

ICASA Priority Market Study 2017

Questionnaire to industry participants and stakeholders

CONTACT DETAILS FOR RESPONDENT

Please complete the table below. Where there is more than one contact person please include the full details of the additional contact person/s in the format provided below.

Prefix (Mr., Mrs., MS, Prof, etc.)	
First Name	
Last Name	
Title	
Organization	
Department	
Address Line 1	
Address Line 2	
Address Line 3	
Postal Code	
City	
Telephone (Switchboard)	
Telephone (Direct line)	
Mobile	
Email	

BACKGROUND AND INSTRUCTIONS

The Independent Communications Authority of South Africa (“ICASA”) is conducting a Priority Markets Study (“the Study”). The purpose of the Study is to identify markets in the electronic communications sector that the Authority should, if necessary, prioritise for regulation, subject to the Authority following the necessary steps envisaged in chapter 10 of the Electronic Communications Act no. 36 of 2005.

The purpose of this questionnaire is to obtain information and opinions from market participants and stakeholders that is considered relevant to the determination of priority markets. Respondents are invited to add valuable input into the Study by completing the relevant sections of the questionnaire that follows. Please complete the survey as accurately as possible.

- All data should be provided electronically in Microsoft Excel.
- When providing written responses, as well as supporting evidence and data, indicate clearly to which question the information pertains.

Should a respondent be of the view that information submitted is confidential, the respondent must take steps envisaged in section 4D of the ICASA Act to claim confidential treatment for such information.

Should there be any questions or further clarification required, kindly address your questions to the Chairperson: Priority Markets Committee (prioritymarkets2017@icasa.org.za).

Stakeholders must complete and submit data in terms of the questionnaire within forty-five (45) days from the date of the publication of this notice.

Thank you for taking the time to complete the questionnaire.

SECTION 1: IDENTIFICATION OF ELECTRONIC COMMUNICATIONS PRODUCT AND SERVICE MARKET SEGMENTS

The electronic communications sector comprises of a number of markets at the retail and wholesale level. As a starting point for the Study, ICASA seeks to identify the broad market segments relevant to the electronic communications sector in South Africa. These broad markets will form the basis for further questions in the subsequent sections which seek to determine which of the identified markets, if any, should be prioritised for possible *ex-ante* regulation. Priority markets identified from this Study may subsequently be investigated further as a part of a market review, which would then involve a more detailed market definition exercise for those specific markets.

The traditional approach taken in segmenting electronic communications markets, as informed by local and international precedent, forms a useful starting point in identifying products and services markets for the purposes of this Study. On this basis, Table 1 below provides possible market segmentations for consideration, distinguishing broadly between the provision of fixed and mobile products and services, and retail and wholesale levels of the market. Within each broad market segment, further possible delineations are provided. For example, “1.2 National transmission services” constitutes a broad market segment, which may be further segmented by bandwidth size and also by managed and unmanaged services. Appendix 1 provides a description of the broad markets listed in Table 1 as well as the definitions of wholesale, retail and reseller.

Question 1: Indicate clearly in the table provided, if you agree with the market segmentation identified (indicate with an X under the column “Agree”) or disagree with the market identified (indicate with an X under the column “Disagree”). This includes both the broad market segmentation and the possible further segmentations provided.

Question 2: Where you disagree with the market segmentation identified, provide detailed reasons for this along with supporting evidence or data.

Question 3: Where you disagree with the market segmentation identified, indicate if the broad markets should be broader than that which is indicated, to include other markets identified or products and services that have not been listed. Motivate your response by providing reasons and any supporting evidence or data.

Question 4: Where you disagree with the market segmentation identified, indicate if the broad markets should be further segmented according to the further segmentations provided. Motivate your response by providing reasons and any supporting evidence or data.

Question 5: Indicate if there are any markets or products and services that are missing from the Table and that would be relevant to the Study. Motivate your response by explaining these suggested segments, products or services, providing reasons as to why they should be included as well as indicating where in the table they should be included.

