigned to each business unit
Vozila						
AM_ME40	Vozila –tehnička	X	X	X		NRC of network equipment assigned to each business unit
AM_ME41	Vozila-prodaja				X	Direct-Retail
AM_ME42	Vozila-opšte	X	X	X	X	Number of headcounts assigned to each business unit
Ostalo-maloprodaja						
AM_ME43	Telefonski aparati				X	Direct-Retail

AM_ME44	Transmission - access microwave links	X	X	X		Total traffic
AM_ME45	Billing System - SW	X	X	X	X	Total wholesale/retail traffic
AM_ME46	CRM System -HW				X	Direct-Retail
AM_ME47	General IT - SW	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME48	Buildings - office - equipment in buildings	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME49	Buildings - office (SW & licenses)	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME50	Buildings - retail stores - technical equipment				X	Direct-Retail
AM_ME51	Buildings - technical - equipment in buildings	X	X	X		NRC of network equipment assigned to each business unit
AM_ME52	Fixed telephony (transferred from MnNews)				X	Direct-Retail
AM_ME53	Brand fee				X	Direct-Retail

Šifra mrežnog elementa	Naziv mrežnog elementa	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo	Allokacije
OPEX - operativni troškovi (neuključujući plate)						
Operativni troškovi vezani za aktivnosti održavanja, podrške, testiranje, konfiguracija i sličnih aktivnosti						
BSS mreža						
BB_TR_ME1	Antenski stubovi i lokacije	X	X	X		Total traffic
BB_TR_ME2	Bazna stanica BTS/NodeB/eNodeB	X	X	X		Total traffic
BB_TR_ME3	Prenos - access microwave linkovi	X	X	X		Total traffic
BB_TR_ME4	Kontroler - BSC	X	X	X		Total GSM traffic
BB_TR_ME5	Kontroler - RNC	X	X	X		Total UMTS traffic
BB_TR_ME6	BSS (Bazna stanica i kontroler) - opšte	X	X	X		Total traffic
Prenos						
BB_TR_ME7	Prenos- backhaul microwavw linkovi	X	X	X		Total traffic
BB_TR_ME8	Prenos- core DWDM	X	X	X		Total traffic
BB_TR_ME9	Prenos - Dark Fiber	X	X	X		Total traffic
BB_TR_ME10	Prenos generalno (opšte)	X	X	X		Total traffic
BB_TR_ME11	Core mreža - MSC/MSS	X	X	X		Total voice/SMS traffic
BB_TR_ME12	Core mreža - HLR	X	X	X		Total traffic
BB_TR_ME13	Core mreža - IMS	X	X	X		Total voice/SMS traffic
BB_TR_ME14	Core CS mreža - generalno (opšte)	X	X	X		Total voice/SMS traffic
Core PS mreža						
BB_TR_ME15	IP routeri			X		Direct-Other Network
BB_TR_ME16	SGSN/GGSN			X		Direct-Other Network
BB_TR_ME17	Wimax			X		Direct-Other Network
BB_TR_ME18	Core PS mreža - generalno (opšte)			X		Direct-Other Network

IT sistem						
BB_TR_ME19	Biling Sistem – HW	X	X	X	X	Total wholesale/retail traffic
BB_TR_ME45	Biling Sistem – SW	X	X	X	X	Total wholesale/retail traffic
BB_TR_ME20	NMS Sistem	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME21	CRM Softver				X	Direct-Retail
BB_TR_ME46	CRM Sistem – HW				X	Direct-Retail
BB_TR_ME22	Finansijski sistem	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME23	Personalni računari	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME24	Opšti IT	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME47	Opšti IT – SW	X	X	X	X	Number of headcounts assigned to each business unit

Šifra mrežnog elementa	Naziv mrežnog elementa	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja	Allokacije
OPEX - operativni troškovi (neuključujući plate)						
Servisne platforme						
BB_TR_ME25	Servisne platforme – SMSC	X	X	X		Total SMS
BB_TR_ME26	Servisne platforme- MMSC			X		Direct-Other Network
BB_TR_ME27	Servisne platforme - CS mreža	X	X	X		Total voice/SMS traffic
BB_TR_ME28	Servisne platforme - PS mreža			X		Direct-Other Network
BB_TR_ME29	Servisne platforme - IN	X	X	X		Total traffic

BB_TR_ME30	Servisne platforme- VAS				X	Direct-Retail
BB_TR_ME31	Servisne platforme - generalno (opšte)	X	X	X	X	NRC of service platforms assigned to each business unit
Ostalo -podrška mreži						
BB_TR_ME32	Napajanje	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME33	Klimatizacija	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME34	Radio planiranje i testna oprema	X	X	X		NRC of Base Stations and radiolinks assigned to each business unit
Zgrade						
BB_TR_ME35	Zgrade u kojima su kancelarije (administrativne funkcije)	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME36	Tehničke zgrade	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME37	Zgrade- prodavnice u maloprodaji				X	Direct-Retail
Vozila						
BB_TR_ME38	Vozila -tehnička	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME39	Vozila-prodaja				X	Direct-Retail
BB_TR_ME40	Vozila-opšte	X	X	X	X	Number of headcounts assigned to each business unit

Šifra mrežnog elementa	Naziv mrežnog elementa	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja	
					i ostalo	
OPEX - operativni troškovi (neuključujući plate)						
Operativni troškovi - Prodaja, Marketing i briga o korisnicima						
BB_TR_ME41	Operativni troškovi povezani sa sektorom Komercijale (Prodaja, Marketing i briga o korisnicima)				X	Direct-Retail
Operativni troškovi - Regulatorne nakande						
BB_TR_ME42	Operativni troškovi povezani sa regulatornim naknadama	X	X	X		Total traffic
Operativni troškovi - opšte službe						
BB_TR_ME43	Finansije	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME44	Administracija	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME45	Uprava	X	X	X	X	Number of headcounts assigned to each business unit
Licence za frekvenciju						
BB_TR_ME46	Licenca za frekvenciju 900-1800	X	X	X		Total GSM traffic
BB_TR_ME47	Licenca za frekvenciju 2100	X	X	X		Total UMTS traffic
BB_TR_ME48	Licenca za frekvenciju Wimax			X		Direct-Other Network
BB_TR_ME49	Licence za frekvenciju Radioveze	X	X	X		Total traffic
BB_TR_ME50	Numeracija			X		Direct-Other Network
BB_TR_ME51	Regulativa i nadzor tržišta	X	X	X		Total traffic
Zakup						
BB_TR_ME52	Antenski stubovi i lokacije	X	X	X		Total traffic
BB_TR_ME53	Zgrade u kojima su kancelarije (administrativne funkcije)	X	X	X	X	Number of headcounts assigned to each business unit

BB_TR_ME54	Tehničke zgrade	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME55	Zakup linija	X	X	X		Total traffic
Troškovi energije						
BB_TR_ME56	Troškovi energije - mreža	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME57	Troškovi energije – ostalo	X	X	X	X	Number of headcounts assigned to each business unit

Šifra mrežnog elementa	Naziv mrežnog elementa	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja	
					i ostalo	
OPEX - operativni troškovi (neuključujući plate)						
Biling						
BB_TR_ME58	Poštanski i biling troškovi				X	Direct-Retail
Interkonekcija i roming troškovi						
BB_TR_ME59	Roming troškovi - pozivi				X	Direct-Retail
BB_TR_ME60	Roming troškovi - podaci				X	Direct-Retail
BB_TR_ME61	Troškovi interkonekcije - pozivi				X	Direct-Retail
BB_TR_ME62	Troškovi interkonekcije - podaci				X	Direct-Retail
Korisnička oprema						
BB_TR_ME63	Korisnička oprema				X	Direct-Retail
Ostali troškovi						
BB_TR_ME64	Ostali troškovi - opšte	X	X	X	X	Total OPEX
BB_TR_ME65	Ostali troškovi - tehnički	X	X	X		Total traffic
BB_TR_ME66	Ostali troškovi - maloprodaja				X	Direct-Retail
Porez po odbitku						
BB_TR_ME67	Porez po odbitku		X	X	X	Total revenue

Šifra mrežnog elementa	Naziv elementa	mrežnog	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo
OPEX - troškovi zaposlenih						
Troškovi zarade zaposlenih u sektoru Tehnike						
BSS						
BB_ZAR_ME1	Antenski stubovi i lokacije		X	X	X	Total traffic
BB_ZAR_ME2	Bazna stanica - BTS/NodeB/eNodeB		X	X	X	Total traffic
BB_ZAR_ME3	Bazna stanica - Wimax				X	Direct-Other Network
BB_ZAR_ME4	Kontrolor - BSC		X	X	X	Total GSM traffic
BB_ZAR_ME5	Kontrolor – RNC		X	X	X	Total UMTS traffic
Prenos						
BB_ZAR_ME6	Prenos- backhaul microwavv linkovi		X	X	X	Total traffic
BB_ZAR_ME7	Prenos- core DWDM / SDH		X	X	X	Total traffic
BB_ZAR_ME8	Prenos-core MPLS/IP		X	X	X	Total traffic
Core CS mreža						
BB_ZAR_ME9	MSC/MSS/MGW		X	X	X	Total voice/SMS traffic
BB_ZAR_ME10	HLR		X	X	X	Total traffic
BB_ZAR_ME11	IMS		X	X	X	Total voice/SMS traffic
Core PS mreža						
BB_ZAR_ME12	IP routers				X	Direct-Other Network
BB_ZAR_ME13	SGSN / GGSN				X	Direct-Other Network
BB_ZAR_ME14	Wimax				X	Direct-Other Network
IT sistem						
BB_ZAR_ME15	Biling Sistem		X	X	X	Total wholesale/retail traffic
BB_ZAR_ME16	NMS Sistem		X	X	X	NRC of network equipment assigned to each business unit
BB_ZAR_ME17	CRM Sistem					Direct-Retail

BB_ZAR_ME18	Finansijski Sistem	X	X	X	X	Number of headcounts assigned to each business unit
BB_ZAR_ME19	Personalni računari	X	X	X	X	Number of headcounts assigned to each business unit
BB_ZAR_ME20	Opšti IT	X	X	X	X	Number of headcounts assigned to each business unit

ID mrežnog elementa	Naziv mrežnog elementa	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo	Allokacije
OPEX - troškovi zaposlenih						
Troškovi zarade zaposlenih u sektoru Tehnike						
Servisne platforme						
BB_ZAR_ME21	Servisne platforme – SMSC	X	X	X		Total SMS
BB_ZAR_ME22	Servisne platforme- MMSC			X		Direct-Other Network
BB_ZAR_ME23	Servisne platforme - CS mreža	X	X	X		Total voice/SMS traffic
BB_ZAR_ME24	Servisne platforme - PS mreža			X		Direct-Other Network
BB_ZAR_ME25	Servisne platforme - IN	X	X	X		Total traffic
BB_ZAR_ME26	Servisne platforme- VAS				X	Direct-Retail
BB_ZAR_ME27	Servisne platforme- opšte	X	X	X	X	NRC of service platforms assigned to each business unit
Mrežna podrška						
BB_ZAR_ME28	Napajanje	X	X	X		NRC of network equipment assigned to each business unit
BB_ZAR_ME29	Klimatizacija	X	X	X		NRC of network equipment assigned to each business unit
BB_ZAR_ME30	Radio planiranje i testna oprema	X	X	X		NRC of Base Stations and radiolinks assigned to each business unit
BB_ZAR_ME31	Upravljanje mrežom	X	X	X		Total traffic
BB_ZAR_ME32	Rad na projektu	X	X	X		Total traffic

