

13 November 2015

Independent Communications Authority of South Africa

Attention: Mr Jake Mongalo

Per e-mail: jmongalo@icasa.org.za

Dear Sir

SUBMISSION ON INFRASTRUCTURE SHARING DISCUSSION DOCUMENT

1. We refer to the Discussion Document on Infrastructure Sharing published by the Authority for comment on 15 September 2015 (“**the Discussion Document**”) and set out submissions in response thereto below.
2. WAPA’s general submissions are as follows:
 - 2.1. It is critical for there to be clarity around and a shared understanding of the different concepts and processes which are raised in the Discussion Document. The process will be stillborn unless we are able to clearly distinguish between the various ways in which the ECA promotes sharing of networks and facilities.
 - 2.2. Infrastructure sharing should not be confused with wholesale access. WAPA understands that infrastructure sharing will generally take place between more-or-less equally-situated entities. Wholesale access implies a technical and commercial arrangement to use an existing network rather than a joint venture type arrangement.
 - 2.3. Interconnection and facilities leasing are fundamental building blocks of a healthy, competitive industry and are critical in enabling sharing of electronic communications networks and electronic communications facilities. There is an urgent need to review the current interconnection and facilities leasing regimes.
 - 2.4. Why have the provisions of the ECA regarding essential facilities not been implemented?
 - 2.5. Active sharing is complex and requires extremely expensive equipment to implement. WAPA submits that – while there are benefits to encouraging active sharing – these will be difficult to realise in practise and that there is more utility in focusing on wholesale layer 2 and layer 3 services and ensuring that these are offered on an open access basis.
 - 2.6. The process to develop regulations for rapid deployment of electronic communications facilities is related to this inquiry. WAPA understands that the Authority is awaiting the

www.wapa.org.za | Tel: +27 12 655 2394 | Fax: 086 579 2606
Postnet Suite No. 477, Private bag X1007, Lyttelton, South Africa, 0140

Management Committee:
Jens Langenhorst (Chairperson), Tim Genders (Deputy Chair), Ellie Hagopian (Treasurer),
Francois Fourie, Roger Hislop, Kevin Viret
Juanita Clark (Secretariat)

required policy but consideration should be given to what aspects raised in the inquiry will be regulated under future section 21 regulations.

- 2.7. Care should be taken in deciding the broad approach to be taken in response to identified market failures or challenges. In which markets is intervention required? Where will it represent an effective intervention given the limited resources which the Authority has? Once the state of markets has been determined it must be borne in mind that there is a difference between obliging sharing, allowing sharing and incentivising sharing. The approaches to be taken could include:
 - 2.7.1. Imposing obligations;
 - 2.7.2. Allowing;
 - 2.7.3. Providing incentives; and
 - 2.7.4. Taking no action.
- 2.8. There seems, for example, to be limited value in intervening with regard to the sharing of passive infrastructure in the form of mobile towers. This is because it is clear that a market has already emerged to meet the commercial needs of operators and that this market is competitive.
- 2.9. In the national long distance fibre market there is evidence of sharing of both passive facilities (NLD) and passive and active facilities (Fibreco), driven by the need to reduce deployment costs.
- 2.10. While a technology-neutral approach is required this should be applied at a high level or in principle. It should not prevent adoption of different approaches to sharing which take into account, for example, the differences between passive infrastructure used in wireless and wired deployments.
- 2.11. The potential for anti-competitive conduct enabled by infrastructure sharing should be considered and catered for as required.
- 2.12. WAPA appreciates the intention behind the launch of the inquiry into infrastructure sharing and the relationship between infrastructure sharing and open access. WAPA, is not, however, convinced that there is a compelling case for the Authority to prioritise infrastructure sharing above the development and enforcement of an effective wholesale access regime. This regime should:
 - 2.12.1. Removal of unfair price discrimination between wholesale/retail arms or between “friends”.
 - 2.12.2. Introduce greater transparency into the availability of wholesale products/ infrastructure available for sharing on a wholesale basis.
 - 2.12.3. Ensure that there is clear, transparent, and reasonable pricing for access to existing structures – towers, ducting, etc. The absence of a clear market rate for a high site rental is problematic for multiple stakeholders

- In order to better inform its submissions, WAPA conducted a simple survey amongst its membership, to which there were a total of 41 respondents. Graphics indicating the results of this survey are inserted where relevant below.

WAPA’s interest in the Discussion Document

- The average WAPA member is an SMME providing extensive coverage in rural areas in South Africa where there is no cost-effective alternative access means.