Question 6: The geographic scope of the market segments identified in Table 1 are generally regarded as being national, except: (i) for international transmission lines which are international in scope and (ii) in instances of fixed infrastructure roll-out (for example, the roll out of metro fibre), where the geographic market is more localised and competition needs to be assessed on a more route-specific basis. Indicate if you agree with this general view. If you disagree, provide reasons and explain what, in your view, should be the relevant geographic market for each of the products and services in Table 1. Motivate your response with supporting evidence or data.

TABLE 1: MARKET SEGMENTATIONS		Agree	Disagree
1	UPSTREAM INFRASTRUCTURE		
1.1	International transmission services		
1.2	National transmission services - Differentiated by bandwidth size - Dark fibre / unmanaged / managed		
1.3	Metropolitan connectivity - Differentiated by bandwidth size - Dark fibre / unmanaged / managed		
1.4	Access services - Copper / fibre / fixed wireless - Dark fibre / unmanaged / managed		
1.5	Mobile radio access network (RAN) services - Active / passive / co-location		
2	WHOLESALE FIXED LINE SERVICES		
2.1	Wholesale local access		
2.2	Fixed call access, origination and transit - Access/ origination/ transit		
2.3	Fixed call termination		
2.4	Wholesale asymmetric broadband origination - Access line / interconnection		
2.5	Wholesale internet connectivity		
2.6	Wholesale internet access		
3	WHOLESALE MOBILE SERVICES		
3.1	Wholesale mobile network access - MVNO access (RAN only / RAN & Core) - National roaming		
3.2	Wholesale mobile network services - Voice / data / SMS - Access Point Network (machine-to-machine)		
3.3	Mobile termination - Voice call termination - SMS termination		
3.4	International roaming		
4	RETAIL FIXED LINE SERVICES		
4.1	Voice telephony via the public telephone network - Business / residential - Local & national / international / fixed to mobile		
4.2	Narrowband internet access - Business / residential		
4.3	Asymmetric broadband internet access - Business / residential - Copper / fibre / fixed wireless - Differentiation by bandwidth size		
4.4	Leased lines internet access - Copper / fibre / fixed wireless - Differentiation by bandwidth size		
4.5	Managed data network services		
4.6	Leased lines - Copper / fibre / fixed wireless - Differentiation by bandwidth size		
5	RETAIL MOBILE SERVICES		
5.1	Retail supply of mobile services - Voice / data / SMS - Business / residential / machine-to-machine - Prepaid / postpaid		

SECTION 2: PARTICIPANTS IN THE ELECTRONIC COMMUNICATIONS PRODUCT AND SERVICE MARKET SEGMENTS

The electronic communications supply chain consists of various layers, starting with the provision of basic infrastructure through to wholesale and retail services. Firms active in the electronic communications supply chain are often a purchaser of upstream electronic communications services in addition to being a supplier of downstream services themselves. Furthermore, firms may use their current position in the market to enter other segments in the same layer or move upstream or downstream. In this section, you are required to respond to questions relevant to your business operations as a purchaser, a current seller/provider or a future seller/provider of electronic communications products and services.

Business Operations

The market segments provided in Table 1 are used as a basis for the questions in this section. Based on your responses to questions in Section 1, you may have identified alternative markets. In these instances, please also answer the questions below based on the alternative list of markets that you have identified.

Question 7: Provide a description of the current activities of your business as they relate to products and services your business provides in the electronic communications sector.

Question 8: For each of the markets listed in Table 2, indicate if your business purchases or leases the products and services listed as an input into the provision of products and services by your business (indicate with an X under the column “Customer”).

Question 9: For each of the markets listed in Table 2, indicate if your business operates as a seller or provider of the products and services listed (indicate with an X under the column “Seller”). This includes instances where products or services are leased.

Question 10: For each of the markets listed in Table 2, indicate if your business is likely to enter the market as a seller or provider of the products and services listed within the next five years (indicate with an X under the column “Future Seller”). This should only be indicated in instances where there are currently concrete plans to enter the market within the next five years.

