

Notes to the group financial statements continued

for the year ended 31 December 2017

5 INFRASTRUCTURE INVESTMENTS (continued)

5.1 Property, plant and equipment (continued)

5.1.4 Changes in estimates

There were no material changes in the depreciation method, residual values or useful lives for any of the categories of property, plant and equipment during the current or prior year.

5.1.5 Encumbrances

Borrowings (note 6.1) are secured by various categories of property, plant and equipment with the following carrying amounts:

	2017 Rm	2016 Rm
Scancom Limited (Ghana)	6 226	5 973
MTN Sudan Company Limited	1 325	4 786
MTN Congo S.A.	–	4
	7 551	10 763

5.2 Intangible assets and goodwill

Goodwill

Goodwill is measured at cost less accumulated impairment losses and is not amortised but tested for impairment annually.

As the functional currencies of MTN South Sudan Company Limited and MTN Syria (JSC) are currencies of hyperinflationary economies, goodwill relating to these subsidiaries is restated by applying the change in the general price indices from the date of acquisition to the current reporting date.

Goodwill arising on the acquisition of subsidiaries is included in intangible assets. Goodwill arising on the acquisition of an associate or joint venture is included in 'Investment in associates and joint ventures', and is tested for impairment as part of the overall balance.

Gains or losses on the disposal of an entity include the carrying amount of goodwill allocated to the entity sold.

The group annually reviews the carrying amounts of intangible assets with indefinite useful lives for impairments. The recoverable amounts of the assets are estimated in order to determine the extent, if any, of the impairment loss.

Intangible assets with finite useful lives

The group's intangible assets with finite useful lives are as follows:

- Licences;
- Customer relationships;
- Computer software; and
- Other intangible assets.

Intangible assets with finite useful lives are measured at historical cost less accumulated amortisation and impairment losses. Intangible assets acquired through business combinations are initially shown at fair value and are subsequently carried at the initially determined fair value less accumulated amortisation and impairment losses. The initial cost incurred in respect of licences is capitalised. Contingent licence fees are expensed as they are incurred.

As the functional currencies of MTN South Sudan Company Limited and MTN Syria (JSC) are currencies of hyperinflationary economies, intangible assets relating to these subsidiaries are restated by applying the change in the general price indices from the date of acquisition to the current reporting date.

Amortisation is calculated on a straight-line basis to write off the cost of intangible assets over their estimated useful lives. Amortisation relating to MTN South Sudan Company Limited and MTN Syria (JSC) is based on the restated amounts, which have been adjusted for the effects of hyperinflation.

Useful lives are reviewed on an annual basis with the effects of any changes in estimate accounted for on a prospective basis. The residual values of intangible assets are assumed to be zero.

Notes to the group financial statements continued

for the year ended 31 December 2017

5 **INFRASTRUCTURE INVESTMENTS** (continued)

5.2 **Intangible assets and goodwill** (continued)

Intangible assets with finite useful lives (continued)

The bases for determining the useful lives for the various categories of intangible assets is as follows:

Licences

The useful lives are determined primarily with reference to the unexpired licence period.

Customer relationships

The useful life principally reflects management's view of the average economic life of the customer base and is assessed by reference to factors such as customer churn rates. An increase in churn rates may lead to a reduction in the estimated useful life.

Software

The useful life is determined with reference to the licence term of the computer software. For unique software products controlled by the group, the useful life is based on historical experience with similar assets as well as anticipation of future events such as technological changes, which may impact the useful life.

Other intangible assets

Useful lives are based on management's estimates and take into account historical experience as well as future events which may impact the useful lives.

The estimated useful lives of intangible assets with finite useful lives are as follows:

	2017 Years	2016 Years
Licences	3 – 20	3 – 20
Customer relationships	5 – 10	5 – 10
Software	3 – 6	3 – 6
Other intangible assets	3 – 10	3 – 10

The gain or loss arising on the disposal or retirement of an intangible asset is included in profit or loss.

Development costs that are directly attributable to the design and testing of identifiable and unique software products controlled by the group are recognised as intangible assets when the following criteria are met:

- it is technically feasible to complete the software so that it will be available for use;
- management intends to complete the software and use or sell it;
- there is an ability to use or sell the software;
- it can be demonstrated how the software will generate probable future economic benefits;
- adequate technical, financial and other resources to complete the development and to use or sell the software are available; and
- the expenditure attributable to the software during its development can be reliably measured.