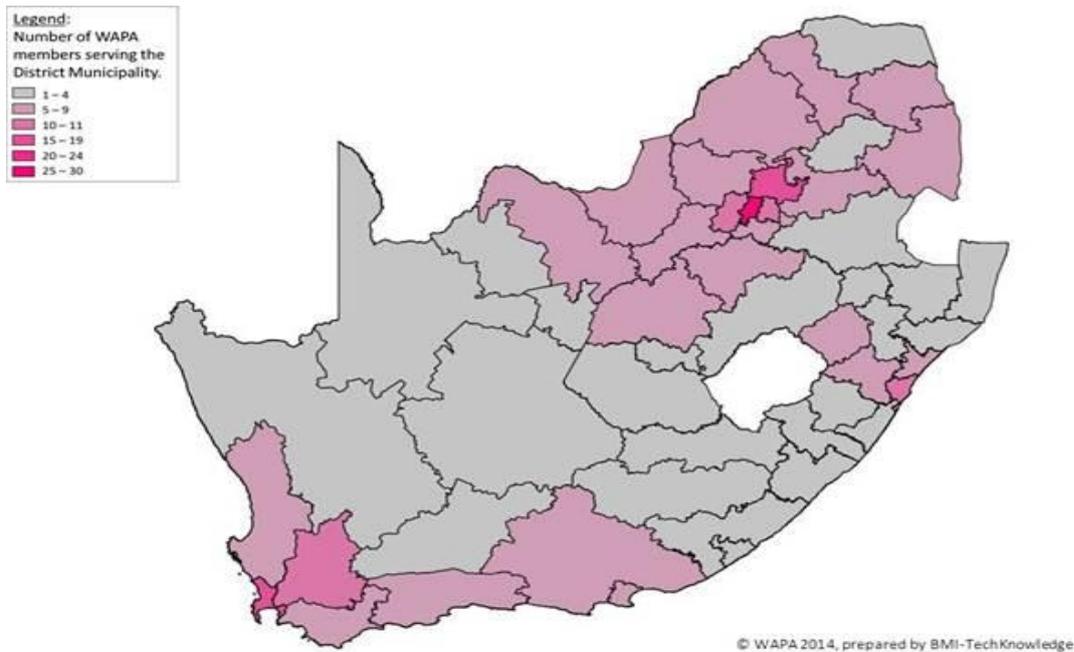


Figure 1: WAPA Members Coverage across District Municipalities, 2014

- WAPA members are found throughout South Africa and collectively have an extensive footprint.

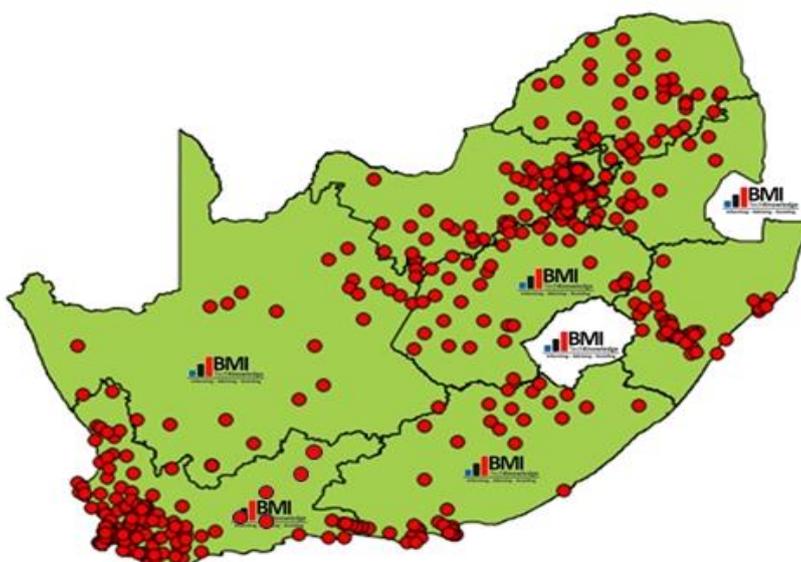
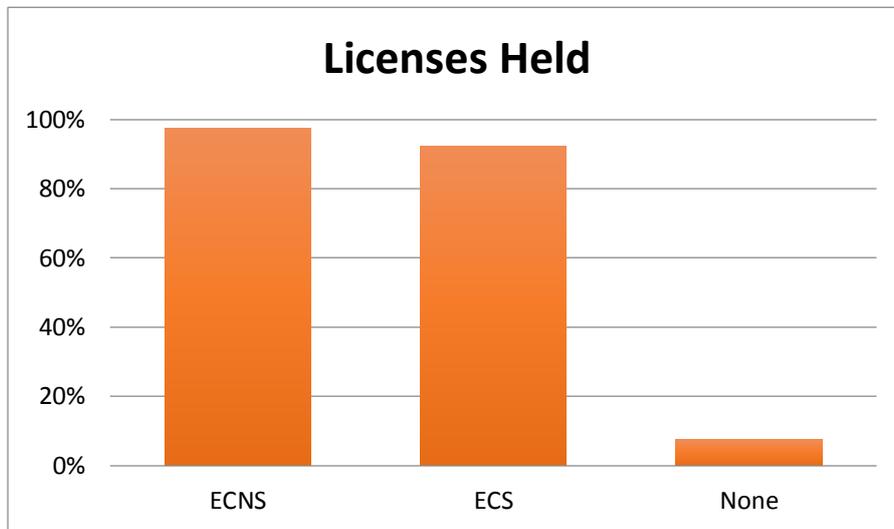


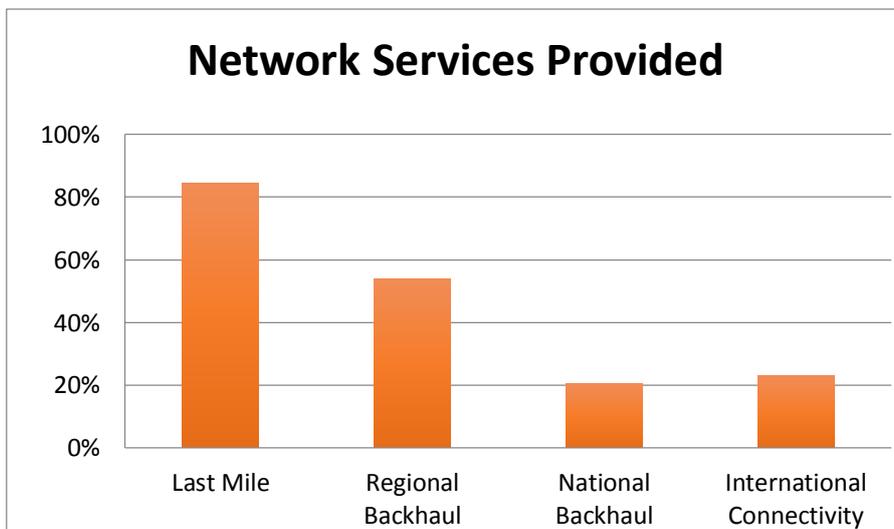
Figure 2: WAPA Members Coverage Map, June 2012

