18 July 2013

The Chief Executive
Botswana Telecommunications Authority
206-207 Independence Avenue
Private Bag 00495
Gaborone

Attention: Mr Moletsane

Dear Sir,

Re: Development of a National Broadband Strategy Project Phase 3 Report

We refer to the above subject matter. Mascom appreciates the opportunity to provide comments and views on the NBS Phase 3 report and its appendices.

Our response in structured in a general comment section, followed by responses to the Consultant's recommendations as stated in the Phase 3 report.

We trust that the Consultant and BOCRA will accordingly take our submission into consideration, and we shall remain at your disposal.

Yours faithfully

José Vieira Couceiro
Chief Executive Officer

Appendix 1: Mascom response to the Phase 3 report

Appendix 1: Mascom response to the Phase 3 report on the Development of a National Broadband Strategy

1. General comments

In general terms, Mascom supports the Phase III report and most of the recommendations. However, we do have reservations on some of the key recommendations, notably with regard to proposed models and mechanisms for implementation of the broadband strategy.

1.1 The NBS Implementation Structure

In Mascom's opinion, the proposed structure and model for the National Broadband Strategy Committee is not ideal.

a. We do *not* believe the proposed NBS committee, and its composition, roles and responsibilities, would lead to an effective implementation of broadband in Botswana. Rather, in our view, there is an evident risk that the proposed structure would, in practice, lead to unnecessary bureaucracy, delays in completion of projects and inefficient use of resources.

b. We believe also the Committee structure and mandate could give rise to potential conflicts of interest that would be difficult to handle in practice.

c. Furthermore, the proposed implementation schedule for the NBS includes a number of projects and actions that clearly fall within the domain and mandate of existing authorities/Ministries. We believe it would be confusing to the stakeholders, but most likely also inefficient, if some of the proposed projects and actions were to be owned and managed by the NBS committee.

1.2 Dependencies & Timing of Actions in the Implementation Schedule

The proposed implementation schedule contains a great variety of projects and actions. To Mascom it seems evident that a number of these, such as cost model revision, replicability tests, release of spectrum, wholesale catalogues, charge reviews etc, fall within BOCRA's current regulatory functions and mandate.

We note that the initial release of 800 MHz spectrum is planned to take place in second half of 2014 to facilitate rollout of mobile broadband in rural areas. The implementation schedule appears to assume that rural areas could be covered simultaneously to the release of 800 MHz spectrum. In order for that to happen in practice, there has to be certainty beforehand that the required spectrum will indeed be released and available for the rural/coverage rollout plan.

Ultimately, we are confident it is in the best interest of the country, and the mobile broadband users, that spectrum allocation is as efficient as possible and made available as soon as possible.

1.3 The Proposed Reverse Auction Model for Rural Areas

We note the Consultant's revised proposition with regards to roll-out of mobile broadband in different parts of the country. We do not, however, understand the rationale and justification for the model proposed for rollout of mobile broadband infrastructure in rural areas (i.e. clusters 1-3). The current licensing framework allows for the three PTO's to roll-out and operate mobile cellular networks and services. On page 45 in the report the Consultant states that; "*Stakeholders who do not have a telecommunications operator licence at the date of the tender should be authorised to bid, stating in parallel the spectrum required for the operation*". This appears to suggest that additional mobile cellular (broadband) licences may be issued as part of the tender process for broadband in rural areas. If this is indeed the intention of the recommendation, Mascom objects to the proposal.

In Mascom's opinion, the recommendation would go beyond what the broadband strategy should cover as it proposes potential new licensees of mobile cellular networks and services in Botswana. The licensing framework and its impact on market structure and competition is, to Mascom's understanding, a separate issue that will also be separately addressed in the near future.

1.4 Facilitation of market driven broadband solutions

In conclusion, as we have also stated in our earlier submission, we believe it is crucial that the models and conditions applied for broadband roll-out are not excessively prescriptive and/or top-down managed. The broadband strategy must, based on the framework in place, not limit the business opportunities for operators and service providers where they see them, and where sound business cases exist to rollout broadband infrastructure and services.