Directly attributable costs that are capitalised as part of the software include employee costs and an appropriate portion of relevant overheads. Capitalised development costs are recorded as intangible assets and amortised from the point at which the asset is ready for use.

Costs associated with maintaining software programs are recognised as an expense as incurred. Research and development expenditure that does not meet the criteria above is recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

Expenditure that enhances or extends the performance of intangible assets beyond their original specifications is recognised as a capital improvement and capitalised to the original cost of the assets. Expenditure on research activities is recognised as an expense in the period in which it is incurred.

Notes to the group financial statements continued

for the year ended 31 December 2017

5 **INFRASTRUCTURE INVESTMENTS** (continued)

5.2 **Intangible assets and goodwill** (continued)

Determination of fair values

The fair value of customer relationships acquired in a business combination is determined using the multi-period excess earnings method, whereby the subject asset is valued after deducting a fair return on all other assets that are part of creating the related cash flows.

The fair value of patents and trademarks acquired in a business combination is based on the discounted estimated royalty payments that have been avoided as a result of the patent or trademark being owned.

The fair values of all other intangible assets acquired in a business combination applicable to the group are based on the discounted cash flows expected to be derived from the use and eventual sale of the assets.

Impairment

An impairment loss is recognised in profit or loss if the carrying amount of an asset or a CGU exceeds its estimated recoverable amount. For the purpose of impairment testing, assets are grouped together into CGUs. The recoverable amount of an asset or CGU is the higher of its value in use and its fair value less costs of disposal. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Impairment losses recognised in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the units and then to reduce the carrying amounts of the other assets in the unit (group of units) on a pro rata basis.

An impairment loss is subsequently reversed only to the extent that the asset or CGU's carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised. A reversal of an impairment loss is recognised immediately in profit or loss.

An impairment loss in respect of goodwill is not reversed.

Notes to the group financial statements continued

for the year ended 31 December 2017

5 INFRASTRUCTURE INVESTMENTS (continued)

5.2 Intangible assets and goodwill (continued)

	Goodwill Rm	Licences Rm	Customer relation- ships Rm	Software ¹ Rm	Other intangible assets Rm	Capital work in progress Rm	Total Rm
Carrying amount at							
1 January 2016	27 231	19 100	664	8 169	484	239	55 887
Additions ^{2,5}	–	3 298	12	1 867	7	1 305	6 489
Acquisitions through business combinations	229	–	455	1	–	–	685
Disposals	(117)	(15)	–	–	–	–	(132)
Reallocations ⁴	–	(37)	(49)	957	(205)	(634)	32
Amortisation for the year	–	(1 798)	(206)	(2 733)	(11)	–	(4 748)
Impairment loss	(873)	–	–	(30)	–	–	(903)
Other movements	49	(169)	9	262	(9)	(7)	135
Effect of movements in exchange rates ³	(4 451)	(5 564)	(2)	(892)	(16)	(47)	(10 972)
Carrying amount at 31 December 2016	22 068	14 815	883	7 601	250	856	46 473
Comprising:							
Cost	25 478	23 746	1 341	17 949	5 413	856	74 783
Accumulated amortisation and impairment losses	(3 410)	(8 931)	(458)	(10 348)	(5 163)	–	(28 310)
	22 068	14 815	883	7 601	250	856	46 473
Carrying amount at							
1 January 2017	22 068	14 815	883	7 601	250	856	46 473
Additions ^{2,5}	–	699	–	2 197	9	1 260	4 165
Disposals	–	–	–	–	–	–	–
Reallocations	–	105	–	1 355	–	(1 258)	202
Amortisation for the year	–	(1 703)	(205)	(2 579)	(3)	–	(4 490)
(Impairment loss)/ impairment loss reversal ⁶	(2 631)	(533)	–	(17)	23	–	(3 158)
Other movements	–	–	–	–	(25)	1	(24)
Effect of movements in exchange rates ³	(2 799)	(1 672)	(1)	(365)	3	(4)	(4 838)
Carrying amount at 31 December 2017	16 638	11 711	677	8 192	257	855	38 330
Comprising:							
Cost	22 679	21 045	1 341	20 074	5 375	855	71 369
Accumulated amortisation and impairment losses	(6 041)	(9 334)	(664)	(11 882)	(5 118)	–	(33 039)
	16 638	11 711	677	8 192	257	855	38 330

¹ Included in software are leased assets with a carrying amount of R690 million (2016: R739 million).

² Included in additions are capitalised borrowing costs of R11 million (2016: R25 million). The capitalisation rate for the year was 8,6% (2016: 8,6%).