BB_ZAR_ME33	Ostali poslovi podrške	X	X	X		Total traffic
Prodaja, Marketing i Briga o korisnicima						
BB_ZAR_ME34	Prodaja, Marketing i Briga o korisnicima				X	Direct-Retail
Operativni troškovi - Regulatorne nakande						
BB_ZAR_ME35	Operativni troškovi povezani sa regulatornim naknadama	X	X	X		Total traffic
Sektor administrativnih poslova						
BB_ZAR_ME36	Finansije	X	X	X	X	Number of headcounts assigned to each business unit
BB_ZAR_ME37	Administracija	X	X	X	X	Number of headcounts assigned to each business unit
BB_ZAR_ME38	Uprava	X	X	X	X	Number of headcounts assigned to each business unit
Ostali troškovi zarada zaposlenih						
BB_ZAR_ME39	Ostali troškovi zarada zaposlenih	X	X	X	X	Total OPEX

Table A1 Allocation of network elements to business units

Network element code	Name of network element	Allocation				
			Termination of calls	Other networks	Retail and other	Allocation driver
AM_ME1	Tower and site infrastructure	X	X	X		Total traffic
AM_ME2	Base station BTS	X	X	X		Total GSM traffic
AM_ME3	Base station BTS/NodeB	X	X	X		Total GSM/UMTS traffic
AM_ME4	Base station - BTS/NodeB/eNodeB	X	X	X		Total traffic
AM_ME5	Base station - Wimax			X		Direct-Other Network
AM_ME6	Controller - BSC	X	X	X		Total GSM traffic
AM_ME7	Controller - RNC	X	X	X		Total UMTS traffic
AM_ME8	Transmission - backhaul microwave links	X	X	X		Total traffic
AM_ME9	Transmission - core DWDM	X	X	X		Total traffic
AM_ME10	Transmission - core SDH	X	X	X		Total traffic
AM_ME11	Core network MSC / MSS	X	X	X		Total voice/SMS traffic
AM_ME12	Core network MGW	X	X	X		Total voice/SMS traffic
AM_ME13	Core network HLR	X	X	X		Total traffic
AM_ME14	Core network IMS	X	X	X		Total voice/SMS traffic
AM_ME15	IP routers			X		Direct-Other Network
AM_ME16	SGSN/GGSN			X		Direct-Other Network
AM_ME17	Wimax			X		Direct-Other Network

Network element code	Name of network element	Allocation				
		Origination of calls and access	Termination of calls	Other networks	Retail trade and other	
License for frequency						
AM_ME18	License for frequency 900/1800	X	X	X		Total GSM traffic
AM_ME19	License for frequency 2100	X	X	X		Total UMTS traffic
AM_ME20	License for frequency Wimax			X		Direct-Other Network
IT system						
AM_ME21	Billing System	X	X	X	X	Total wholesale/retail traffic
AM_ME22	NMS System	X	X	X		NRC of network equipment assigned to each business unit
AM_ME23	CRM System				X	Direct-Retail
AM_ME24	Financial system	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME25	Personal computers	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME26	General IT	X	X	X	X	Number of headcounts assigned to each business unit
Service platforms						
AM_ME27	Service platforms - SMSC	X	X			Total SMS
AM_ME28	Service platforms - MMSC			X		Direct-Other Network
AM_ME29	Service platforms - CS network	X	X			Total voice/SMS traffic
AM_ME30	Service platforms - PS network			X		Direct-Other Network
AM_ME31	Service platforms – IN	x	X	X		Total traffic
AM_ME32	Service platforms - VAS				X	Direct-Retail
AM_ME33	Service platforms - general	X	X	X	X	NRC of service platforms assigned to each business

						unit
Other – network support						
AM_ME34	Power supply	X	X	X		NRC of network equipment assigned to each business unit
AM_ME35	Air-conditioning	X	X	X		NRC of network equipment assigned to each business unit
AM_ME36	Radio planning and test equipment	X	X	X		NRC of Base Stations and radiolinks assigned to each business unit

Network element code	Name of network element	Allocation				
		Origination of calls and access	Termination of calls	Other networks	Retail trade and other	
Buildings						
AM_ME37	Buildings containing offices (administrative functions)	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME38	Buildings - retail stores - equipment in buildings				X	Direct-Retail
AM_ME39	Buildings - technical	x	x	x		NRC of network equipment assigned to each business unit
Vehicles						
AM_ME40	Cars -technical	X	X	X		NRC of network equipment assigned to each business unit
AM_ME41	Cars – sale				X	Direct-Retail
AM_ME42	Cars – general	X	X	X	X	Number of headcounts assigned to each business unit
Other - retail trade						

AM_ME43	Phone –Sales				X	Direct-Retail
AM_ME44	Transmission - access microwave links	X	X	X		Total traffic
AM_ME45	Billing System - SW	X	X	X	X	Total wholesale/retail traffic
AM_ME46	CRM System -HW				X	Direct-Retail
AM_ME47	General IT - SW	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME48	Buildings - office - equipment in buildings	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME49	Buildings - office (SW & licenses)	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME50	Buildings - retail stores - technical equipment				X	Direct-Retail
AM_ME51	Buildings - technical - equipment in buildings	X	X	X		NRC of network equipment assigned to each business unit
AM_ME52	Fixed telephony (transferred from MnNews)				X	Direct-Retail

Network element code	Name of network element	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	Allocation driver
OPEX - operating expenses (not including salaries)						
Operating expenses related to activities of maintenance, support, testing, configurations and similar activities						
BSS network						
BB_TR_ME1	Tower and site infrastructure	X	X	X		Total traffic
BB_TR_ME2	Base station BTS/NodeB/eNodeB	X	X	X		Total traffic
BB_TR_ME3	Transmission - access microwave links			X		Total traffic
BB_TR_ME4	Controller - BSC	X	X	X		Total GSM traffic
BB_TR_ME5	Controller - RNC	X	X	X		Total UMTS traffic

BB_TR_ME6	BSS (Base station and controller) - general	X	X	X		Total traffic
Transmission						
BB_TR_ME7	Transmission - backhaul microwave links	X	X	X		Total traffic
BB_TR_ME8	Transmission - core DWDM	X	X	X		Total traffic
BB_TR_ME9	Transmission Dark Fiber	X	X	X		Total traffic
BB_TR_ME10	Transmission in general	X	X	X		Total traffic
BB_TR_ME11	Core network - MSC/MSS	X	X	X		Total voice/SMS traffic
BB_TR_ME12	Core network - HLR	X	X	X		Total traffic
BB_TR_ME13	Core network - IMS	X	X	X		Total voice/SMS traffic
BB_TR_ME14	Core CS network – in general	X	X	X		Total voice/SMS traffic
Core PS network						
BB_TR_ME15	IP routers			X		Direct-Other Network
BB_TR_ME16	SGSN/GGSN			X		Direct-Other Network
BB_TR_ME17	Wimax			X		Direct-Other Network
BB_TR_ME18	Core PS network – in general			X		Direct-Other Network

IT system						
BB_TR_ME19	Billing System	X	X	X	X	Total wholesale/retail traffic
BB_TR_ME20	NMS System	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME21	CRM System				X	Direct-Retail
BB_TR_ME22	Financial system	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME23	Personal computers	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME24	General IT	X	X	X	X	Number of headcounts assigned to each business unit
Network element code	Name of network element	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade	
OPEX - operating expenses (not including salaries)						
Service platforms						
BB_TR_ME25	Service platforms - SMSC	X	X			Total SMS
BB_TR_ME26	Service platforms - MMSC			X		Direct-Other Network
BB_TR_ME27	Service platforms - CS network	X	X			Total voice/SMS traffic
BB_TR_ME28	Service platforms - PS network			X		Direct-Other Network
BB_TR_ME29	Service platforms - IN	X	X	X		Total traffic
BB_TR_ME30	Service platforms - VAS				X	Direct-Retail
BB_TR_ME31	Service platforms – in general	X	X	X	X	NRC of service platforms assigned to each business unit
Other - network support						
BB_TR_ME32	Power supply	X	X	X		NRC of network equipment assigned to each business unit

BB_TR_ME33	Air conditioning	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME34	Radio planning and test equipment	X	X	X		NRC of Base Stations and radiolinks assigned to each business unit
Buildings						
BB_TR_ME35	Buildings containing offices (administrative functions)	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME36	Technical facilities	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME37	Buildings – retail stores				X	Direct-Retail
Vehicles						
BB_TR_ME38	Cars – technical	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME39	Cars – sale				X	Direct-Retail
BB_TR_ME40	Cars - general	X	X	X	X	Number of headcounts assigned to each business unit

Network element code	Name of network element	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	
OPEX - operating expenses (not including salaries)						
Operating expenses - Sales, Marketing and Customer Care						
BB_TR_ME41	Operating expenses related to the Commercial Sector (Sales, Marketing and Customer Care)				X	Direct-Retail
Operating expenses - Regulatory fees						
BB_TR_ME42	Operating expenses related to regulatory fees	X	X	X		Total traffic
Operating expenses - general services						

BB_TR_ME43	Finances	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME44	Administration	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME45	Management	X	X	X	X	Number of headcounts assigned to each business unit
Licenses for frequencies						
BB_TR_ME46	License for frequency 900-1800	X	X	X		Total GSM traffic
BB_TR_ME47	License for frequency 2100	X	X	X		Total UMTS traffic
BB_TR_ME48	License for frequency Wimax			X		Direct-Other Network
BB_TR_ME49	License for frequency Radio links	X	X	X		Total traffic
BB_TR_ME50	Numeration			X		Direct-Other Network
BB_TR_ME51	Regulations and market supervision	X	X	X		Total traffic
Lease						
BB_TR_ME52	Antenna masts and locations	X	X	X		Total traffic
BB_TR_ME53	Buildings containing offices (administrative functions)	X	X	X	X	Number of headcounts assigned to each business unit
BB_TR_ME54	Technical facilities	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME55	Lease of lines	X	X	X		Total traffic
Electric power expenses						
BB_TR_ME56	Electric power expenses – network	X	X	X		NRC of network equipment assigned to each business unit
BB_TR_ME57	Electric power expenses – other	X	X	X	X	Number of headcounts assigned to each business unit