6. The survey undertaken indicates that:

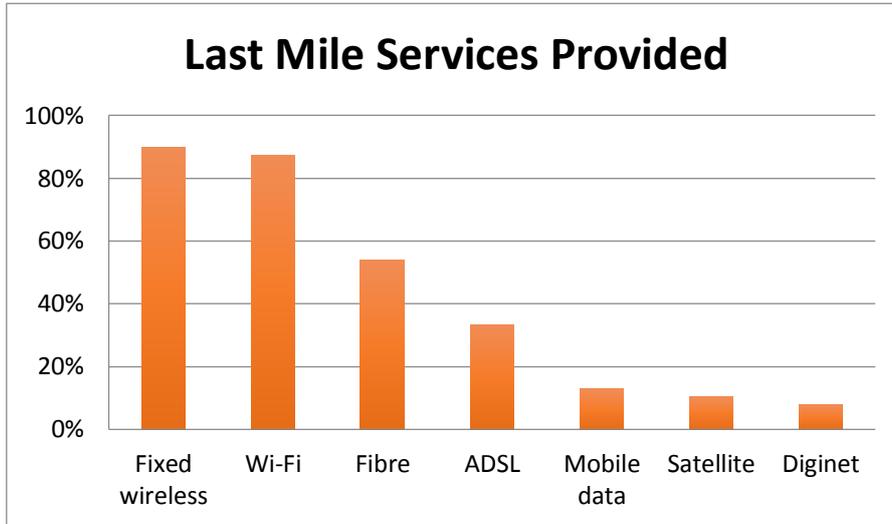
6.1. Almost all respondents are holders of ECNS licences:



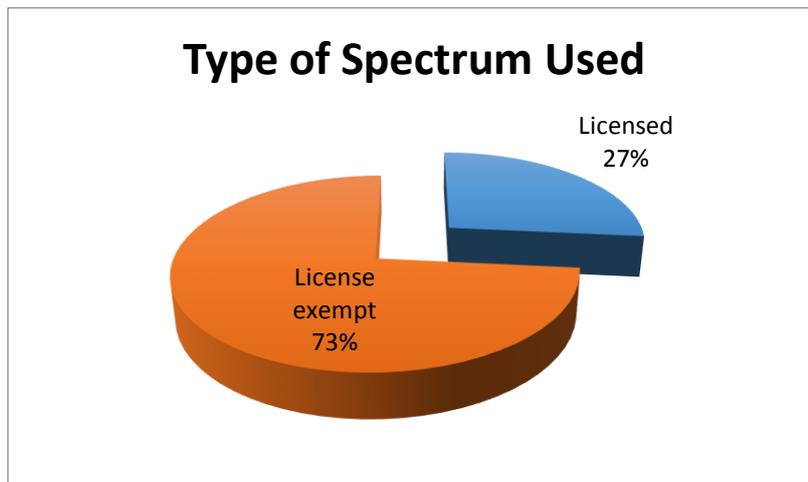
6.2. More than 80% of these provide access/last mile networks and more than 50% provide backhaul services:



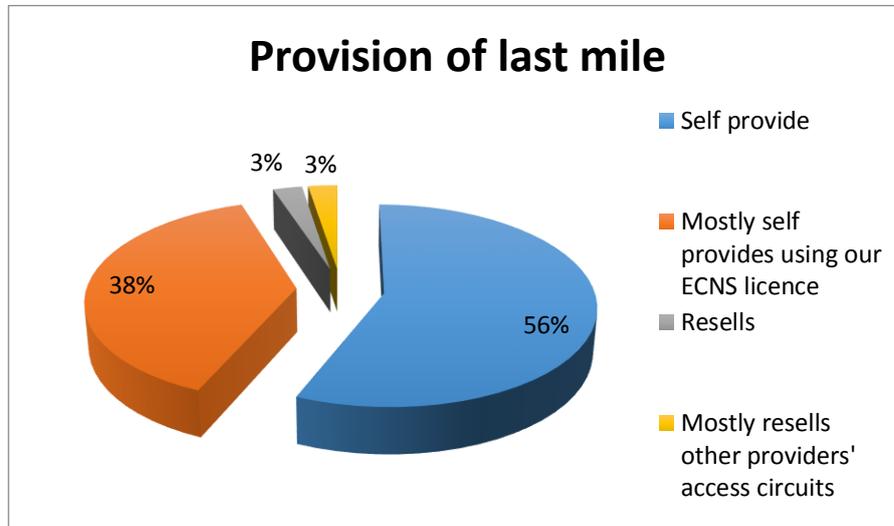
6.3. Using a mixture of fixed wireless, Wi-Fi, fibre and other technologies:



6.4. The majority of fixed wireless services provided use licence exempt spectrum but there is increasing uptake of licensed PtP links:



6.5. The vast majority of access services provided by respondents are provided over self-provided networks:



7. WAPA members are accordingly important providers of self-provided access and backhaul infrastructure in rural and urban areas in South Africa and have a direct interest in infrastructure sharing and related regulatory interventions.

The Scope of the Discussion Document

8. WAPA submits that there is a need at the outset to have clarity on the various regulatory concepts raised in the Discussion Document.

9. In the first section of the Discussion Document the Authority notes that:

“envisioned regulations will enable the commercial sharing of infrastructure and pooling of resources, including spectrum, in order to reduce wholesale costs and encourage services-based competition in the market”.