³ Includes the effect of hyperinflation.

⁴ Included in reallocations is an amount of R254 million relating to intangible assets reallocated to non-current assets held for sale which were disposed of in 2016.

⁵ Included in additions is internally generated software amounting to R701 million (2016: R1 134 million).

⁶ The impairment loss in respect of licences included an amount of R172 million and R354 million relating to MTN Sudan and MTN Syria, respectively, for the current financial year.

Notes to the group financial statements continued

for the year ended 31 December 2017

5 INFRASTRUCTURE INVESTMENTS (continued)

5.2 Intangible assets and goodwill (continued)

5.2.1 Goodwill

A summary of the goodwill allocation and related assumptions applied for impairment testing purposes is presented below:

	2017			2016		
	Growth rate %	Discount rate %	Carrying amount Rm	Growth rate %	Discount rate %	Carrying amount Rm
MTN Côte d'Ivoire S.A.	2,0	9,7	2 682	2,0	11,4	2 678
Scancom Limited (MTN Ghana)	6,0	17,5	4 330	6,0	20,0	5 293
MTN Sudan Company Limited	14,0	39,0	–	13,7	32,9	1 214
MTN Yemen	9,0	31,7	1 202	9,0	23,9	2 950
MTN Afghanistan Limited	6,0	17,6	490	7,0	20,2	1 482
MTN Uganda Limited	5,0	15,1	551	5,0	17,3	618
MTN Congo S.A.	2,4	16,0	909	3,6	17,0	891
MTN Syria (JSC)	15,0	41,9	–	15,0	35,5	–
MTN Cyprus Limited	2,0	10,1	787	1,9	9,5	759
Spacetel Benin S.A.	2,0	24,7	1 192	2,3	11,3	1 190
Areeba Guinea S.A.	7,9	22,0	–	5,0	22,7	–
Mobile Telephone Networks Proprietary Limited (South Africa)	5,5	12,0	2 583	5,5	13,3	2 583
Lonestar Communications Corporation LLC (Liberia)	7,1	25,0	312	7,5	23,4	350
MTN Rwandacell	5,0	15,1	313	5,0	17,3	361
MTN Nigeria Communications Limited (Visafone)	14,5	25,5	345	9,1	20,6	439
MTN Zambia	8,0	19,2	204	5,0	18,2	228
Spacetel Guinea-Bissau S.A.	2,5	13,6	322	3,0	13,7	321
Other			416			711
Total			16 638			22 068

Goodwill is tested annually for impairment. The recoverable amounts of CGUs were determined based on value in use calculations. The calculations mainly used cash flow projections based on financial budgets approved by management covering a three to five-year (2016: three to 10-year) period. Management is confident that projections covering periods longer than three years (MTN Yemen) (2016: MTN Syria (JSC) and MTN Sudan Company Limited) are appropriate in order for terminal values to be determined using steady state cash flows. Cash flows beyond the above period were extrapolated using the estimated growth rates as mentioned above. These growth rates are in line with industry norms.

The following key assumptions were used for the value in use calculations:

- Growth rates: the group used steady growth rates to extrapolate revenues beyond the budget period cash flows. The growth rates were consistent with publicly available information relating to long-term average growth rates for each of the markets in which the respective CGU operated. The average growth rates used ranged from 2% to 15,0% (2016: 1,9% to 15,0%); and
- Discount rates: discount rates ranged from 9,7% to 41,9% (2016: 9,5% to 35,5%). Discount rates used reflect both time value of money and other specific risks relating to the relevant CGU.

Notes to the group financial statements continued

for the year ended 31 December 2017

5 INFRASTRUCTURE INVESTMENTS (continued)

5.2 Intangible assets and goodwill (continued)

5.2.1 Goodwill (continued)

Goodwill impairment

Impairment losses were recognised relating to the following entities:

	Impairment losses		Recoverable amount ¹	
	2017 Rm	2016 Rm	2017 Rm	2016 Rm
MTN Afghanistan	841	–	2 317	–
MTN Yemen	807	–	1 769	–
MTN Sudan Company Limited	983	–	2 963	6 117
MTN Syria (JSC)	–	269	2 888	3 426
Areeba Guinea S.A. (Conakry)	–	402	–	578
Afrihost Proprietary Limited	–	202	–	325
	2 631	873	9 937	10 446

¹ This includes any minority portion of the recoverable amount of the CGU.