TABLE 2: MARKET PARTICIPANTS		Customer	Seller	Future Seller
1	UPSTREAM INFRASTRUCTURE			
1.1	International transmission services			
1.2	National transmission services - Differentiated by bandwidth size - Dark fibre / unmanaged / managed			
1.3	Metropolitan connectivity - Differentiated by bandwidth size - Dark fibre / unmanaged / managed			
1.4	Access services - Copper / fibre / fixed wireless - Dark fibre / unmanaged / managed			
1.5	Mobile radio access network (RAN) services - Active / passive / co-location			
2	WHOLESALE FIXED LINE SERVICES			
2.1	Wholesale local access			
2.2	Fixed call access, origination and transit - Access/ origination/ transit			
2.3	Fixed call termination			
2.4	Wholesale asymmetric broadband origination - Access line / interconnection			
2.5	Wholesale internet connectivity			
2.6	Wholesale internet access			
3	WHOLESALE MOBILE SERVICES			
3.1	Wholesale mobile network access - MVNO access (RAN only / RAN & Core) - National roaming			
3.2	Wholesale mobile network services - Voice / data / SMS - Access Point Network (machine-to-machine)			
3.3	Mobile termination - Voice call termination - SMS termination			
3.4	International roaming			
4	RETAIL FIXED LINE SERVICES			
4.1	Voice telephony via the public telephone network - Business / residential - Local & national / international / fixed to mobile			
4.2	Narrowband internet access - Business / residential			
4.3	Asymmetric broadband internet access - Business / residential - Copper / fibre / fixed wireless - Differentiation by bandwidth size			
4.4	Leased lines internet access - Copper / fibre / fixed wireless - Differentiation by bandwidth size			
4.5	Managed data network services			
4.6	Leased lines - Copper / fibre / fixed wireless - Differentiation by bandwidth size			
5	RETAIL MOBILE SERVICES			
5.1	Retail supply of mobile services - Voice / data / SMS - Business / residential / machine-to-machine - Prepaid / postpaid			

Purchase of electronic communications products and services

The following questions pertain to your business operations as a Customer of electronic communications products and services. The questions should be answered separately for each broad product or service market where you have cited your business as a Customer. Indicate clearly which product or service the responses are intended to address. For each of the markets where you have cited your business as a Customer (as well as for any alternative list of market segments you have identified where you are a Customer), answer the following questions:

Question 11: Provide the specific name/s of the products and/or services purchased or leased and the name/s of the supplier/s and provider/s.

Question 12: Identify the alternative suppliers and providers for the products and/or services that are purchased or leased (in other words, who are the competitors to your current suppliers and providers?).

Question 13: Explain how the products and/or services are used as an input into the provision of products or services supplied by your own business (for example, national transmission lines acquired as an input for building the Virtual Private Network (VPN) core national network).

Question 14: Do the products and/or services constitute a minor or major input cost for your business? Motivate your response and, if available, provide any supporting evidence or data of the precise cost contribution of these products and/or services.

Question 15: Indicate if prices for the purchased products and/or services have been increasing or decreasing over the past five years, as well as the relative magnitude of the price increases or decreases. Where possible, provide the actual prices charged by the supplier for the products and/or services your business acquires or leases for the past five years (January 2012 – December 2016). Please also include any necessary explanation of what is included in the prices and how they have been compiled.

Question 16: Has there been entry into the product or service market in question over the past five years (2012 –2016)? If yes, list the entrants, their date of entry and the specific products and services they provide. Indicate whether or not the entrant has made an impact on the market, providing reasons and examples if relevant.

Question 17: To what extent is self-supply of the inputs in question a viable commercial option? In your response, explain what are the practical and commercial barriers to self-supply, and the reasons why self-supply is either possible or not. To the extent self-supply is feasible, indicate the timelines required for self-supply and the extent your business would still need to purchase inputs from third-party suppliers.