10. In the second entitled Purpose of this Discussion Document the Authority further states:

“The purpose of this discussion document is to solicit input on a regulatory framework that will provide certainty on infrastructure sharing holistically to include facilities leasing, interconnection and other matters relevant to access to broadband services within the Republic.”

11. In the Discussion Document that Authority characterises infrastructure sharing as a range of possible options for regulatory interventions. These options differ in terms of the scale and complexity of the intervention concerned. These options could include (but are not limited to):

- 11.1.1. regulations regarding the manner in which Chapter 4 rights are exercised (rapid deployment regulations)
- 11.1.2. interconnection
- 11.1.3. facilities leasing
- 11.1.4. accounting separation and reporting
- 11.1.5. wholesale pricing remedies
- 11.1.6. mandatory access to essential facilities
- 11.1.7. roaming
- 11.1.8. spectrum sharing
- 11.1.9. local loop unbundling,
- 11.1.10. functional separation, and
- 11.1.11. structural separation.

12. The following statement from an ITU discussion document is illuminating:

“Likewise, some sharing options can be considered flip sides of the same coin. Functional separation forces legacy operators to open their networks to downstream competitors. When sharing is incorporated into an open access model to encourage market entry by Greenfield players who do not compete in the downstream market, resistance to forced

*sharing is replaced by the incentive to provide capacity to as many downstream service providers as possible.*¹

13. As noted in the Discussion Document the ECA does not use the term “infrastructure”. It is WAPA’s understanding from the context of the Discussion Document that this term is meant to encompass:

- 13.1. Electronic communications networks (ECNs); and
- 13.2. Electronic communications facilities (ECFs).

14. As we have set out in the table below, the sharing of ECNs and ECFs raises different considerations and is achieved using different remedies.

INFRASTRUCTURE SHARING	ELECTRONIC COMMUNICATIONS NETWORKS	INTERCONNECTION (including peering and transit)
		WHOLESALE ACCESS
		NETWORK SHARING
	ELECTRONIC COMMUNICATIONS FACILITIES	FACILITIES LEASING (Chapter 8)
		FACILITIES LEASING (Non-licensees)
		FACILITIES SHARING

Infrastructure sharing vs wholesale

15. WAPA submits that co-building of ECNs through the sharing of ECFs will generally take place between parties of relatively equal bargaining power. Each party to the sharing must be able to assume a portion of the risk attaching to the high sunk costs of network deployment.

16. Sharing of ECNs and ECFs is not – in WAPA’s understanding – a mechanism for larger entities to subsidise network builds for smaller entities to utilise. This is more properly wholesale access: either in the form of interconnection when applied to ECNs or facilities leasing when applied to ECFs.

17. Under a sharing arrangement there will generally be one party – perhaps a third party to the arrangement – that will have control over the sharing of active infrastructure. Under a wholesale arrangement the ECN owner/operator provides a service through their exercise of control over the ECN or ECF.

18. This raises an important question: in what circumstances does a buyer of services require greater control over the delivery of that service than will be provided by a wholesale service?

Facilities leasing

19. This is discussed in detail below.

¹ Schorr, S What do we mean by six degrees of sharing? https://www.itu.int/ITU-D/treg/Events/Seminars/GSR/GSR08/discussion_papers/Overview_Final_web.pdf

Interconnection

20. WAPA submits that the interconnection regime under the Interconnection Regulations 2010 has to date been applied primarily to the voice market. While this is historically correct there is a need to consider the application of these Regulations to accommodate a broader range of ECN sharing through interconnection.
21. Interconnection in the sense of interconnection of ECNs is far more widespread than the voice market. In the broad sense interconnection is fundamental to the growth of a competitive market and the provision of end-to-end services. It includes capacity swaps, VLANs and the multitude of cross-connections taking place in data centres and exchanges.
22. Interconnection other than that involving voice and, perhaps, SMS, is effectively not regulated. There does not appear to a need for regulation but the continuing convergence to IP may well change this position.

Rapid deployment regulations

23. WAPA notes that these regulations are intended to address the relationship between ECNS licensees and landowners / Government authorities. In other words they apply to a licensee / non-licensee relationship and specifically address the deployment of electronic communications facilities.

Questions raised in the Discussion Document

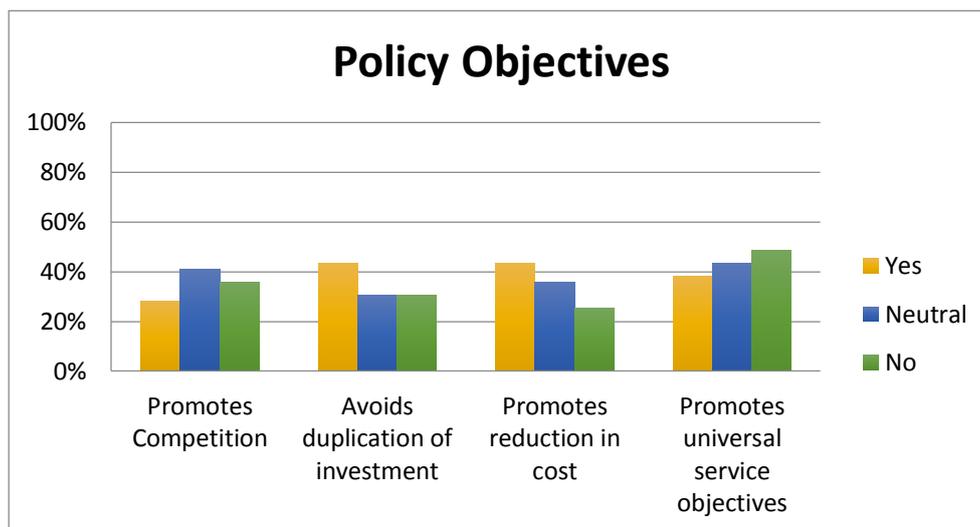
Do you believe that the Authority should deal with infrastructure sharing matters in one regulation?