2. Mascom responses to Consultant's recommendations

The following provides Mascom's responses to the key recommendations raised by the Consultant in the Phase 3 report dated 27 June, 2013.

Recommendation 1 (p.15): Botswana should adopt a predominantly ecosystem-based approach to broadband. Targets (speed, QoS, etc) should be defined at the implementation of each individual project

Mascom response: In principle, Mascom supports the recommendation.

We note, however, the statement following the recommendation; "*An initial objective of having 10 Mbps download speed available for 90% of the population, 90% of the time, within three years after the adoption of the present strategy appears to be reasonable*".

In Mascom's opinion, if such targets are to be set, it is highly important that it is clearly stated and understood by all what the targets effectively mean and refer to.

Recommendation 2 (p.25): Public investments and resources should be allocated to actions listed in Table 4-1: Actions and funding, with a particular focus on:
   a. e-Government implementation.
   b. Develop web-hosting and web-agencies.
   c. Develop appropriate content and applications.

Mascom response: We have at this stage no objection to recommendation 2 with respect to priorities for content development in Botswana. However, our overall view is that priorities should be made based on sound evaluations of socio-economic impact against the complexity and costs of implementation.

Recommendation 3 (p.28): The Government should communicate what services will be available online and by what dates, and accelerate the implementation of the plan so as to create the need as well as the demand for e-Government services.

Mascom response: Mascom supports the recommendation.

Recommendation 4 (p.29): Launch of a structured mass Digital Literacy programme as an integral part of the NBS implementation.

Mascom response: Mascom has no objection to the recommendation, and supports initiatives that will enhance the digital literacy for all Batswana.

Recommendation 5 (p.29): Public access to broadband facilities should be intensified through:
   i. Provision of computers with internet access in Post Offices;
   ii. Funding for the provision of internet access in public libraries. Internet connectivity to public libraries should be subsidised through the Universal Service Fund;
   iii. Public Telecommunications Operators should provide internet connectivity to libraries at subsidised tariffs.

Mascom response: In principle, we have no objection to the recommendation to intensify public access to broadband facilities. However, we fail to understand why the PTO's should specifically subsidise tariffs to libraries.

Recommendation 6 (p.32): **Improving customer information**. BOCRA should issue a regulatory directive mandating operators and ISPs to publish products, services and price information on their standard offers, on their websites or in other easily available means.

Mascom response: All PTO's and licensed VANS are already required, as per existing licences, to publish the information as stated in the recommendation.

Recommendation 7 (p. 34): Legislation on electronic commerce based on SADC Model Law…

Mascom response: Mascom supports the recommendation.

Recommendation 8 (p. 35): The promulgation of data protection law based on the SADC Model Law on data protection.

Mascom response: Mascom supports the recommendation.

Recommendation 9 (p. 35): The Cyber and Computer related Crimes Act should be reviewed to align it to best practice including the SADC Model Law on Computer Crime and Cybercrime.

Mascom response: Mascom supports the recommendation.

Recommendation 10 (p. 37): Wholesale catalogues...

Mascom response: Mascom supports the recommendation.

Recommendation 11 (p.39): Operators with direct access to the EASSy and WACS undersea cables...

Mascom response: We note the recommendations made by the Consultant.

Recommendation 12 (p.39): Government to discuss transit charges in Namibia and South Africa with its counterparts with a view to having such tariffs reviewed...

Mascom response: We support the recommendation.

Recommendation 13 (p.40): BOCRA should conduct an appropriate cost study in order to realign BTC's existing cost models develop in the recent past with a view to:
- Understanding the effect of decrease in international bandwidth and access to undersea cables;
- Making the said model more aligned to current transmission technologies and less sensitive to distance. The level and structure of wholesale tariffs for national bandwidth should be adapted in view of technological evolution.

Mascom response: We support the recommendation.

Recommendation 14 (p.40): The access charge and the bandwidth charge should be both paid by the ISP to BTC (as it is done in other countries), in order for the end customer to deal with a single bill for internet access and service.