In some instances, an active wholesale market may not exist for a particular product or service because the current supplier(s) of the relevant infrastructure or product may choose to self-supply and only offer a downstream product or service. If there are instances where your business would be a potential Customer if an active wholesale market existed for certain products or services, then please answer the following questions:

Question 18: Indicate which product or service your business would acquire were they to be available at a wholesale level? Furthermore, for each product or service, indicate which firms currently have the capability to supply the product or service and the reasons why they do not provide it on a wholesale level.

Question 19: How would your business use the product or service as an input into your business and how would this affect your ability to compete in the markets in which you are active? Motivate your response by providing reasons and supporting data.

Sale of electronic communications products / services

The following questions pertain to your business operations as a Seller of electronic communications products and services. The questions should be answered separately for each broad product or service market where you have cited your business as a Seller. In all instances, the term 'provide' is intended to include all forms of sale and leasing arrangements with customers. Indicate clearly which product or service the responses are intended to address. For each of the markets where you cited your business as a Seller (as well as for any alternative list of market segments you have identified where you are a Seller), answer the following questions:

Question 20: Provide the specific names of the products and/or services provided.

Question 21: What are the target customer groups for the specific products and/or services your business provides (for example, other licensed operators, corporates, SMEs, general public)?

Question 22: For the specific products and/or services in question, provide prices charged by your business for the past five years (January 2012 – December 2016). Provide any explanations necessary to interpret the pricing data that has been provided, such as what is included in the prices and how they were derived.

Question 23: Provide the annual sales volumes and Rand value earned by your business for each of the products or services for the past five years (January 2012 to December 2016). For volumes, provide the appropriate unit of measure (for example, subscribers, lines, fibre kilometres, etc.). Provide any explanations necessary to understand what is included in the values provided.

Question 24: Where your firm owns infrastructure in order to provide the specific product or service, provide the capacity (using an appropriate measure, for example, fibre kilometres) and geographic reach of your infrastructure (for example, national or in specific cities / regions only).

Question 25: Identify the alternative suppliers and providers of the products or services in question (in other words, who are your main competitors in the market?). Where possible, indicate the strength of each competitor on the basis of their capacity and geographic reach.

Question 26: Has there been entry into the product or service market in question over the past five years (2012 – 2016)? If yes, list the entrants, their dates of entry and the specific products and services they provide, also indicating whether or not the entrant(s) have made an impact on the market and on your business. Motivate your response with reasons and examples if relevant.

Question 27: Provide an estimate of your business' market share for the past five years (2012 – 2016). Explain the basis for the market share estimation and, if available, provide any underlying data.

Question 28: To the extent that the information is available, provide market share estimates for your competitors for the past five years (2012 – 2016). Explain the basis for the estimation of the market shares and, if available, provide any underlying data.

Potential future entry

The following questions pertain to your business operations as a potential future Seller of electronic communications products and services. The questions should be answered separately for each product or service where you have cited your business as a future potential Seller. Indicate clearly which product or service the response is intended to address. For each of the markets where you cited your business as a future potential Seller (as well as for any alternative list of market segments you have identified where you are a future potential Seller), answer the following questions:

Question 29: Describe the products or services your firm intends to provide and the intended target customer groups.

Question 30: Provide reasons for future entry as well as the planned date of rollout and entry.

Question 31: Where your firm intends to roll out infrastructure in order to provide the specific product or service, provide the intended capacity (using an appropriate measure, for example, fibre kilometres) and geographic reach of that infrastructure (for example, national or in specific cities / regions only).

SECTION 3: FEATURES AND COMPETITIVE DYNAMICS IN THE ELECTRONIC COMMUNICATIONS SECTOR

This section identifies features of the market and competitive dynamics. It seeks to determine the state of competition currently, as well as how this is expected to change in the future given the dynamic nature of the electronic communications market. These factors are relevant to the identification of priority markets. This section also provides the opportunity for market participants and industry stakeholders to provide views on which markets should be considered as priority market for possible *ex-ante* regulation.

In this section, you are required to respond to questions relevant to current and future market conditions and trends.