24. WAPA refers to its comments above regarding the scope of the inquiry initiated by the Discussion Document and notes that it would appear that the broadness of the term “infrastructure sharing” does not appear to be capable of being regulated through a single regulation.

25. A preferable approach would be to separate out the options available to the Authority and evaluate the effectiveness of applying these against defined markets or challenges.

Do you agree that infrastructure sharing will encourage the deployment of networks to rural and sparsely populated areas? If not, please provide the reason(s) for your answer.

26. The survey undertaken by WAPA indicates the extent to which respondents believe that infrastructure sharing will contribute to various policy objectives identified in the Discussion Document.



27. It is noteworthy that:

27.1. The highest percentage of respondents do not believe that infrastructure sharing will promote universal service objectives.

27.2. The potential for reducing costs and the related objective of avoiding duplication of investment were believed to be most likely to be realised through infrastructure sharing regulation.

28. WAPA does not support the view that infrastructure sharing will always assist in meeting the challenge of building access networks in hard-to-serve areas. There are typically a very small number of companies operating in sparsely populated areas, and infrastructure can't be shared if there aren't people to share it. Those areas are economically marginal and enforced sharing may even provide a disincentive to invest.

29. This should not detract from the role of an effective facilities leasing regime and commercially-driven infrastructure sharing in expanding broadband networks in other areas.
30. What would help is concessions or economic incentives to invest in those areas, and a wholesale open access mandate or strong incentives towards this.

In your opinion, how do you think infrastructure sharing will encourage service based competition?

31. There is at worst a linear relationship where each additional ECNS licensee sharing infrastructure provides its own ECS only.
32. The relationship becomes exponential when one or more or all ECNS licensees provide a transparent and non-discriminatory open-access service to ECS licensees at wholesale rates below retail rates and with sufficient flexibility to allow innovation and differentiation by these ECS licensees.

To what extent do you believe that the objectives of infrastructure sharing are reached?

33. To the extent that infrastructure sharing has been shaped by market forces the identified objectives have been reached as a consequence.
34. The extent to which such benefits are expressed in reductions in the cost to communicate is a separate enquiry.

Please list other benefits realised as a result of infrastructure sharing

35. The Discussion Document in paragraph 4.1 sets out a comprehensive list of potential benefits and WAPA agrees with these.

Do you think that it is necessary for the Authority regulate for 'one-build' civil works and mast erections at this time? Please state your reasons?

36. As noted in the comments above regarding the scope of this inquiry there is significant overlap here with the process to develop rapid deployment guidelines.
37. The Authority should be cautious of over-regulation which removes flexibility from the various build options available. There is room here for incentivisation but WAPA believes that commercial pressures and interactions with landowners and authorities will continue to drive a trend towards shared

In your view, what incentives will encourage infrastructure sharing in general?

38. WAPA welcomes the focus on incentives and encouragement of infrastructure sharing, which we believe to be a more effective means to an end than the imposition of obligations.
39. What form could these incentives take?
 - 39.1. Financial incentives such as allowing deductions from annual licence fees, USAF contributions and annual radio frequency spectrum licence fees.

- 39.2. Operational incentives such as preferential access to radio frequency spectrum surrounding a shared high-site.
- 39.3. The provision of universal access subsidies to defray civil engineering costs.
40. It is unfortunate that the Authority has moved recently to disincentivise sharing by removing the allowable deduction for facilities leasing and interconnection previously applied in the calculation of licence fees under the General Licence Fee Regulations 2012. The sole amendment introduced by the General Licence Fee Amendment Regulations 2014 was to amend the definition of licensed services as follows:

“Licensed Service” as defined in the Electronic Communications Act under “broadcasting service”, “electronic communications service” and “electronic communications network service”; and as contained in the relevant licence and does not include the resale of electronic communications services, service provider discounts, agency fees, interconnection and facilities leasing charges, and government grants and subsidies;

[In your view, how can the Authority improve on its intervention in terms of non-discriminatory access to infrastructure?](#)

41. As noted below there is an urgent need to revise the Facilities Leasing Regulations. This should be based on recognition of facilities leasing as the fundamental vehicle for sharing in the form of wholesale access to ECFs.
42. There is also a need for an inexpensive and effective dispute resolution mechanism which can create a body of precedent regarding facilities leasing disputes.
43. The perception exists in industry that disputes will only be resolved by the courts and that there is no capacity within the Authority for investigation of complaints.
44. The Authority has failed to utilise provisions in the ECA relating to essential facilities.

[Would you say that the facilities leasing regulations adequately cater for infrastructure sharing needs in South Africa? If not, please state the areas that have not been covered.](#)

45. Section 43(3) of the ECA sets out a non-exhaustive list of matters which the Authority may include in electronic communications facilities regulations. These include:

(3) Matters which the electronic communications facilities leasing regulations may address include but are not limited to -

...

(c) subject to and in accordance with section 47, wholesale electronic communications facilities leasing rates and the manner in which the structure of fees and charges for such electronic communications facilities leasing must be determined;

(d) the sharing of technical information including obligations imposed in respect of the disclosure of current and future electronic communications network planning activities;

(g) the list of electronic communications facilities contemplated in section 43(8) as reviewed and modified as contemplated in section 43(9);

(h) services associated with leasing electronic communications facilities such as support systems, collocation, fault reporting, supervision, functionality, unbundling, and co-operation in the event of fault;

(i) access and security arrangements;

(j) the framework in accordance with which an electronic communications network service licensee may refuse a request to lease electronic communications facilities due to such electronic communications network service licensees' planned expansion of its electronic communications network;

(k) the framework for determining technical and economic feasibility and promotion of efficient use of electronic communications networks and provision of services contemplated in section 43(4);

...