Network element code	Name of network element	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	
OPEX - operating expenses (not including salaries)						
Billing						
BB_TR_ME58	Postal and billing costs				X	Direct-Retail
Interconnection and roaming costs						
BB_TR_ME59	Roaming costs – calls				X	Direct-Retail
BB_TR_ME60	Roaming costs – data				X	Direct-Retail
BB_TR_ME61	Interconnection costs – calls				X	Direct-Retail
BB_TR_ME62	Interconnection costs - data				X	Direct-Retail
User equipment						
BB_TR_ME63	User equipment				X	Direct-Retail
Other expenses						
BB_TR_ME64	Other expenses – general	X	X	X	X	Total OPEX
BB_TR_ME65	Other expenses – technical	X	X	X		Total traffic
BB_TR_ME66	Other expenses – retail trade				X	Direct-Retail
Withholding tax						
BB_TR_ME67	Withholding tax		X	X	X	Total revenue

Network element code	Name of network element	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	
OPEX – costs of employees						
Costs of salaries of employees in Technical Division						
BSS						
BB_ZAR_ME1	Tower and site infrastructure	X	X	X		Total traffic
BB_ZAR_ME2	Base station - BTS/NodeB/eNodeB	X	X	X		Total traffic
BB_ZAR_ME3	Base station – Wimax			X		Direct-Other Network
BB_ZAR_ME4	Controller - BSC	X	X	X		Total GSM traffic

BB_ZAR_ME5	Controller – RNC	X	X	X		Total UMTS traffic
Transmission						
BB_ZAR_ME6	Transmission - backhaul microwave links	X	X	X		Total traffic
BB_ZAR_ME7	Transmission - core DWDM / SDH	X	X	X		Total traffic
BB_ZAR_ME8	Transmission - core MPLS/IP	X	X	X		Total traffic
Core CS network						
BB_ZAR_ME9	MSC/MSS/MGW	X	X	X		Total voice/SMS traffic
BB_ZAR_ME10	HLR	X	X	X		Total traffic
BB_ZAR_ME11	IMS	X	X	X		Total voice/SMS traffic
Core PS network						
BB_ZAR_ME12	IP routers			X		Direct-Other Network
BB_ZAR_ME13	SGSN / GGSN			X		Direct-Other Network
BB_ZAR_ME14	Wimax			X		Direct-Other Network
IT system						
BB_ZAR_ME15	Billing System	X	X	X	X	Total wholesale/retail traffic
BB_ZAR_ME16	NMS System	X	X	X		NRC of network equipment assigned to each business unit
BB_ZAR_ME17	CRM System				X	Direct-Retail
BB_ZAR_ME18	Financial System	X	X	X	X	Number of headcounts assigned to each business unit
BB_ZAR_ME19	Personal computers	X	X	X	X	Number of headcounts assigned to each business unit
BB_ZAR_ME20	General IT	X	X	X	X	Number of headcounts assigned to each business unit

ID of network element	Name of network element	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	
OPEX – costs of employees						
Costs of salaries of employees in Technical Sector						
Service platforms						
BB_ZAR_ME21	Service platforms – SMSC	X	X	X		Total SMS
BB_ZAR_ME22	Service platforms – MMSC			X		Direct-Other Network
BB_ZAR_ME23	Service platforms – CS network	X	X	X		Total voice/SMS traffic
BB_ZAR_ME24	Service platforms – PS network			X		Direct-Other Network
BB_ZAR_ME25	Service platforms – IN	X	X	X		Total traffic
BB_ZAR_ME26	Service platforms – VAS				X	Direct-Retail
BB_ZAR_ME27	Service platforms – general	X	X	X	X	NRC of service platforms assigned to each business unit
Network support						
BB_ZAR_ME28	Power supply	X	X	X		NRC of network equipment assigned to each business unit
BB_ZAR_ME29	Air-conditioning	X	X	X		NRC of network equipment assigned to each business unit
BB_ZAR_ME30	Radio planning and test equipment	X	X	X		NRC of Base Stations and radiolinks assigned to each business unit
BB_ZAR_ME31	Network management	X	X	X		Total traffic
BB_ZAR_ME32	Work on project	X	X	X		Total traffic
BB_ZAR_ME33	Other support operations	X	X	X		Total traffic
Sale, Marketing and Customer Care						
BB_ZAR_ME34	Sale, Marketing and Customer Care				X	Direct-Retail
Operating expenses - Regulatory fees						
BB_ZAR_ME35	Operating expenses related to regulatory fees	X	X	X		Total traffic
Administrative Affairs Division						
BB_ZAR_ME36	Finances	X	X	X	X	Number of headcounts assigned to each business unit

BB_ZAR_ME37	Administration	X	X	X	X	Number of headcounts assigned to each business unit
BB_ZAR_ME38	Management	X	X	X	X	Number of headcounts assigned to each business unit
Other costs of salaries of employees						
BB_ZAR_ME39	Other costs of salaries of employees	X	X	X	X	Total OPEX

ID of network element	Name of network element	Mobile call origination and access	Mobile call termination	Other Network	Retail and Other	
AM_ME44	Transmission - access microwave links	x	x	x		Total traffic
AM_ME45	Billing System - SW	x	x	x	x	Total wholesale/retail traffic
AM_ME46	CRM System -HW				x	Direct-Retail
AM_ME47	General IT - SW	x	x	x	x	Number of headcounts assigned to each business unit
AM_ME48	Buildings - office - equipment in buildings	x	x	x	x	Number of headcounts assigned to each business unit
AM_ME49	Buildings - office (SW & licenses)	x	x	x	x	Number of headcounts assigned to each business unit
AM_ME50	Buildings - retail stores - technical equipment				x	Direct-Retail
AM_ME51	Buildings - technical - equipment in buildings	x	x	x		NRC of network equipment assigned to each business unit
AM_ME52	Fixed telephony (transferred from MnNews)				X	Direct-Retail

Tabela A2. Alokacija prihoda po poslovnim jedinicama
PRIHODI MALOPRODAJA I INTERKONEKCIJA

#	Naziv prihoda	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo	Alokacija
P_1	Pozivi u mreži				X	Direktna alokacija
P_2	SMS u mreži				X	Direktna alokacija
P_3	MMS u mreži				X	Direktna alokacija
P_4	Dolazni pozivi		X			Direktna alokacija
P_5	Odlazni pozivi				X	Direktna alokacija
P_6	Dolazni SMS		X			Direktna alokacija
P_7	Odlazni SMS				X	Direktna alokacija
P_8	Dolazni MMS			X		Direktna alokacija
P_9	Odlazni MMS				X	Direktna alokacija
P_10	Dolazni međunarodni pozivi		X			Direktna alokacija
P_11	Odlazni međunarodni pozivi				X	Direktna alokacija

Table A2. Allocation of income by business units
INCOME - RETAIL TRADE AND INTERCONNECTION

#	Name of income	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	Allocation
P_1	Calls within the network				X	Direct allocation
P_2	SMSs within the network				X	Direct allocation
P_3	MMSs within the network				X	Direct allocation
P_4	Incoming calls		X			Direct allocation
P_5	Outgoing calls				X	Direct allocation
P_6	Incoming SMSs		X			Direct allocation
P_7	Outgoing SMSs				X	Direct allocation
P_8	Incoming MMSs			X		Direct allocation
P_9	Outgoing MMSs				X	Direct allocation
P_10	Incoming international calls		X			Direct allocation
P_11	Outgoing international calls				X	Direct allocation

PRIHODI - DOLAZEĆI ROMING

#	Naziv prihoda	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo	Alokacija
P_12	Dolazni pozivi			X		Direktna alokacija
P_13	Odlazni pozivi			X		Direktna alokacija
P_14	Dolazni SMS			X		Direktna alokacija
P_15	Odlazni SMS			X		Direktna alokacija
P_16	Dolazni MMS			X		Direktna alokacija
P_17	Odlazni MMS			X		Direktna alokacija
P_18	Dolazni međunarodni pozivi			X		Direktna alokacija
P_19	Odlazni međunarodni pozivi			X		Direktna alokacija

PRIHODI - ODLAZEĆI ROMING

#	Naziv prihoda	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo	Alokacija
P_20	Pozivi				X	Direktna alokacija
P_21	SMS				X	Direktna alokacija
P_22	MMS				X	Direktna alokacija

INCOME - INCOMING ROAMING

#	Name of income	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	Allocation
P_12	Incoming calls			X		Direct allocation
P_13	Outgoing calls			X		Direct allocation
P_14	Incoming SMSs			X		Direct allocation
P_15	Outgoing SMSs			X		Direct allocation
P_16	Incoming MMSs			X		Direct allocation
P_17	Outgoing MMSs			X		Direct allocation
P_18	Incoming international calls			X		Direct allocation
P_19	Outgoing international calls			X		Direct allocation

INCOME - OUTGOING ROAMING

#	Name of income	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	Allocation
P_20	Calls				X	Direct allocation
P_21	SMSs				X	Direct allocation
P_22	MMSs				X	Direct allocation

PRIHODI - PRENOS PODATAKA

#	Naziv prihoda	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo	Alokacija
P_23	Usluge prenosa podataka maloprodaja				X	Direktna alokacija
P_24	Usluge podataka - dolazeći roving			X		Direktna alokacija
P_25	Usluge podataka maloprodaja - odlazeći roving				X	Direktna alokacija

PRIHODI - MESEČNE PRETPLATE

#	Naziv prihoda	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo	Alokacija
P_26	Mjesečne pretplate maloprodaja				X	Direktna alokacija

PRIHODI - PRODAJA OPREME, AKTIVACIJA USLUGA, ZAKUPA

#	Naziv prihoda	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo	Alokacija
P_27	Prodaje korisničke opreme				X	Direktna alokacija
P_28	Naknada za aktivaciju				X	Direktna alokacija
P_29	Zakup usluga prenosa			X		Direktna alokacija
P_30	Zakup stubova, jarbola i krovova			X		Direktna alokacija
P_31	Zakup tehničkih zgrada			X		Direktna alokacija

INCOME - DATA TRANSMISSION

#	Name of income	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	Allocation
P_23	Data transmission services retail trade				X	Direct allocation
P_24	Data services – incoming roaming			X		Direct allocation
P_25	Data services - retail trade - outgoing roaming				X	Direct allocation

INCOME - MONTHLY SUBSCRIPTIONS

#	Name of income	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	Allocation
P_26	Monthly subscriptions - retail trade				X	Direct allocation

INCOME – SALE OF EQUIPMENT, ACTIVATION OF SERVICES, LEASE

#	Name of income	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	Allocation
P_27	Sales of user equipment				X	Direct allocation
P_28	Activation fee				X	Direct allocation
P_29	Lease of transmission services			X		Direct allocation
P_30	Lease of pillars, masts and roofs			X		Direct allocation
P_31	Lease of technical facilities			X		Direct allocation