- The relevant time horizon for the consideration of future trends and dynamics is the next five years, which extends from the present to the end of 2021.
- Provide responses for each product or service market segment as provided in Table 1 that is relevant to your business as a (current and future) provider and/or consumer of products or services. This includes instances where a market may currently not exist (for example, due to the lack of an active wholesale market), but where your business would be a potential customer if the products or services became available. Insofar as Table 1 is different to the alternative list of market segments you have identified, please also answer the questions below based on your alternative list of market segments.
- The questions should be answered separately for each product or service segment that is relevant to your business as a provider and/or customer. Indicate clearly which product or service segment the responses are intended to address.
- Interested stakeholders who are not necessarily participants in the market segment (as sellers or customers) are encouraged to respond and provide valuable input that is relevant for the Study.
- Please be as specific as possible in your responses, and motivate the responses provided. Where possible, support your responses with evidence and data.

Question 32: Would you describe the supply and provision of products or services in the market in question as competitive? Motivate your response by providing reasons and any supporting evidence or data. In your response, consider, where relevant, factors related to:

- (i) The number of suppliers in the market and entry into the market;
- (ii) Pricing levels in the market and the pricing structure;
- (iii) The quality of the product or service supplied;
- (iv) The level of innovation in terms of new or modified products and services;
- (v) The terms and conditions of the sale (this may include bundling of products or services, the structure of rental agreements, the duration of the contract, interconnection arrangements, etc.).

Question 33: For markets that you consider concentrated and/or lacking sufficient competition, identify what are the barriers to entering and competing effectively in the market for the identified product or service? In responding to this question, please consider the following possible barriers to entry and indicate the significance of any identified barrier to entry:

- (i) Structural factors including factors such as high sunk costs, economies of scale and/or scope and capacity constraints;
- (ii) Legal factors (for example, regulatory or licensing requirements);
- (iii) Factors related to the behaviour of incumbents in the market (for example, refusal to provide access to essential inputs, the use of loyalty schemes, requiring customers to purchase a range of products, etc.) and
- (iv) Other factors which in your view are likely to impede entry.

Question 34: For markets that you consider concentrated and/or lacking sufficient competition, what are the barriers to expansion (including product range, capacity and geographic reach) for new entrants and smaller firms in order to become effective competitors in the market? Such factors may include those identified in response to question 33.

Question 35: Where you have described a barrier to entry or expansion as significant, identify whether you believe regulatory action can be used to reduce the barrier to entry. Motivate your response by providing reasons and any supporting evidence or data. In responding to this question, consider the following forms of regulatory action:

- (i) Imposition of regulations by ICASA (please specify what type of regulations you consider sufficient to address the barrier);
- (ii) Investigation of dominant firm behaviour and the imposition of remedial actions by the Competition Commission (specify what behavior should be investigated and what remedies may be appropriate);
- (iii) Policy changes by the Department of Telecommunications and Postal Services (specify what policy changes would remedy the problem);
- (iv) A combination of the above.

Question 36: For markets that you consider concentrated and/or lacking sufficient competition, identify whether you believe regulatory action can be used to ensure more competitive pricing in the short term. Motivate your response by providing reasons and any supporting evidence or data. In responding to this question, consider the following forms of regulatory action:

- (i) Imposition of regulations by ICASA (please specify what type of regulations you consider sufficient to address the barrier);
- (ii) Investigation of dominant firm behaviour and the imposition of remedial actions by the Competition Commission (specify what behavior should be investigated and what remedies may be appropriate);
- (iii) Policy changes by the Department of Telecommunications and Postal Services (specify what policy changes would remedy the problem);
- (iv) A combination of the above.

Question 37: If relevant to the product or service market in question, explain whether the Telkom Settlement Agreement with the Competition Commission (including revisions in subsequent mergers) has been sufficient in addressing concerns of price discrimination and margin squeeze. Motivate your response by providing reasons and any supporting evidence or data.