In a number of the group's operations in the MENA region the socio-political instability experienced in these markets resulted in suppressed revenue growth and lower operating margins in the current year, resulting in decreased forecast cash flows at 30 June 2017. This necessitated impairment reviews being performed on the group's operations in Guinea-Bissau, Guinea-Conakry, Liberia, Ghana, Afghanistan, Sudan, Yemen and Syria where the carrying amounts of these cash-generating units were compared to their respective recoverable amounts.

The goodwill of MTN Syria and MTN Sudan was fully impaired as at 31 December 2016 and 30 June 2017, respectively. The remaining goodwill in MTN Afghanistan and MTN Yemen amount to R490 million and R1 202 million at 31 December 2017, respectively.

The group performed the annual impairment assessments on all goodwill balances at 31 December 2017 and have not identified any further impairments at that date.

Areeba Guinea S.A. (Conakry)

During 2016, Areeba Guinea S.A. (Conakry) experienced a decline in EBITDA and Guinea-Conakry experienced poor economic performance countrywide. Consequently, a review of the recoverable amount of Conakry was undertaken subsequent to which an impairment loss was recognised. The recognition of the impairment loss resulted in the goodwill for Conakry being fully impaired.

Notes to the group financial statements continued

for the year ended 31 December 2017

5 INFRASTRUCTURE INVESTMENTS (continued)

5.2 Intangible assets and goodwill (continued)

5.2.1 Goodwill (continued)

Goodwill impairment (continued)

Afrihost Proprietary Limited

Based on an agreement concluded by the group to sell its 50,02% investment in Afrihost Proprietary Limited (Afrihost) for R325 million, a goodwill impairment loss was recognised at 30 June 2016 on the remeasurement of assets to fair value less costs to sell in accordance with IFRS 5 *Non-current Assets Held for Sale and Discontinued Operations*. The investment was disposed of in 2016.

Recoverable amounts are represented by a CGU's value in use. A specific change in the discount and growth rates (see below) would result in the recoverable amount being equal to the carrying amount of the net assets of the following CGUs:

	2017		2016	
	Change to discount rate %	Change to growth rate %	Change to discount rate %	Change to growth rate %
MTN Afghanistan	5,25	(1,50)	–	–
MTN Liberia	3,45	(3,10)	–	–
MTN Sudan Company Limited	–	–	10,89	(1,79)
MTN Yemen	*	*	6,34	(0,54)

* A minimal change in the discount and growth rates at 31 December 2017 would result in the recoverable amount being equal to the carrying amount of the net assets of MTN Yemen.

5.2.2 Encumbrances

Borrowings are secured by intangible assets of Scancom Limited (MTN Ghana) with a carrying amount of R934 million (2016: R1 083 million) (note 6.1).

Notes to the group financial statements continued

for the year ended 31 December 2017

5 INFRASTRUCTURE INVESTMENTS (continued)

5.2 Intangible assets and goodwill (continued)

5.2.3 Licences

Licence agreements	Type	Granted/ renewed	Term
Mobile Telephone Networks Proprietary Limited (South Africa)	ECS licence	15/01/2009	15 years
	ECNS licence	15/01/2009	20 years
	900MHz	29/01/2003	Renewable annually
	1 800MHz	29/10/2004	Renewable annually
	2 100MHz	02/02/2005	Renewable annually
	6GHz	14/06/2010	Renewable annually
	7GHz	14/06/2010	Renewable annually
	8GHz	14/06/2010	Renewable annually
	10,5GHz	07/02/2006	Renewable annually
	11GHz	23/03/2009	Renewable annually
	13GHz	06/04/2009	Renewable annually
	15GHz	21/10/2005	Renewable annually
	18GHz	14/06/2010	Renewable annually
	23GHz	14/06/2010	Renewable annually
	26GHz Sub 17	21/10/2005	Renewable annually
	26GHz Sub 18	07/02/2006	Renewable annually
	28GHz	12/04/2012	Renewable annually
	38GHz	07/10/2005	Renewable annually
MTN Uganda Limited	900MHz	15/04/1998	20 years
	1 800MHz	15/04/1998	20 years
MTN Rwandacell Limited	GSM	01/07/2008	13 years
	SNO	30/06/2006	15 years
MTN Zambia Limited	National service licence	31/08/2010	15 years
	International network licence	31/08/2010	15 years
MTN Nigeria Communications Limited	1 800MHz	03/11/2015	5 years
	900MHz	03/11/2015	5 years
	3G spectrum licence	01/05/2007	15 years
	Unified access licence (including international gateway)	01/09/2006	15 years
	WACS	01/01/2010	20 years
	WiMax 3,5GHz spectrum	2007	Renewable annually
	Microwave spectrum		
	8GHz – 26GHz Digital terrestrial TV broadcasting licence	2001	Renewable annually
	800MHz spectrum (Visafone)	12/08/2015	10 years
	2,6GHz spectrum	01/01/2015	10 years
	Unified access ¹ service licence (Visafone)	01/08/2016	10 years
		01/07/2007	10 years

¹ The unified access service licence (Visafone) has expired and renewal of the licence is under discussion.