OSTALI TELEKOMUNIKACIONI I NETELKOMUNIKACIONI PRIHODI

#	Naziv prihoda	Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostale mreže	Maloprodaja i ostalo	Alokacija
P_32	Usluge dodatne vrednosti				X	Direktna alokacija
P_33	Ostali prihodi				X	Direktna alokacija
P_34	Ostali netelekomunikacioni prihodi				X	Direktna alokacija

OTHER TELECOMMUNICATION AND NON-TELECOMMUNICATION INCOME

#	Name of income	Origination of mobile calls and access	Termination of mobile calls	Other networks	Retail trade and other	Allocation
P_32	Value added services				X	Direct allocation
P_33	Other income				X	Direct allocation
P_34	Other non-telecommunication income				X	Direct allocation

Tabela A3. Alokacija obrtnog kapitala poslovnim jedinicama

OI šifra	OI Naziv	Origin acija mobil nih poziva i pristu p	Termin acija mobiln ih poziva	Osta le mre ža	Malop rodaja i ostalo	Alokacija
Obrtna sredstva						
OI_1	Zalihe – mobilni telefoni				X	Direktno-maloprodaja
OI_2	Zalihe – SIM kartice i vaučeri				X	Direktno-maloprodaja
OI_3	Ostale zalihe		X	X	X	Ukupni prihodi
OI_4	Dati avansi za zalihe		X	X	X	Ukupni prihodi
OI_5	Potraživanja od pretplatnika				X	Direktno-maloprodaja
OI_6	Potraživanja od distributera				X	Direktno-maloprodaja
OI_7	Potraživanja – interkonekcija	X	X	X		Ukupan saobraćaj
OI_8	Potraživanja – roming			X		Direktna alokacija
OI_9	Potraživanja od inostranih lica		X	X	X	Ukupni prihodi
OI_10	Potraživanja – ostala potraživanja		X	X	X	Ukupni prihodi
OI_11	Potraživanja od zaposlenih	X	X	X	X	Broj zaposlenih
OI_12	Obračunati prihodi		X	X	X	Ukupni prihodi
OI_13	Gotovina i gotovinski ekvivalenti		X	X	X	Ukupni prihodi

Table A3. Allocation of working capital to business units

OI code	OI Name	Origina tion of mob ile calls and acce ss	Termin atio n of mob ile calls	Other netwo rks	Retail and other	Allocation
Working assets						
OI_1	Stocks – mobile handsets				X	Direct- retail
OI_2	Stocks – SIM cards and vouchers				X	Direct- retail
OI_3	Other stocks		X	X	X	Total revenues
OI_4	Advance payments for stocks		X	X	X	Total revenues
OI_5	Claims from subscribers				X	Direct- retail
OI_6	Claims from distributors				X	Direct- retail
OI_7	Claims – interconnections	X	X	X		Total traffic
OI_8	Claims – roaming			X		Direct allocation
OI_9	Claims from foreign persons		X	X	X	Total revenues
OI_10	Claims – other claims		X	X	X	Total revenues
OI_11	Claims from employees	X	X	X	X	Number of employees
OI_12	Calculated revenues		X	X	X	Total revenues
OI_13	Cash and cash equivalents		X	X	X	Total revenue

Kratkoročne obaveze					
OI_14	Obaveze iz poslovanja – povezana pravna lica	X	X	X	Ukupan saobraćaj
OI_15	Obaveze iz poslovanja-roming				Direktno-Maloprodaja
OI_16	Obaveze iz poslovanja-interkonekcija				Direktno-Maloprodaja
OI_17	Obaveze iz poslovanja - dobavljači u zemlji	X	X	X	Ukupan Neto trosak zamjene mrezne opreme
OI_18	Obaveze iz poslovanja - dobavljači u inostranstvu	X	X	X	Ukupan Neto trosak zamjene mrezne opreme
OI_19	Ukakulisani nefakturisani troškovi		X	X	Ukupni prihodi
OI_20	Razgraničeni prihodi		X	X	Ukupni prihodi
OI_21	Ostale Ukakulisane obaveze		X	X	Ukupni prihodi
OI_22	Ostale kratkoročne obaveze – PDV				Direktno-Maloprodaja
OI_23	Ostale kratkoročne obaveze - Obaveze za takse i doprinose		X	X	Ukupni prihodi
OI_24	Obračunati troškovi		X	X	Ukupni prihodi

Short-term liabilities					
OI_14	Business operation liabilities – related legal entities	X	X	X	Total traffic
OI_15	Business operation liabilities - roaming				Direct- retail
OI_16	Business operation liabilities - interconnections				Direct- retail
OI_17	Business operation liabilities – local suppliers	X	X	X	Total NRC of network equipment
OI_18	Business operation liabilities – suppliers abroad	X	X	X	Total NRC of network equipment
OI_19	Calculated uninvoiced expenses		X	X	Total revenues
OI_20	Deferred revenues		X	X	Total revenues
OI_21	Other calculated liabilities		X	X	Total revenues
OI_22	Other short-term liabilities – VAT				Direct- retail
OI_23	Other short-term liabilities - Liabilities for taxes and contributions		X	X	Total revenues
OI_24	Calculated expenses		X	X	Total revenues

Tabela A4. Alokacija mrežnih elemenata na mrežne komponente

Šifra i naziv elementa	Naziv mrežne komponente	Lokacija	BSS pozivi	BSS podaci	MSC / MSS / MGW	Prenos	SMSC	MMSC	Core podataka	Wimax	HLR	Billing	IN	Malo prodaja i ostalo	Allokacije
BSS Mreža															
AM_ME_1	Antenski stubovi i lokacija	X													Direct
AM_ME_2	Bazna stanica – BTS		X	X											GSM traffic
AM_ME_3	Bazna stanica - BTS/NodeB		X	X											GSM/UMTS traffic
AM_ME_4	Bazna stanica - BTS/NodeB/eNodeB		X	X											Total traffic
AM_ME_5	Bazna stanica – Wimax									X					Direct
AM_ME_6	Kontrolor – BSC		X	X											GSM traffic
AM_ME_7	Kontrolor – RNC		X	X											UMTS traffic
Prenos															
AM_ME_8	Prenos- backhaul microwavv linkovi					X									Direct
AM_ME_9	Prenos- core DWDM					X									Direct
AM_ME_10	Prenos-core SDH					X									Direct
Core CS mreža															
AM_ME_11	Core mreža - MSC / MSS				X										Direct
AM_ME_12	Core mreža – MGW				X										Direct
AM_ME_13	Core mreža – HLR										X				Direct
AM_ME_14	Core mreža – IMS									X					Direct
Core PS mreža															
AM_ME_15	IP ruteri								X						Direct
AM_ME_16	SGSN/GGSN								X						Direct
AM_ME_17	Wimax									X					Direct

Licence za frekvenciju															
AM_ME_18	Licenca za frekvenciju 900/1800		X	X											GSM traffic
AM_ME_19	Licenca za frekvenciju 2100		X	X											UMTS traffic
AM_ME_20	Licenca za frekvenciju Wimax									X					Direct
IT sistemi															
AM_ME_21	Biling Sistem		X	X								X			Total wholesale/retail traffic
AM_ME_22	NMS Sistem	X	X	X	X	X			X	X	X			X	Total NRCof network equipment
AM_ME_23	CRM Sistem													X	Direct
AM_ME_24	Finansijski sistem	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcounts
AM_ME_25	Personalni računari	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcounts
AM_ME_26	Opšti IT	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcounts

Šifra i naziv elementa	Naziv mrežne komponente	Lokacija	BSS pozivi	BSS podaci	MSC / MSS / MGW	Prenos	SMSC	MMSC	Core podataka	Wimax	HLR	Billing	IN	Maloprodaja i ostalo	Allokacije
BSS Mreža															
Servisne platforme															
AM_ME_27	Servisne platforme – SMSC						X								Direct
AM_ME_28	Servisne platforme- MMSC							X							Direct
AM_ME_29	Servisne platforme - CS mreža				X										Direct
AM_ME_30	Servisne platforme - PS mreža								X						Direct
AM_ME_31	Servisne platforme – IN												X		Direct
AM_ME_32	Servisne platforme- VAS													X	Direct
AM_ME_33	Servisne platforme –opšte	X	X	X	X	X			X	X	X				Total NRC of network equipment

Ostalo mrežna podrška															
AM_ME_34	Napajanje	X	X	X	X	X			X	X	X				NRC of network equipment assigned to each business unit
AM_ME_35	Klimatizacija	X	X	X	X	X			X	X	X				NRC of network equipment assigned to each business unit
AM_ME_36	Radio planiranje i testna oprema		X	X											Total traffic
Zgrade															
AM_ME_37	Zgrade u kojima su kancelarije (administrativne funkcije)	X	X	X	X	X	X	X	X	X	X	X	X	X	Number of headcounts assigned to each business unit
AM_ME_38	Tehničke zgrade	X	X	X	X	X			X	X	X				NRC of network equipment assigned to each business unit
AM_ME_39	Zgrade- prodavnice u maloprodaji													X	Direct-Retail
Vozila															
AM_ME_40	Vozila –tehnička	X	X	X	X	X			X	X	X				NRC of network equipment assigned to each business unit

AM_ME_41	Vozila-prodaja													X	Direct-Retail
AM_ME_42	Vozila-opšte	X	X	X	X	X	X	X	X	X	X	X	X	X	Number of headcounts assigned to each business unit
Ostalo – maloprodaja															
AM_ME_43	Telefonski aparati													X	Direct-Retail

Sifra i naziv elementa	Naziv mrezne komponente	Sajt	BSS voice	BSS data	MSC / MSS / MGW	Transmission	SM SC	MM SC	Data core	Wimax	HLR	Billing	IN	Maloprodaja i ostalo	Alokacija
AM_ME_44	Prenos - access microwave linkovi					X									Direktna maloprodaja
AM_ME_45	Biling Sistem – SW		X	X								X			Ukupan saobracaj
AM_ME_46	CRM Sistem – HW													X	Direktna maloprodaja
AM_ME_47	Opšti IT -SW	X	X	X	X	X	X	X	X	X	X	X	X	X	Broj zaposlenih
AM_ME_48	Zgrade u kojima su kancelarije- oprema u zgradama	X	X	X	X	X	X	X	X	X	X	X	X	X	Broj zaposlenih
AM_ME_49	Zgrade u kojima su kancelarije (SW i licence)	X	X	X	X	X	X	X	X	X	X	X	X	X	Broj zaposlenih
AM_ME_50	Zgrade-prodavnice u maloprodaji-tehnicka oprema													X	Direktna maloprodaja
AM_ME_51	Tehnicke zgrade- oprema u zgradama	X	X	X	X	X			X	X	X				Ukupan Neto trosak zamjene mrezne opreme
AM_ME_52	Fixed telephony (transferred from MnNews)													x	Direktna maloprodaja