Question 38: In your view, what are the main future trends and developments affecting the product or service market segment in question within the next five years (for example, this may include, the growth of over-the-top (“OTT”) products and services, the increasing roll out of next generation networks (“NGN”), etc.)? Please elaborate and provide examples where possible.

Question 39: Explain how the trends and developments identified in response to Question 38 will impact on your own business over the next five years and how will your business respond to these developments. Please elaborate and provide examples, including details on own future business plans, such as rolling out new products and services.

Question 40: How are the future trends and developments identified in response to Question 38 likely to impact on the product or service market in question in the next five years? Motivate your response and provide reasons. In your response, provide details on the driver/s and nature of the change along with the likely impact on:

- (i) The scope of the relevant market, including which products or services should be included in the market as constraints on competition;
- (ii) Barriers to entry and bottlenecks in the market;
- (iii) Competitive outcomes in the market.

Having regard to the full list of markets provided in Table 1 (and your alternative version) and the factors that have been identified in this questionnaire, answer the following questions:

Question 41: What additional factors (additional to the factors and questions that have already been covered in this questionnaire) are relevant factors to consider for the prioritisation of markets for possible *ex-ante* regulation? Identify these factors and explain why, in your view, they are they relevant to the identification of priority markets.

Question 42: Having regard to the factors explored in this questionnaire and any other factors that you may have identified in response to Question 41, in your view, which products and services markets, if any, should be prioritised by ICASA for possible *ex-ante* regulation. Motivate your response by providing reasons and any supporting evidence or data. Where you have identified more than one market, rank the markets you have identified and provide detailed reasons for each market separately.

APPENDIX 1

	MARKET SEGMENTATIONS	DEFINITIONS
1	UPSTREAM INFRASTRUCTURE	
1.1	International transmission services	Provides international transmission services over submarine fibre optic cables which connect South Africa to international locations and networks.
1.2	National transmission services - Differentiated by bandwidth size - Dark fibre / unmanaged / managed	National transmission services, also referred to as long-haul or backbone connectivity, enables high bandwidth connectivity over fibre between locations (i.e. major cities) within South Africa.
1.3	Metropolitan connectivity - Differentiated by bandwidth size - Dark fibre / unmanaged / managed	Metropolitan connectivity consists of metro ring services that aggregate traffic from customers within small geographic areas and transmits that traffic to and from the larger metropolitan switches/point-of-presence.
1.4	Access services - Copper / fibre / fixed wireless - Dark fibre / unmanaged / managed	Access services provide last mile connectivity between the customer premises and the nearest switches/points-of-presence of the communications provider.
1.5	Mobile radio access network (RAN) services - Active / passive / co-location	This includes passive elements (i.e. physical supporting infrastructure that does not require active co-ordination between network operators) such as sites, masts, cabinets, power and air-conditioning and active elements of the network such as antenna, radio access nodes, radio network controller elements, transmission and potentially spectrum sharing.
2	WHOLESALE FIXED LINE SERVICES	
2.1	Wholesale local access	Wholesale local access refers to the fixed connection from the local exchange to the end-user's premises.
2.2	Fixed call access, origination and transit - Access/ origination/ transit	Enables voice calls over a narrowband access line, including conveyance of signals originating from the customer's premises to the first point in the network where those signals can be accessed by another communications provider as well as transit services on the public telephone network.
2.3	Fixed call termination	Services provided by a fixed communications provider to another fixed or mobile telecommunications provider for calls which terminate on the former's network.
2.4	Wholesale asymmetric broadband origination - Access line / interconnection	Provides asymmetric broadband access, connecting the end user to the communications provider, including any backhaul required to allow interconnection.
2.5	Wholesale internet connectivity	Arrangements between internet service providers (ISPs) which allow connectivity with all other internet end-users or with the networks that these end-users use. This includes peering and transit arrangements.
2.6	Wholesale internet access	The provision of wholesale internet connectivity by first tier ISPs to resellers who have a limited network or no network at all.
3	WHOLESALE MOBILE SERVICES	
3.1	Wholesale mobile network access - MVNO access (RAN only / RAN & Core) - National roaming	Services that provide access to a mobile network operator's network by other Mobile network operators (MNOs) or virtual MNOs. Access may occur at different levels of aggregation, for instance only radio access network (RAN) access or access to both the RAN and core network elements.
3.2	Wholesale mobile network services - Voice / data / SMS - Access Point Network (machine-to-machine)	The provision of mobile services including voice, text messaging, and data on a wholesale basis to other licensed operators. This can include Access Point Network (APN) services.
3.3	Mobile termination - Voice call termination - SMS termination	Voice call termination is provided by a mobile communications provider to another fixed or mobile communications provider to connect a caller with the intended mobile call recipient on the former's network. SMS termination is provided by a mobile communications provider to another fixed or mobile communications provider for SMS's which terminate on the former's network.
3.4	International roaming	Agreements concluded with preferred foreign communications providers with respect to access and capacity services to allow the local provider of retail mobile services to provide its customers with telecommunications services abroad.