(m) the manner in which unbundled electronic communications facilities are to be made available.

46. It is immediately apparent that:

46.1. Section 43(3) contemplates sharing of both passive and active facilities.

46.2. The Electronic Communications Facilities Regulations 2010 create a framework for the leasing of ECFs but do not provide for many of the matters set out in section 43(3).

46.3. This framework needs to be further developed in respect of specific applications of leasing such as local loop unbundling and spectrum sharing.

46.4. There is scope for developing regulations regarding sharing of network expansion plans which would facilitate both sharing of ECFs and rapid deployment.

46.5. There is scope for interventions under Chapter 10 of the ECA aimed at assessing the competitiveness of facilities leasing markets and the desirability of imposing pro-competitive conditions including pricing remedies.

46.6. The Authority has not exercised any of its powers in respect of mandating access to essential facilities notwithstanding the recent amendment of the ECA and the nature of the powers afforded to the Authority.

47. It therefore appears that the ECA creates a framework for the sharing of both active and passive ECFs and that is what is required is for the Authority to utilise the relevant provisions of Chapter 8 of the ECA.

48. The failure of the Authority to utilise the provisions of Chapter 8 relating to essential facilities is inexplicable given the nature of the powers involved.

(8) The Authority must prescribe a list of essential facilities including but not limited to -

(a) *electronic communications facilities, including without limitation local loops, sub-loops and associated electronic communications facilities for accessing subscribers and provisioning services;*

(b) *electronic communications facilities connected to international electronic communications facilities such as submarine cables and satellite earth stations; and*

(c) *any other such facilities,*

required to be leased by an electronic communications network service licensee in terms of subsection (1).

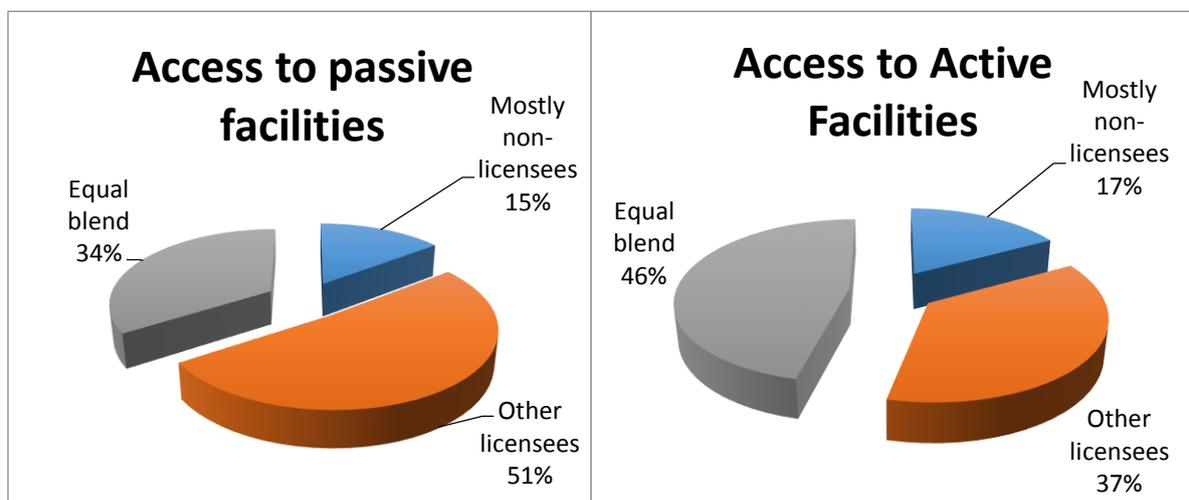
(8A)(a) Requests for leasing of essential facilities are deemed to promote efficient use of electronic communication networks and services.

(b) All electronic communications network services licensees receiving requests contemplated in paragraph (a) are required to agree on non-discriminatory terms and conditions of a facilities leasing agreement for those essential facilities within 20 days of receiving the request.

(c) If the electronic communications network licensee can prove that the request is not technically or economically feasible within the 20 day period the electronic communications network services licensee may refuse the request.

(d) If no agreement regarding the non-discriminatory terms and conditions contemplated in paragraph (b) can be reached, the Authority must impose terms and conditions consistent with this Chapter within 20 days of receiving notification of the failure to reach an agreement.

49. WAPA notes further that there are a variety of ECFs which are not owner or operated by or under the control of an ECNS licensee. This includes mobile towers owned by tower companies such as ATC and Eaton as well as ducting in business parks and other multi-tenant complexes or buildings. The graphs below indicate the extent to which respondents to the WAPA survey interacted with licensees and non-licensees when seeking to access ECFs.



Do you agree with the Authority on the definition of passive infrastructure? If not, please provide an alternative definition.