Notes to the group financial statements continued

for the year ended 31 December 2017

5 INFRASTRUCTURE INVESTMENTS (continued)

5.2 Intangible assets and goodwill (continued)

5.2.3 Licences (continued)

Licence agreements	Type	Granted/ renewed	Term
Scancom Limited (MTN Ghana)	900MHz	02/12/2004	15 years
	1 800MHz	02/12/2004	15 years
	3G	23/01/2009	15 years
	Fixed access service of unified access	06/07/2015	4 years
	International gateway	08/11/2014	5 years
	4G (LTE) spectrum	01/06/2016	15 years
Mobile Telephone Networks Cameroon Limited	2G	15/02/2015	15 years
	3G	15/02/2015	15 years
	4G	15/02/2015	15 years
MTN Côte d'Ivoire S.A. ¹	3G/UMTS	31/05/2012	10 years
	1,9/2,1GHz Universal networks	04/01/2016	17 years
Spacefel Benin S.A.	900MHz	19/10/2007	25 years
	1 800MHz	19/10/2007	25 years
	Universal licence	10/08/2012	20 years
Areeba Guinea S.A.	900MHz	31/08/2005	18 years
	1 800MHz	31/08/2005	18 years
	3G	14/08/2013	10 years
	WiMax	04/08/2014	5 years
MTN Congo S.A.	900MHz	25/11/2011	15 years
	1 800MHz	25/11/2011	15 years
	Optical fibre licence	02/04/2010	15 years
	3G	25/11/2011	17 years
	2G	25/11/2011	15 years
	International gateway by optical fibre	03/06/2013	10 years
	LTE spectrum	09/12/2016	15 years
Lonestar Communications Corporation LLC (Liberia)	Universal telecommunication licence (Novafone)	04/08/2015	15 years
	WiMax	24/03/2009	15 years
	3G	19/02/2013	10 years
Spacefel Guinea-Bissau S.A.	900MHz	23/05/2014	10 years
	1 800MHz	23/05/2014	10 years
	3G	17/07/2015	10 years
	4G	17/07/2015	10 years
MTN Syria (JSC)	Freehold licence ²	01/01/2015	20 years
	900MHz	01/01/2016	19 years
	1 800MHz	01/01/2016	19 years
	2 000MHz	01/01/2016	19 years
	Additional frequency		
	1 800MHz	07/01/2017	17,5 years

¹ The WiMax 2,5GHz – 3,5GHz licence became obsolete (no longer in use) and was derecognised in 2016.

² The 900MHz, 1 800MHz and 3G licences from 2015 were replaced during the prior year upon termination of the BOT arrangement and entering into a freehold arrangement.

Notes to the group financial statements continued

for the year ended 31 December 2017

5 INFRASTRUCTURE INVESTMENTS (continued)

5.2 Intangible assets and goodwill (continued)

5.2.3 Licences (continued)

Licence agreements	Type	Granted/ renewed	Term
MTN Sudan Company Limited	2G +3G	25/10/2003	20 years
	Transmission	25/10/2003	20 years
	VSAT gateway	25/10/2003	20 years
	VSAT hub	25/10/2003	20 years
	VSAT terminal	25/10/2003	20 years
	Frequency 4G	25/10/2017	7 years
MTN Afghanistan Limited	3G unified licence	01/07/2012	15 years
	New number range RTU	31/10/2012	15 years
	New number range RTU	25/08/2013	14 years
	New number range RTU	31/10/2014	13 years
	New number range RTU	31/05/2015	12 years
MTN Yemen	900MHz ¹	01/08/2015	2 years and 5 months
	1 800MHz ¹	01/08/2015	2 years and 5 months
MTN Cyprus Limited	900MHz	01/12/2003	20 years
	1 800MHz	01/12/2003	20 years
	4G (LTE)		
	2 100MHz	01/12/2003	20 years
	800MHz	05/09/2016	12 years
	2 600MHz	05/09/2016	12 years

¹ These licences expired during the year and are still under negotiation for renewal.