APPENDIX 1 CONTINUED

4	RETAIL FIXED LINE SERVICES	
4.1	Voice telephony via the public telephone network - Business / residential - Local & national / international / fixed to mobile	Fixed voice services that provide customers with the facility to make and receive calls at a fixed location over the public telephone network.
4.2	Narrowband internet access - Business / residential	Internet services offered over traditional analogue dial-up (Public Switched Telephone network (PSTN)) or Integrated services Digital Network (ISDN) lines, at downloads speeds of below 256 kbps.
4.3	Asymmetric broadband internet access - Business / residential - Copper / fibre / fixed wireless - Differentiation by bandwidth size	Broadband internet access which allows both voice and data services to be used simultaneously with a minimum capacity of greater or equal to 256 kbps at a fixed location. An asymmetric broadband service refers to a service which provides users with greater download than upload speeds.
4.4	Leased lines internet access - Copper / fibre / fixed wireless - Differentiation by bandwidth size	Broadband internet access via a dedicated leased line is mostly used by corporate customers and allows for secure and symmetric (equal download and upload speeds) internet access.
4.5	Managed data network services	Virtual private network (VPNs) services run over fixed telecommunications networks that connect different elements of an organisation. These services enable corporate customers to connect all their sites and business applications in various geographic locations to enable communication and data exchange.
4.6	Leased lines - Copper / fibre / fixed wireless - Differentiation by bandwidth size	High-quality, dedicated, point-to-point data transmission services provided between fixed locations. Leased lines are typically used by large corporates and providers of communications services.
5	RETAIL MOBILE SERVICES	
5.1	Retail supply of mobile services - Voice / data / SMS - Business / residential / machine-to-machine - Prepaid / postpaid	Retail mobile services refers to access to the mobile network as well as voice, text messaging (SMS) and data services offered to end-users

Notes: the Electronic Communications Act no. 36 of 2005 defines the terms reseller, retail and wholesale as follows:

Reseller - means a person who—

(a) acquires, through lease or other commercial arrangement, by any electronic communications network service or electronic communications service; and

(b) makes such electronic communications network service or electronic communications service available to subscribers for a fee, whether or not such electronic communications network services or electronic communications services made available by the reseller—

(i) are identical to the electronic communications network service or electronic communications service acquired;

(ii) are packaged, bundled or otherwise re-grouped to form new or varied service offerings;

(iii) are combined, linked or used in connection with electronic communications networks or electronic communications facilities owned by the reseller; or

(iv) add value to such electronic communications network services or electronic communications services, and “resale” is construed accordingly;

Retail - means the sale, lease or otherwise making available of services offered by licensees to subscribers. A subscriber means a person who lawfully accesses, uses or receives a retail service of a licensee referred to in Chapter 3 of the Electronic Communications Act no. 36 of 2005 for a fee or the retail services of a person providing a service pursuant to a licence exemption;

Wholesale - means the sale, lease or otherwise making available an electronic communications network service or an electronic communications service by an electronic communications network service licensee or an electronic communications service licensee, to another licensee or person providing a service pursuant to a licence exemption.