Table A4. Allocation of network elements to network components

Code and element name	Name of network component	Location	BSS calls	BSS data	MSC / MSS / MGW	Transmission	SMSC	MMS C	Core data	Wimax	HLR	Billing	IN	Retail trade and other	Allocation
BSS Network															
AM_ME_1	Antenna masts and location	X													Direct
AM_ME_2	Base station – BTS		X	X											GSM traffic
AM_ME_3	Base station - BTS/NodeB		X	X											GSM/UMTS traffic
AM_ME_4	Base station - BTS/NodeB/eNodeB		X	X											Total traffic
AM_ME_5	Base station – Wimax									X					Direct
AM_ME_6	Controller – BSC		X	X											GSM traffic
AM_ME_7	Controller – RNC		X	X											UMTS traffic
Transmission															
AM_ME_8	Transmission - backhaul microwave links					X									Direct
AM_ME_9	Transmission - core DWDM					X									Direct
AM_ME_10	Transmission - core SDH					X									Direct
Core CS network															
AM_ME_11	Core network - MSC / MSS				X										Direct
AM_ME_12	Core network – MGW				X										Direct
AM_ME_13	Core network – HLR										X				Direct
AM_ME_14	Core network – IMS									X					Direct
Core PS network															
AM_ME_15	IP routers								X						Direct
AM_ME_16	SGSN/GGSN								X						Direct
AM_ME_17	Wimax									X					Direct
Licenses for frequencies															
AM_ME_18	License for frequency 900/1800		X	X											GSM traffic
AM_ME_19	License for frequency 2100		X	X											UMTS traffic
AM_ME_20	License for frequency Wimax									X					Direct
IT systems															
AM_ME_21	Billing System		X	X								X			Total wholesale/retail traffic
AM_ME_22	NMS System	X	X	X	X	X			X	X	X			X	Total NRC of network equipment

AM_ME_23	CRM System													X	Direct
AM_ME_24	Financial system	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcounts
AM_ME_25	Personal computers	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcounts
AM_ME_26	General IT	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcounts

Code and element name	Name of network component	Location	BSS calls	BSS data	MSC / MSS / MGW	Transmission	SMSC	MMSC	Core data	Wimax	HLR	Billing	IN	Retail trade and other	Allocation
BSS Network															
Service platforms															
AM_ME_27	Service platforms – SMSC						X								Direct
AM_ME_28	Service platforms – MMSC							X							Direct
AM_ME_29	Service platforms - CS network				X										Direct
AM_ME_30	Service platforms - PS network								X						Direct
AM_ME_31	Service platforms – IN												X		Direct
AM_ME_32	Service platforms – VAS													X	Direct
AM_ME_33	Service platforms - general	X	X	X	X	X			X	X	X				Total NRC of network equipment
Other network support															
AM_ME_34	Power supply	X	X	X	X	X			X	X	X				NRC of network equipment assigned to each business unit
AM_ME_35	Air-conditioning	X	X	X	X	X			X	X	X				NRC of network equipment assigned to each business unit

AM_ME_36	Radio planning and test equipment		X	X											<i>Total traffic</i>
Buildings															
AM_ME_37	Buildings containing offices (administrative functions)	X	X	X	X	X	X	X	X	X	X	X	X	X	Number of headcount s assigned to each business unit
AM_ME_38	Technical facilities	X	X	X	X	X			X	X	X				NRC of network equipment assigned to each business unit
AM_ME_39	Buildings – retail stores													X	Direct-Retail
Vehicles															
AM_ME_40	Vehicles – technical	X	X	X	X	X			X	X	X				NRC of network equipment assigned to each business unit
AM_ME_41	Vehicles – sale													X	Direct-Retail
AM_ME_42	Vehicles – general	X	X	X	X	X	X	X	X	X	X	X	X	X	Number of headcount s assigned to each business unit
Other – retail trade															
AM_ME_43	Telephone sets													X	Direct-Retail
AM_ME52	Fixed telephony (transferred from MnNews)													x	Direct-Retail

Šifra i naziv elementa	Naziv mrežne komponente	Sajt	BSS voice	BSS data	MSC / MSS / MGW	Transmission	SMSC	MMSC	Data core	Wimax	HLR	Billing	IN	Malopro daja I ostalo	Allokacija
ID of network element	Name of network element	Site	BSS voice	BSS data	MSC / MSS / MGW	Transmission	SMSC	MMSC	Data core	Wimax	HLR	Billing	IN	Retail and Other	Allocation
AM_ME44	Transmission - access microwave links					X									Direct
AM_ME45	Billing System - SW		X	X								X			Total wholesale/retail traffic
AM_ME46	CRM System -HW													X	Direct
AM_ME47	General IT - SW	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcounts
AM_ME48	Buildings - office - equipment in buildings	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcounts
AM_ME49	Buildings - office (SW & licenses)	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcounts
AM_ME50	Buildings - retail stores - technical equipment													X	Direct
AM_ME51	Buildings - technical - equipment in buildings	X	X	X	X	X			X	X	X				Total NRC of network equipment

Tabela A5. Alokacija obrtnog kapitala na mrežne komponente

Šifra i naziv elementa	Naziv mrežne komponente	Lokacija	BSS pozivi	BSS podaci	MSC / MSS / MGW	Prenos	SMSC	MMSC	Core podataka	Wimax	HLR	Billing	IN	Maloprodaja i ostalo	Allokacija
Obrtna sredstva															
OI_1	Zalihe – mobilni telefoni													X	Direktno-Maloprodaja
OI_2	Zalihe – SIM kartice i vaučeri													X	Direktno-Maloprodaja
OI_3	Ostale zalihe	X	X	X	X	X			X	X	X				Ukupan Neto trosak zamjene mrezne opreme
OI_4	Dati avansi za zalihe	X	X	X	X	X			X	X	X				Ukupan Neto trosak zamjene mrezne opreme
OI_5	Potraživanja od pretplatnika													X	Direktno-Maloprodaja
OI_6	Potraživanja od distributera	X	X	X	X	X			X	X	X				Ukupan Neto trosak zamjene mrezne opreme
OI_7	Potraživanja – interkonekcija													X	Direktno-Maloprodaja
OI_8	Potraživanja – roming													X	Direktno-Maloprodaja
OI_9	Potraživanja od inostranih lica	X	X	X	X	X			X	X	X				Ukupan Neto trosak zamjene mrezne opreme
OI_10	Potraživanja – ostala potraživanja	X	X	X	X	X			X	X	X				Ukupan Neto trosak zamjene mrezne opreme
OI_11	Potraživanja od zaposlenih	X	X	X	X	X	X	X	X	X	X	X	X	X	Ukupan broj zaposlenih
OI_12	Obračunati prihodi													X	Direktno-Maloprodaja
OI_13	Gotovina i gotovinski ekvivalenti	X	X	X	X	X			X	X	X				Ukupan Neto trosak zamjene mrezne opreme
OI_14	Obaveze iz poslovanja – povezana pravna lica	X	X	X	X	X			X	X	X				Ukupan Neto trosak zamjene mrezne opreme
OI_15	Obaveze iz poslovanja-roming													X	Direktno-Maloprodaja
OI_16	Obaveze iz poslovanja-interkonekcija													X	Direktno-Maloprodaja

Ol_17	Obaveze iz poslovanja - dobavljači u zemlji	X	X	X	X	X			X	X	X			Ukupan Neto trosak zamjene mrezne opreme
Ol_18	Obaveze iz poslovanja - dobavljači u inostranstvu	X	X	X	X	X			X	X	X			Ukupan Neto trosak zamjene mrezne opreme
Ol_19	Ukakulisani nefakturisani troškovi	X	X	X	X	X			X	X	X			Ukupan Neto trosak zamjene mrezne opreme
Ol_20	Razgraničeni prihodi	X	X	X	X	X			X	X	X			Ukupan Neto trosak zamjene mrezne opreme
Ol_21	Ostale Ukakulisane obaveze	X	X	X	X	X			X	X	X			Ukupan Neto trosak zamjene mrezne opreme
Ol_22	Ostale kratkoročne obaveze – PDV													X Direktno-Maloprodaja
Ol_23	Ostale kratkoročne obaveze - Obaveze za takse i doprinose	X	X	X	X	X			X	X	X			Ukupan Neto trosak zamjene mrezne opreme
Ol_24	Ukakulisani troškovi	X	X	X	X	X			X	X	X			Ukupan Neto trosak zamjene mrezne opreme

Table A5. Allocation of working capital to network components

Code and element name	Name of network component	Location	BSS calls	BSS data	MSC / MSS / MGW	Transmission	SMSC	MMSC	Core data	Wimax	HLR	Billing	IN	Retail trade and other	Allocation driver
Current assets															
OI_1	Inventories – mobile telephones													X	Direct-retail
OI_2	Inventories – SIM cards and vouchers													X	Direct-retail
OI_3	Other inventories	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_4	Prepayments for inventories	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_5	Receivables from subscribers													X	Direct-retail
OI_6	Receivables from distributors	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_7	Receivables – interconnection													X	Direct-retail
OI_8	Receivables – roaming													X	Direct-retail
OI_9	Receivables from foreign persons	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_10	Receivables – other receivables	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_11	Receivables from employees	X	X	X	X	X	X	X	X	X	X	X	X	X	Headcount
OI_12	Accrued income													X	Direct-retail
OI_13	Cash and cash equivalents	X	X	X	X	X			X	X	X				Total NRC of network equipment

OI_14	Liabilities from operations – linked legal entities	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_15	Liabilities from operations - roaming													X	Direct-retail
OI_16	Liabilities from operations - interconnection													X	Direct-retail
OI_17	Liabilities from operations – trade payable - domestic	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_18	Liabilities from operations – trade payable - foreign	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_19	Accrued uninvoiced costs	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_20	Deferred income	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_21	Other accrued liabilities	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_22	Other short-term liabilities – VAT													X	Direct-retail
OI_23	Other short-term liabilities - liabilities for taxes and contributions	X	X	X	X	X			X	X	X				Total NRC of network equipment
OI_24	Accrued costs	X	X	X	X	X			X	X	X				Total NRC of network equipment

Tabela A6. Izvještaj o transfernim naknadama

Originacija mobilnog poziva i pristup

Šifra usluge	Usluge	Jedinični trošak usluge (EUR)	Količina usluge (Unit)	Transfer naknade poslovne jedinice (EUR)			
				Originacija mobilnih poziva i pristup	Terminacija mobilnih poziva	Ostala tržišta	Maloprodaja i ostalo
	Pozivi u mreži (originacija)						X
	Originacija poziva (domaći i međunarodni)						X
	SMS u mreži (originacija)						X
	SMS originacija (domaći i međunarodni)						X

Terminacija mobilnih poziva

Šifra usluge	Usluge	Jedinični trošak usluge (EUR)	Količina usluga (Unit)	Transferne naknade poslovnih jedinica (EUR)			
				Originacija mob. poziva i pristup	Terminacija mob. poziva	Ostala tržišta	Maloprodaja i ostalo
	Pozivi u mreži (terminacija)						X
	Terminacija poziva (domaći i međunarodni)						X
	SMS u mreži (terminacija)						X
	SMS terminacija (domaći i međunarodni)						X