Mascom response: We support the recommendation.

Recommendation 15 (p.41): The access charge should be split between pure access and backhaul charge. Pure access should be based on BTC actual costs for the local loop and not be dependent on bandwidth, backhaul should be related to bandwidth and quality of service.

Mascom response: We support the recommendation.

Recommendation 16 (p.41): BOCRA should put in place replicability tests on retail services in order to avoid the possibility of squeeze effects for small players.

Mascom response: We have no objection to the recommendation, so long as the procedure includes to first establishing which player(s) in the relevant market has a dominant position.

Recommendation 17 (p.43): Infrastructure sharing…

Mascom response: In principle, we have no objection to the recommendation, but we believe it would be unnecessary to promulgating the guidelines as regulations since the current guidelines instrument should be sufficient. In any case, BOCRA can always intervene in terms of sector disputes, such as on infrastructure sharing matters.

Recommendation 18 (p.43): Measures to release 800 MHz spectrum….

Mascom response: We have no objection to the recommendation, but believe timing and availability of necessary spectrum for both coverage and capacity requirements are of utmost importance to speed up the rollout mobile broadband infrastructure and services in the country.

Recommendation 19 (p.44): **4G/LTE spectrum will only be granted subject to the following conditions:**
  i.   The operator shall provide services in Clusters 4 to 6 at their own cost.
  ii.   The operator shall complete the rollout within a period to be specified in the spectrum licence.
  iii. The operator will be allowed to use either 3G or 4G/LTE spectrum in any village or town in Cluster 4 to 6 if they so choose to.
  iv.   The 4G/LTE spectrum for broadband infrastructure will be national and the operator may use it at any other location beyond those in Clusters 4, 5 and 6 at their discretion.

Mascom response: Mascom has noted the recommendation and in general we believe it could serve the mobile broadband development well.

Recommendation 20 (p.47): **Coverage of rural areas (Clusters 1 to 3).**

Mascom response: In principle, we have no objection to the recommendation as stated, since it is, to our understanding, essentially built around the same reverse auction model that was previously applied for Nteletsa II areas.

However, as previously mentioned in our general comment section, we do have a potential objection on the statement on page 45 namely that; "*Stakeholders who do not have a telecommunications operator licence at the date of the tender should be authorised to bid, stating in parallel the spectrum required for the operation*".

This appears to suggest that additional mobile cellular (broadband) licences may be issued as part of the tender process for broadband in rural areas. If this is indeed the intention of the recommendation, Mascom does not support the proposal.

In Mascom's opinion, the recommendation would go beyond what the broadband strategy should cover as it proposes potential new licensees of mobile cellular networks and services in Botswana. The licensing framework and its impact on market structure and competition is, to Mascom's understanding, a separate issue that will also be separately addressed in the near future.

Recommendation 21 (p.49): Broadband infrastructure for farms…

Mascom response: In principle, Mascom has no objection to the recommendation.. We share the Consultant's opinion, that the best solutions for farms need to the balance the anticipated benefits of broadband solutions (also taking into account what current solutions can provide), against the costs for rolling out the infrastructure and services.

Recommendation 22 (p.50): Upgrading of xDSL Infrastructure…

Mascom response: Mascom has no objection to the recommendation, but it should be made clear thatthe xDSL wholesale offers should, in line with current licence conditions, be made available to all licensed operators; PTOs and VANS.

Recommendation 23 (p.52): Development of FTTx in major cities…

Mascom response: Based on our understanding of the recommendation (including the open access principles to be adopted), Mascom has no objection.

Recommendation 24 (p.53): Satellite broadband should be supported through specific subsidies to be granted on a case by case basis, when no other solution providing the same level of service is (or foreseen to be) available.

Mascom response: We support the recommendation.

Recommendation 25 (p.53): An audit should be carried out on Kitsong Centres provided under the Nteletsa II project, as well as other related projects such as Sesigo

and the implementation of Kitsong centres by Botswana Post. The outcome of such a study should provide useful lessons learned that could be taken on board during the rollout of community access centres as part of the broadband infrastructure.