50. WAPA has no difficulty with this definition.

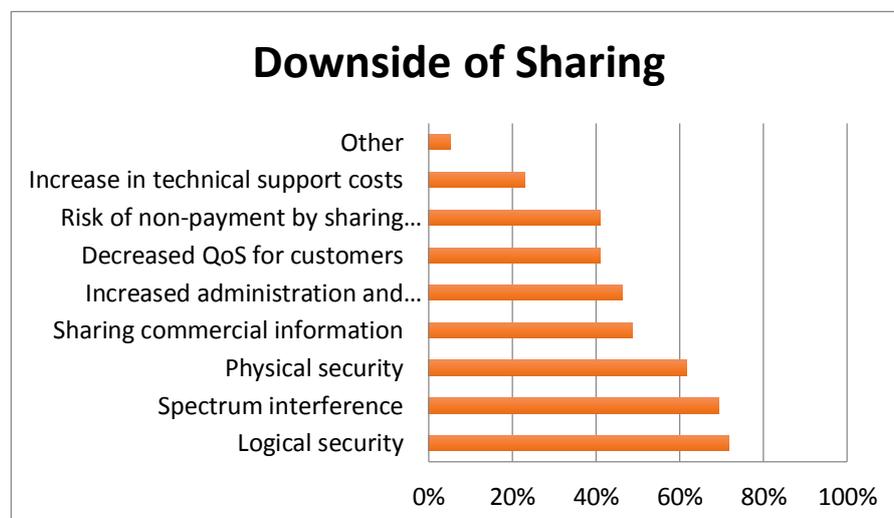
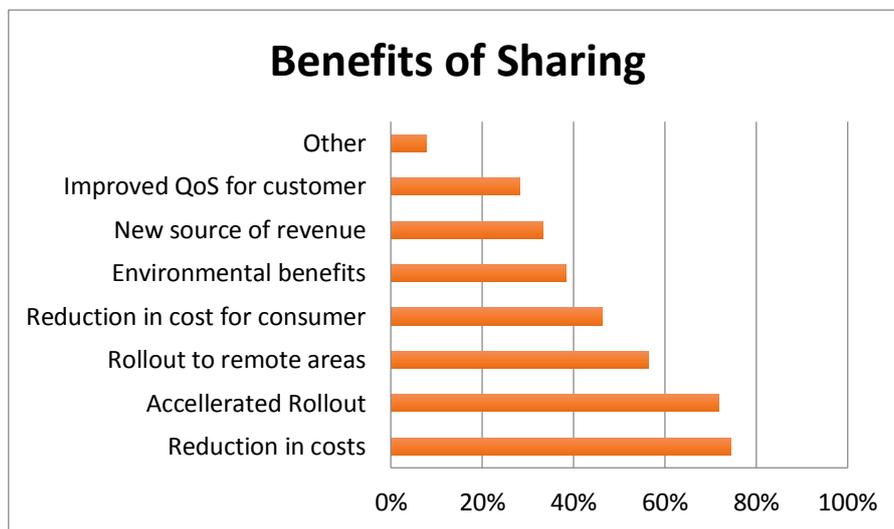
Please state other passive infrastructure that you consider essential for sharing.

51. This should be a reference to passive electronic communications facilities as contained in the definition in section 1 of the ECA.

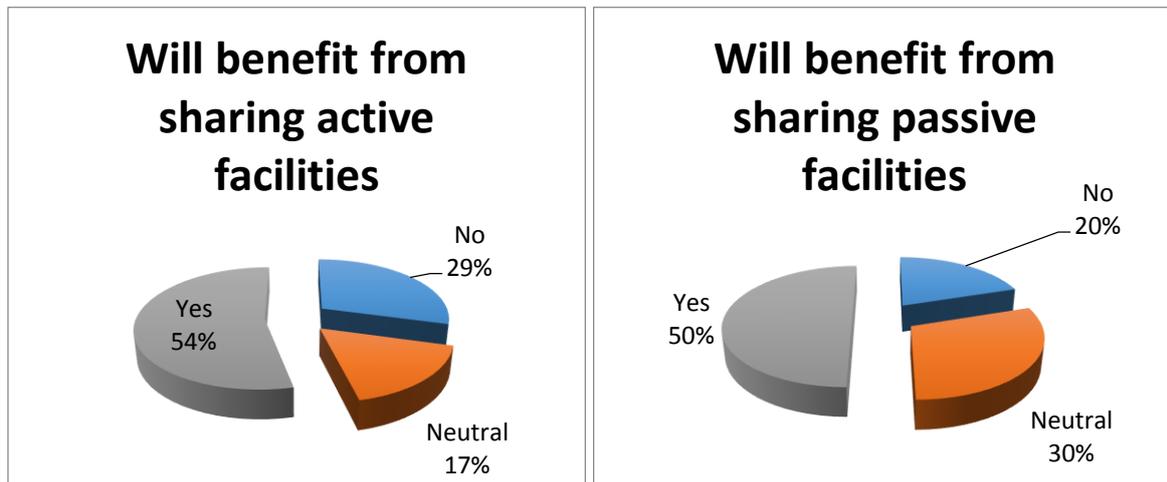
Please state the advantages and disadvantages of passive infrastructure sharing.

Please state the advantages and disadvantages of active infrastructure sharing.

52. The graphs below – pertaining to both passive and infrastructure sharing show the response to the survey undertaken:



53. Respondents identified the biggest advantages as being a reduction in costs and an increase in the speed with which they can expand coverage.
54. The principle disadvantages were regarded as logical and physical security together with the potential for spectrum signal interference.
55. A slightly higher percentage of respondents perceived that they would benefit from sharing active facilities:



56. It should be borne in mind that there is a high cost attached to sharing of active ECFs due to the need to manage quality of service. Hidden costs include those relating to access control, technical support, insurance, monitoring etc.

[Do you agree with the Authority on the definition of active infrastructure? If not, please provide an alternative definition.](#)

57. WAPA does not disagree with the definition.

[Please state other active infrastructure that you consider essential for sharing.](#)

58. WAPA is concerned about the use of the word “essential” both because sharing of active infrastructure is one of a range of options (and a complex and expensive one to implement) and because of possible confusion with essential facilities.

59. A determination of whether a facility is essential or not is guided by section 43(8) of the ECA and should be determined within the context of a particular application of facilities leasing. In this sense sharing of active infrastructure would be an essential component of local loop unbundling or radio access network sharing.