Ostale mreže

Šifra usluge	Usluga	Jedinični trošak usluge (EUR)	Količina usluga (Unit)	Transferne naknade poslovnih jedinica (EUR)			
				Originacija mob. poziva i pristup	Terminacija mob. poziva	Ostala tržišta	Maloprodaja i ostalo
	Saobraćaj podataka						X
	MMS u mreži						X
	MMS originacija						X
	MMS terminacija						X

Table A6. Report on transfer fees

Origination of mobile call and access

Service code	Services	Unit cost of service (EUR)	Service quantity (Unit)	Transfer of fees of business unit (EUR)			
				Origination of mobile calls and access	Termination of mobile calls	Other markets	Retail trade and other
	Calls in the network (origination)						X
	Origination of calls (domestic and international ones)						X
	SMSS within the network (origination)						X
	SMS origination (domestic and international ones)						X

Termination of mobile calls

Service code	Services	Unit cost of service (EUR)	Service quantity (Unit)	Transfer of fees of business units (EUR)			
				Origination of mobile calls and access	Termination of mobile calls	Other markets	Retail trade and other
	Calls in the network (termination)						X
	Termination of calls (domestic and international ones)						X
	SMSS within the network (termination)						X
	SMS termination (domestic and international ones)						X

Other networks

Service code	Services	Unit cost of service (EUR)	Service quantity (Unit)	Transfer of fees of business units (EUR)			
				Origination of mobile calls and access	Termination of mobile calls	Other markets	Retail trade and other
	Data traffic						X
	MMS within the network						X
	MMS origination						X
	MMS termination						X

Tabela A7. Matrica Routing faktora

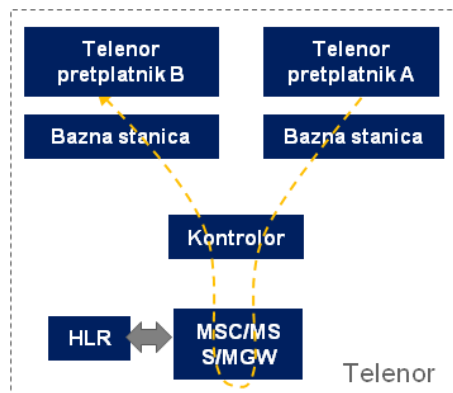
Usluge	Mrežne komponente (NC) routing factor												
	Lokacija	BSS pozivi	BSS podaci	MSC / MSS / MGW	Prenos	SMSC	MMSC	Core podataka	Wimax	HLR	Billing	IN	Maloprodaja i ostalo
Originacija poziva u mreži	1	1		0,5	1					1		1	
Terminacija poziva u mreži	1	1		0,5	1					1		1	
Originacija poziva	1	1		1	1					1		1	
Terminacija poziva	1	1		1	1					1		1	
Podaci	1		1		1			1		1		1	
Originacija SMS-ova u mreži	1	1		0,5	1	0,5				1		1	
Terminacija SMS – ova u mreži	1	1		0,5	1	0,5				1		1	
Originacija SMS-ova	1	1		1	1	1				1		1	
Terminacija SMS-ova	1	1		1	1	1				1		1	
MMS u mreži	2		2		2		1	1		1		1	
Originacija MMS	1		1		1		1	1		1		1	
Terminacija MMS	1		1		1		1	1		1		1	

Table A7. Matrix of Routing Factors

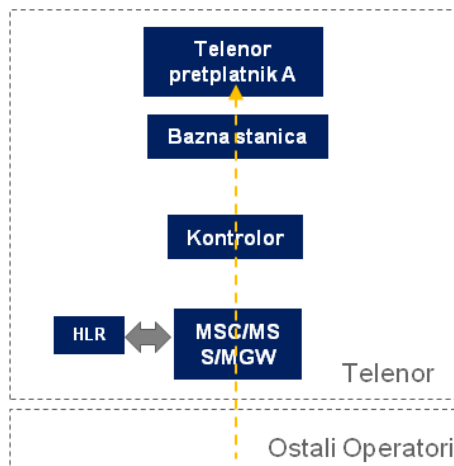
Services	Network Components (NC) routing factor												
	Location	BSS calls	BSS data	MSC / MSS / MGW	Transmission	SMSC	MMSC	Core data	Wimax	HLR	Billing	IN	Retail trade and other
Origination of calls within the network	1	1		0.5	1					1		1	
Termination of calls within the network	1	1		0.5	1					1		1	
Origination of calls	1	1		1	1					1		1	
Termination of calls	1	1		1	1					1		1	
Data	1		1		1			1		1		1	
Origination of SMSs within the network	1	1		0.5	1	0.5				1		1	
Termination of SMSs within the network	1	1		0.5	1	0.5				1		1	
Origination of SMSs	1	1		1	1	1				1		1	
Termination of SMSs	1	1		1	1	1				1		1	
MMSs within the network	2		2		2		1	1		1		1	
Origination of MMSs	1		1		1		1	1		1		1	
Termination of MMSs	1		1		1		1	1		1		1	

Tabela A8. – Prikaz routing staza

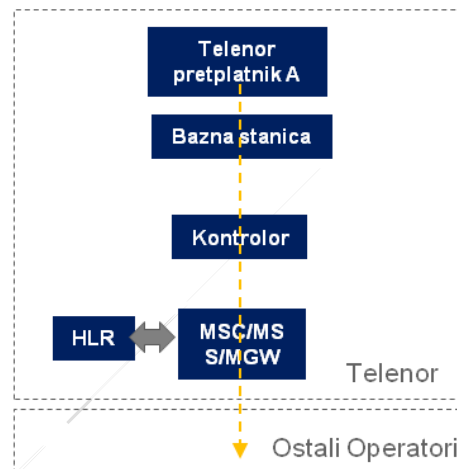
Slika br. 1



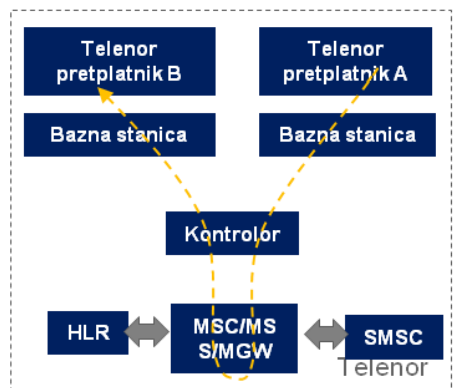
Slika br. 2



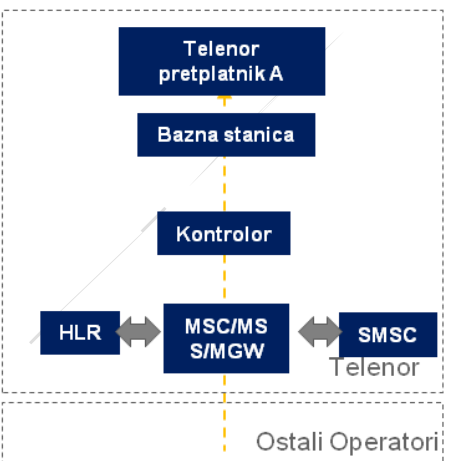
Slika br. 3



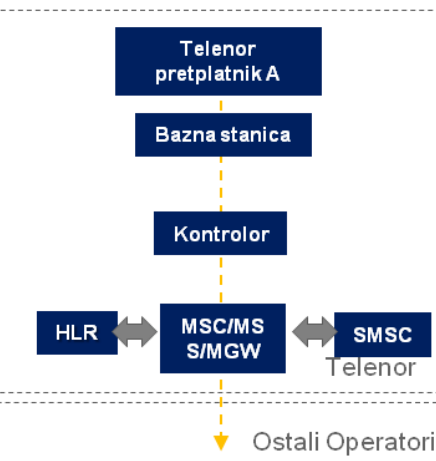
Slika br. 4



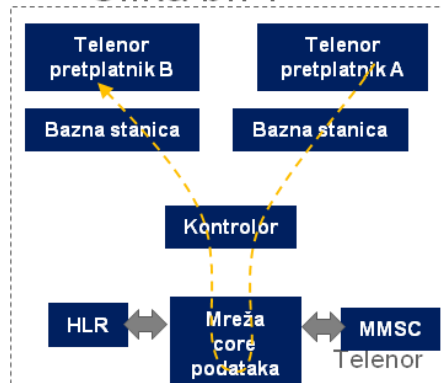
Slika br. 5



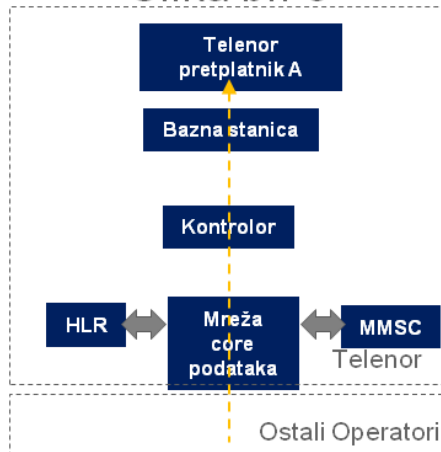
Slika br. 6



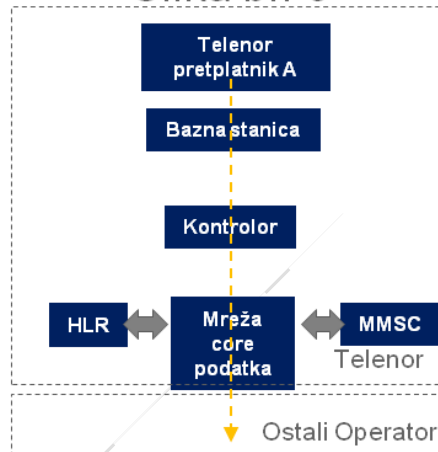
Slika br. 7



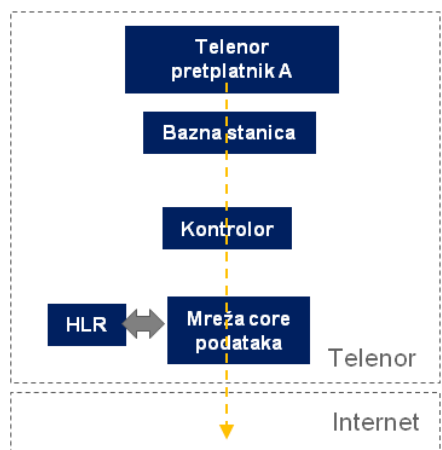
Slika br. 8



Slika br. 9



Slika br. 10



Slika br.1 u Tabeli A8 se odnosi na saobraćaj poziva unutar mreže. Na slici je prikazan tok ovakvog saobraćaja koji tom prilikom upošljava jedan MSC/MSS/MGW, jedan kontrolor BSC/RNC dva puta, dvije bazne stanice,.

Slika br.2 u Tabeli A8 se odnosi na terminaciju poziva u Telenor mreži. Na slici je prikazan tok ovakvog saobraćaja koji tom prilikom upošljava jedan MSC/MSS/MGW, jedan kontrolor BSC/RNC i jednu baznu stanicu.