Mascom response: We have no objection to the recommendation.

Recommendation 26 (p.54): Potential means of increasing the rollout of Local Internet Access Points (LIAPs) in rural areas:

   i.   The cost of backhauling internet traffic from LIAPs to ISPs main centres should be made independent of distance.

   ii.   A rollout schedule for internet LIAPs should be developed starting with urban areas and large villages and eventually smaller villages as the demand for broadband service develops.

   iii.   The programme for the rollout of internet LIAPs and upgrade of Kitsong Centres should be synchronised with the eollout of e-Government services to ensure a quick adoption of broadband services.

Mascom response: We support the recommendation.

Recommendation 27 (p.55): BOCRA should authorise BPC to lease its excess dark fibre optic cables to the main operators (Bofinet, BTC, Mascom and Orange) to make use of this valuable national asset, increase the extent of the national backbone and provide redundancy for improved network security.

Mascom response: We support the recommendation.

Recommendation 28 (p.55): The Government of Botswana should consider exempting smartphones, laptops and other similar ICT equipment from import/customs duties and Value Added Tax.

Mascom response: We support the recommendation.

Recommendation 29 (p.58): The National Broadband Implementation Structure should be set-up as described above to ensure an efficient implementation of the strategy and a coordinated and aligned approach with respect to the provision of the services including power, equipment and e-government services.

Mascom response: Whereas we do appreciate the motivation behind the recommendation, notably the need for a coordinated approach and to align with provision of other services (including power), we do not support the proposed structure.

In our opinion, notwithstanding the non-disputed importance of the national broadband development, we do not believe there are advantages that outweigh the disadvantages of setting up a National Broadband Committee that is proposed to have the roles and responsibilities as outlined in the report.

In Mascom's opinion, the proposed structure and model for the National Broadband Strategy Committee is not ideal for the following main reasons:

    a. We do *not* believe the proposed NBS committee, and its composition, roles and responsibilities, would lead to an effective implementation of broadband in Botswana. Rather, in our view, there is an evident risk that the proposed structure would, in practice, lead to unnecessary bureaucracy, delays in completion of projects and inefficient use of resources.

    b. We believe the Committee structure and mandate could give rise to potential conflicts of interest that would be difficult to handle in practice.

    c. Furthermore, the proposed implementation schedule for the NBS includes a number of projects and actions that clearly fall within the domain and the mandate of existing authorities/Ministries. We believe it would be confusing to the stakeholders, but most likely also inefficient, if some of the proposed projects and actions were to be owned and managed by the NBS committee.

Recommendation 30 (p.59): The NBS should be subject to review every five years by an independent third party appointed by the Ministry responsible for communications provided that the first of such take place during the second quarter of 2018.

Mascom response: We have no objection to the recommendation.

Recommendation 31 (p.59): BOCRA should setup a broadband observatory that will monitor the evolution of key performance indicators showing the progress in the execution of the National Broadband Strategy.

Mascom response: We have no objection to the recommendation, especially since BOCRA has already, in its capacity as sector regulator, the role and mandate to monitor the sector development and its performance in general. We believe BOCRA is well suited to also monitor the progress in execution of the national broadband strategy.

Recommendation 32 (p.61): **Funding**

    i. Government should set up the Universal Service Fund as per the recommendations of the study on the "Development of a Universal Access and Service Policy for the Communications Sector in Botswana" (2006) with whatever modifications that the Government has made to the recommendations therein.

    ii. The universal access and service fund should be financed from a combination of sources including operator levy, direct Government contribution and from any other lawful contribution from any approved third party contributor.

Mascom response: In principle, we support the recommendation, so long as the USF levies imposed on operators take into account the current, in international comparisons, high level of turnover related licence fees. In Mascom's view, an earmarked portion of existing licence fees should be used for the planned USF.

The Universal Service Fund could, if properly managed and controlled, provide an important instrument to finance and realise projects aimed at developing broadband infrastructure and solutions in Botswana, not least in the more remote areas of the country.

END OF MASCOM RESPONSE