[Please provide examples of how active and passive infrastructure is being shared in South Africa.](#)

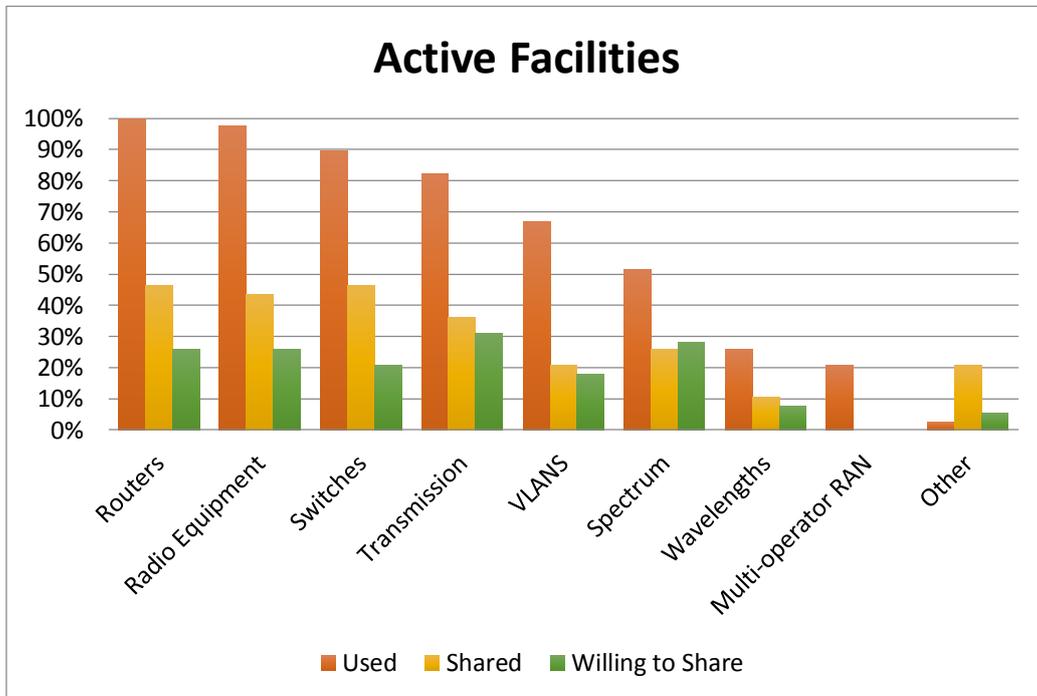
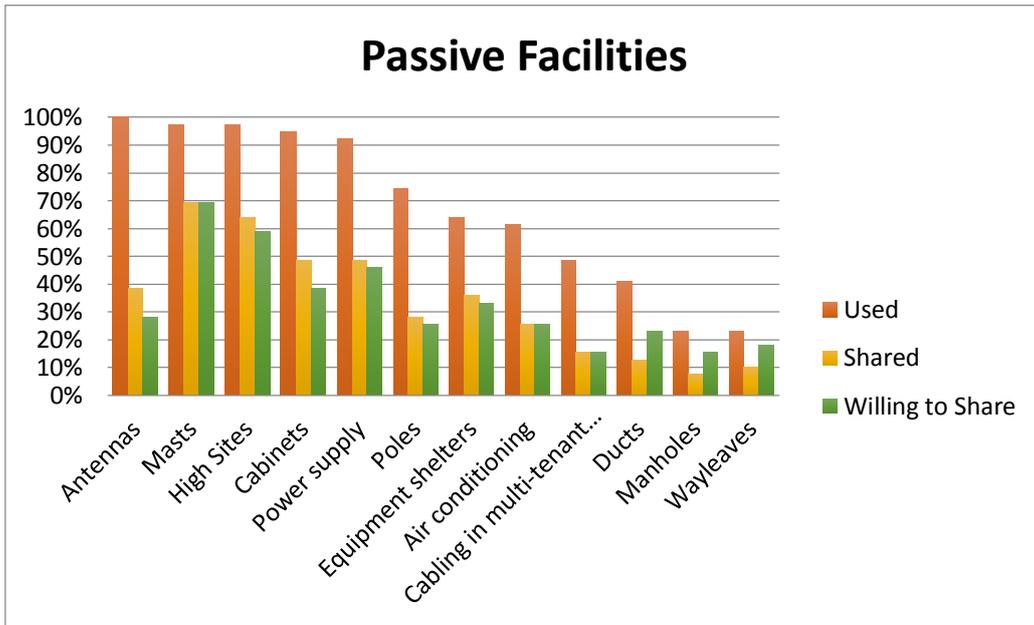
60. At present infrastructure sharing is taking place through commercial agreements, such as electronic communications facilities leasing agreements. The main facilities that are being shared are masts/towers and equipment rooms.

61. The graphs below indicate the view of respondents – in respect of both passive and active ECFs – relating to:

61.1. The electronic communications facilities they are currently using;

61.2. The electronic communications facilities they are currently sharing; and

61.3. The electronic communications facilities they would be willing to share.



Conclusion

62. WAPA supports:

- 62.1. Incentives around passive infrastructure sharing where there is found to be market failure
- 62.2. The use of the provisions of the ECA dealing with essential facilities as a way to simplify and more effectively implement wholesale access to facilities declared to be essential
- 62.3. The finalisation of the rapid deployment regulations
- 62.4. That sharing of active ECFs not be prohibited
- 62.5. The prioritisation of sharing through wholesale access regulation
- 62.6. The development of detailed interventions around leasing / sharing of active electronic communications facilities within the framework of Chapter 8 of the ECA and the Electronic Communications Facilities Leasing Regulations 2010.

63. WAPA trusts that its submissions and information provided will be of assistance to the Authority in its further deliberations.