Slika br.3 u Tabeli A8 se odnosi na originacija poziva iz Telenor mreže. Na slici se je prikazan tok saobraćaja koji dolazi iz druge mreže i tom prilikom upošljava jedan MSC/MSS/MGW, jedan kontrolor BSC/RNC i jednu baznu stanicu.

Slika br.4 u Tabeli A8 se odnosi na SMS unutar mreže. Na slici je prikazan tok ovakvog saobraćaja koji tom prilikom upošljava jedan MSC/MSS/MGW, jedan kontrolor BSC/RNC dva puta, dvije bazne stanice i jedan SMSC.

Slika br.5 u Tabeli A8 se odnosi na terminaciju SMS-a u Telenor mreži. Na slici je prikazan tok ovakvog saobraćaja koji tom prilikom upošljava jedan MSC/MSS/MGW, jedan kontrolor BSC/RNC, jednu baznu stanicu, i jedan SMSC.

Slika br.6 u Tabeli A8 se odnosi na originacija SMS-a u Telenor mreži. Na slici je prikazan tok saobraćaja koji tom prilikom upošljava jedan MSC/MSS/MGW, jedan kontrolor BSC/RNC, jednu baznu stanicu, i jedan SMSC.

Slika br.7 u Tabeli A8 se odnosi na MMS saobraćaj unutar mreže. Na slici je prikazan tok ovakvog saobraćaja koji tom prilikom upošljava jedan kontrolor BSC/RNC dva puta, dvije bazne stanice jedan MMSC i jednu mrežu core podataka (GGSN/SGGN).

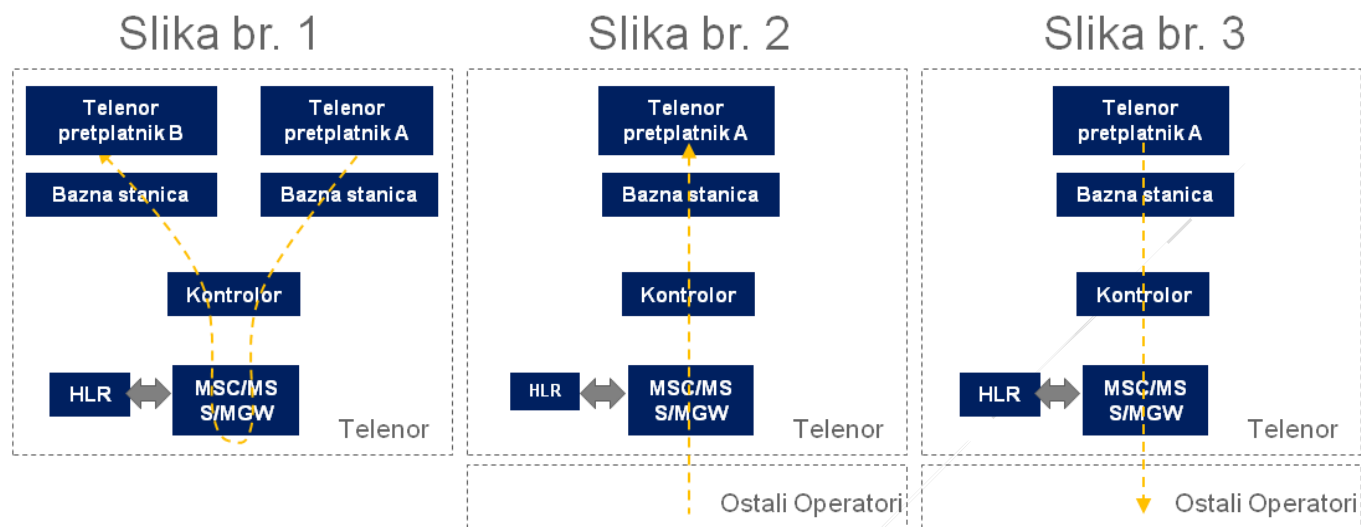
Slika br.8 u Tabeli A8 se odnosi na terminacija MMS-a u Telenor mreži. Na slici je prikazan tok ovakvog saobraćaja koji tom prilikom upošljava jedan MMSC, jedan kontrolor BSC/RNC, jednu baznu stanicu, i jednu mrežu core podataka (GGSN/SGGN).

Slika br.9 u Tabeli A8 se odnosi na originacija MMS-a u Telenor mreži. Na slici je prikazan tok saobraćaja koji tom prilikom upošljava jedan MMSC, jedan kontrolor BSC/RNC, jednu baznu stanicu i jednu mrežu core podataka (GGSN/SGGN).

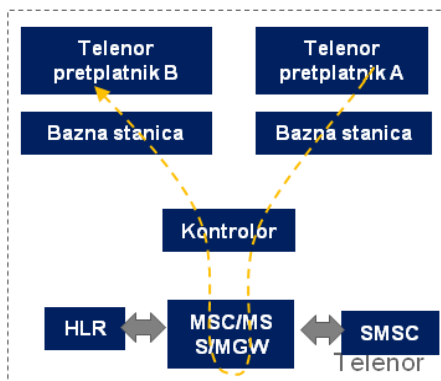
Slika br.10 u Tabeli A8 se odnosi na Podatkovni saobraćaj u mreži. Na slici je prikazan tok saobraćaja koji tom prilikom upošljava jednu mrežu core podataka (GGSN/SGGN), jedan kontrolor (BSC/RNC) i jednu Baznu stanicu.

Napomena: Slika br. 1 i slika br. 4 se odnose na pozive i SMS unutra mreže koji su u Tabeli A7 podeljeni na deo originacija i deo terminacija poziva/SMS-a.

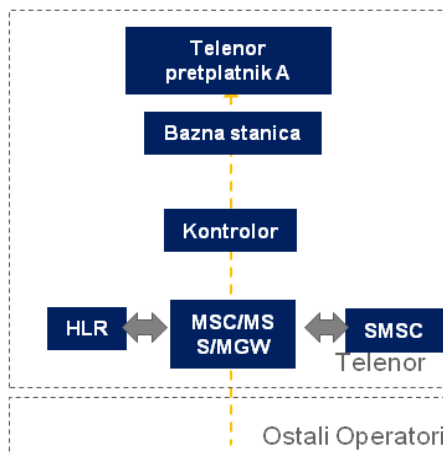
Table A8. – Presentation of routing paths



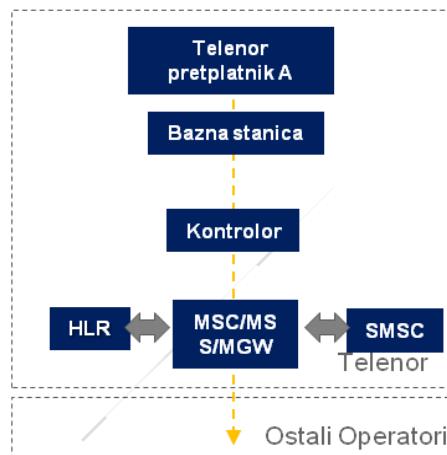
Slika br. 4



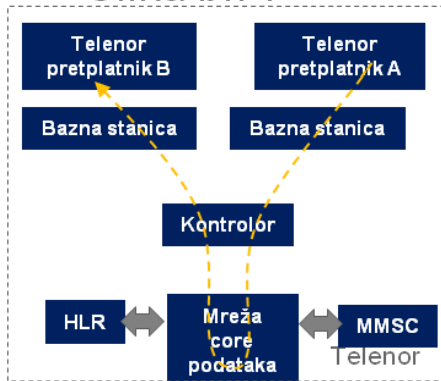
Slika br. 5



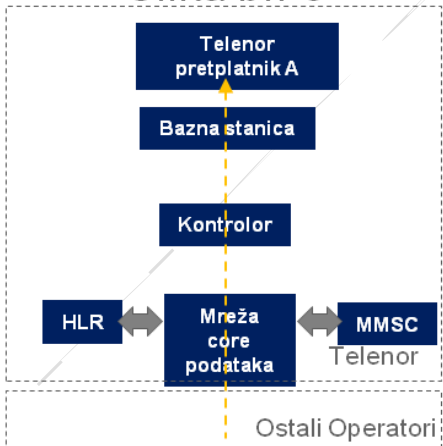
Slika br. 6



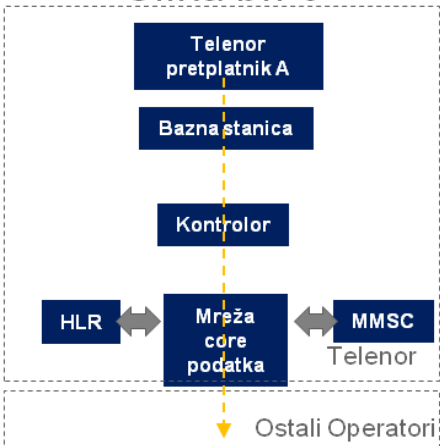
Slika br. 7



Slika br. 8



Slika br. 9



Slika br. 10

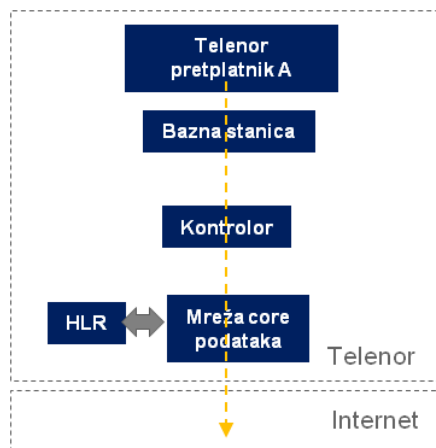


Figure No.1 in Table A8 is related to the traffic of calls within the network. The Figure shows the flow of such traffic, which, on that occasion, employs one MSC/MSS/MGW, one BSC/RNC controller twice, two base stations.

Figure No.2 in Table A8 is related to the termination of calls in the Telenor network. The Figure shows the flow of such traffic, which, on that occasion, employs one MSC/MSS/MGW, one BSC/RNC controller, and one base station.

Figure No.3 in Table is related to the origination of calls from the Telenor network. The Figure shows the flow of traffic coming from another network and, on that occasion, employs one MSC/MSS/MGW, one BSC/RNC controller, and one base station.

Figure No.4 in Table A8 is related to SMS within the network. The Figure shows the flow of such traffic, which, on that occasion, employs one MSC/MSS/MGW, one BSC/RNC controller twice, two base stations, and one SMSC.

Figure No.5 in Table A8 is related to the termination of SMSs in the Telenor network. The Figure shows the flow of such traffic, which, on that occasion, employs one MSC/MSS/MGW, one BSC/RNC controller, one base station, and one SMSC.

Figure No.6 in Table A8 is related to the origination of SMSs in the Telenor network. The Figure shows the flow of traffic, which, on that occasion, employs one MSC/MSS/MGW, one BSC/RNC controller, one base station, and one SMSC.

Figure No.7 in Table A8 is related to the MMS traffic within the network. The Figure shows the flow of such traffic, which, on that occasion, employs one BSC/RNC controller twice, two base stations, one MMSC, and one core data network (GGSN/SGGN).

Figure No.8 in Table A8 is related to the termination of MMSs in the Telenor network. The Figure shows the flow of such traffic, which, on that occasion, employs one MMSC, one BSC/RNC controller, one base station, and one core data network (GGSN/SGGN).

Figure No.9 in Table A8 is related to the origination of MMSs in the Telenor network. The Figure shows the flow of traffic, which, on that occasion, employs one MMSC, one BSC/RNC controller, one base station, and one core data network (GGSN/SGGN).

Figure No.10 in Table A8 is related to the Data Traffic in the network. The Figure shows the flow of traffic, which, on that occasion, employs one core data network (GGSN/SGGN), one controller (BSC/RNC), and one Base Station.

Note: Figure No. 1 and Figure No. 4 are related to the calls and SMSs within the network, which are, in Table A7, divided into the origination part and the termination part of calls/SMSs.

Table A 8: List of Homogeneous Cost Categories (HCC) and their CVR type.

HCC	HCC Name	CVR Type
BSS Network		
AM_ME1	Tower and site infrastructure	Linear
AM_ME2	Base Station - BTS	Linear
AM_ME3	Base Station-BTS/NodeB	Linear
AM_ME4	Base Station-BTS/NodeB/eNodeB	Linear
AM_ME5	Base Station-WiMAX	
AM_ME6	Controller - BSC	Linear
AM_ME7	Controller - RNC	Linear
Transmission		
AM_ME8	Transmission - backhaul microwave links	Linear
AM_ME9	Transmission - core DWDM	Linear
AM_ME10	Transmission - core SDH	
AM_ME44	Transmission - access microwave links	Linear
Core CS Network		
AM_ME11	Core network - MSC/MSS	Constant
AM_ME12	Core network - MGW	Constant
AM_ME13	Core network - HLR	Constant
AM_ME14	Core network - IMS	Linear
Core PS Network		
AM_ME15	Core network - IP routers	Linear
AM_ME16	Core network- SGSN / GGSN	Linear
AM_ME17	Core network - Wimax	Constant
Frequency licence		
AM_ME18	Frequency licence 900/1800	Constant
AM_ME19	Frequency licence 2100	Constant
AM_ME20	Frequency licence Wimax	Constant

IT systems		
AM_ME21	Billing System - HW	Constant
AM_ME45	Billing System - SW	0
AM_ME22	NMS System	Linear
AM_ME23	CRM Software	Constant
AM_ME46	CRM System -HW	Constant
AM_ME24	Finance System	Constant
AM_ME25	Personal Computers	Linear
AM_ME26	General IT	Linear
AM_ME47	General IT - SW	Linear
Service platforms		
AM_ME27	Service platforms - SMSC	Constant
AM_ME28	Service platforms- MMSC	Constant
AM_ME29	Service platforms - CS network	Constant
AM_ME30	Service platforms - PS network	Linear
AM_ME31	Service platforms - IN	Constant
AM_ME32	Service platforms - VAS	Constant
AM_ME33	Service platforms - general	Constant
Other - Network support		
AM_ME34	Power Supply	Linear
AM_ME35	Air conditioning	Linear
AM_ME36	Radio planning and test equipment	Constant
Buildings		
AM_ME37	Buildings - office	Constant
AM_ME48	Buildings - office - equipment in buildings	Constant
AM_ME49	Buildings - office (SW & licenses)	Constant
AM_ME38	Buildings - retail stores - equipment in buildings	Linear
AM_ME50	Buildings - retail stores - technical equipment	Linear

AM_ME39	Buildings - technical	Linear
AM_ME51	Buildings - technical - equipment in buildings	Linear
Cars		
AM_ME40	Cars - technical	Linear
AM_ME41	Cars - sales	Linear
AM_ME42	Cars - general	Constant
Other retail		
AM_ME43	Phones- Sales	Linear
OPEX		
BSS		
BB_TR_ME1	Tower and site infrastructure	Linear
BB_TR_ME2	Base Station-BTS/NodeB/eNodeB	Linear
BB_TR_ME3	Transmission - access microwave links	Linear
BB_TR_ME4	Controller - BSC	Linear
BB_TR_ME5	Controller - RNC	Linear
BB_TR_ME6	General BSS (Base Station and Controller)	Linear
Transmission		
BB_TR_ME7	Transmission - backhaul microwave links	Linear
BB_TR_ME8	Transmission - core DWDM	Linear
BB_TR_ME9	Transmission Dark Fiber	Linear
BB_TR_ME10	General Transmission	Linear
Core CS network		
BB_TR_ME11	Core network - MSC/MSS/MGW	Constant
BB_TR_ME12	Core network - HLR	Constant
BB_TR_ME13	Core network - IMS	Linear
BB_TR_ME14	General Core CS network	Linear
Core PS network		
BB_TR_ME15	Core network - IP routers	Linear

BB_TR_ME16	Core network- SGSN / GGSN	Linear
BB_TR_ME17	Core network - Wimax	Constant
BB_TR_ME18	General Core PS network	Linear
IT systems		
BB_TR_ME19	Billing System	Constant
BB_TR_ME20	NMS System	Linear
BB_TR_ME21	CRM System	Constant
BB_TR_ME22	Finance System	Constant
BB_TR_ME23	Personal Computers	Linear
BB_TR_ME24	General IT	Linear
Service platforms		
BB_TR_ME25	Service platforms - SMSC	Constant
BB_TR_ME26	Service platforms- MMSC	Constant
BB_TR_ME27	Service platforms - CS network	Constant
BB_TR_ME28	Service platforms - PS network	Linear
BB_TR_ME29	Service platforms - IN	Constant
BB_TR_ME30	Service platforms - VAS	Constant
BB_TR_ME31	Service platforms - general	Constant
Other - network support		
BB_TR_ME32	Power Supply	Linear
BB_TR_ME33	Air conditioning	Linear
BB_TR_ME34	Radio planning and test equipment	Constant
Buildings		
BB_TR_ME35	Buildings - office	Constant
BB_TR_ME36	Buildings - technical	Linear
BB_TR_ME37	Buildings - retail stores	Linear
Cars		
BB_TR_ME38	Cars - technical	Linear

BB_TR_ME39	Cars - sales	Linear
BB_TR_ME40	Cars - general	Constant
Operationa costs - Sales, Marketing and Customer Care		
BB_TR_ME41	Operationa expenses related to Sales, Marketing and Customer Care	Linear
Operationa costs – Regulatory		
BB_TR_ME42	Operationa expenses related to Regulatory	Constant
Operationa costs - general departments		
BB_TR_ME43	Finance	Linear
BB_TR_ME44	Administration	Linear
BB_TR_ME45	Management	Linear
Licence fees		
BB_TR_ME46	Concesion fee - 900/1800	Linear
BB_TR_ME47	Concesion fee - 2100	Linear
BB_TR_ME48	Concesion fee - Wimax	Constant
BB_TR_ME49	Concesion fee - radiolinks	Linear
BB_TR_ME50	Numbering	Linear
BB_TR_ME51	Regulation and monitoring the markets	Constant
Rental fees		
BB_TR_ME52	Towers and site (BSS)	Linear
BB_TR_ME53	Buildings - offices	Linear
BB_TR_ME54	Buildings - technical	Constant
BB_TR_ME55	Leased lines	Linear
Energy costs		
BB_TR_ME56	Energy costs - network	Linear
BB_TR_ME57	Energy costs - other	Linear
Billing		
BB_TR_ME58	Postal and billing costs	Linear
Interconnection and roaming costs		

BB_TR_ME59	Roaming costs - voice	Linear
BB_TR_ME60	Roaming costs - data	Linear
BB_TR_ME61	Interconnection costs - voice	Linear
BB_TR_ME62	Interconnection costs - data	Linear
Customer equipment		
BB_TR_ME63	Customer equipment	Linear
Other expenditures		
BB_TR_ME64	Other expenditures - general	Linear
BB_TR_ME65	Other expenditures - technical	Linear
BB_TR_ME66	Other expenditures - retail	Linear
Withholding tax		
BB_TR_ME67	Withholding tax paid abroad	Constant
Salaries		
Salaries - Technical Department		
BSS		
BB_ZAR_ME1	Tower and site infrastructure	Constant
BB_ZAR_ME2	Base Station-BTS/NodeB/eNodeB	Constant
BB_ZAR_ME3	Base Station-WiMAX	Constant
BB_ZAR_ME4	Controller - BSC	Constant
BB_ZAR_ME5	Controller - RNC	Constant
Transmission		
BB_ZAR_ME6	Transmission - backhaul microwave links	Constant
BB_ZAR_ME7	Transmission - core DWDM / SDH	Constant
BB_ZAR_ME8	Transmission - core MPLS/IP	Constant
Core CS network		
BB_ZAR_ME9	Core network - MSC/MSS/MGW	Constant
BB_ZAR_ME10	Core network - HLR	Constant
BB_ZAR_ME11	Core network - IMS	Constant

Core PS network		
BB_ZAR_ME12	Core network - IP routers	Constant
BB_ZAR_ME13	Core network- SGSN / GGSN	Constant
BB_ZAR_ME14	Core network - Wimax	Constant
IT systems		
BB_ZAR_ME15	Billing System	Linear
BB_ZAR_ME16	NMS System	Constant
BB_ZAR_ME17	CRM System	Linear
BB_ZAR_ME18	Finance System	Constant
BB_ZAR_ME19	Personal Computers	Constant
BB_ZAR_ME20	General IT	Constant
Service platforms		
BB_ZAR_ME21	Service platforms - SMSC	Constant
BB_ZAR_ME22	Service platforms- MMSC	Constant
BB_ZAR_ME23	Service platforms - CS network	Constant
BB_ZAR_ME24	Service platforms - PS network	Constant
BB_ZAR_ME25	Service platforms - IN	Constant
BB_ZAR_ME26	Service platforms - VAS	Constant
BB_ZAR_ME27	Service platforms - general	Constant
Network support		
BB_ZAR_ME28	Power Supply	Constant
BB_ZAR_ME29	Air conditioning	Constant
BB_ZAR_ME30	Radio planning and test equipment	Constant
BB_ZAR_ME31	Network management	Linear
BB_ZAR_ME32	Project work	Linear
BB_ZAR_ME33	Other support work	Constant
Salaries - Sales, Marketing and Customer Care		
BB_ZAR_ME34	Sales, Marketing and Customer Care	Linear

Salaries costs – Regulatory		
BB_ZAR_ME35	Salaries expenses related to Regulatory	Constant
Salaries - General departments		
BB_ZAR_ME36	Finance	Constant
BB_ZAR_ME37	Administration	Constant
BB_ZAR_ME38	Management	Constant
Other salaries		
BB_ZAR_ME39	Other salaries	Constant