Economic impact of ICASA's proposals for assignment of 800 and 2600 MHz spectrum in South Africa

Executive Summary
for **the GSMA**

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About Plum

Plum Consulting offer strategy, policy and regulatory advice in the telecoms, media and online sectors; and on radio spectrum as a key sector input. We draw on economics, our knowledge of the sector and our clients understanding and perspective to shape and respond to convergence.

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Executive summary

Mobile broadband has the potential to stimulate economic growth and social development in South Africa over the next 15 years. But for this potential to be realised more spectrum is required. The Government of South Africa has already taken an important first step by announcing plans to release 60 MHz of spectrum at 800 MHz and 190 MHz of spectrum at 2600 MHz (the new spectrum) for broadband use.

Now ICASA has published proposals for how this spectrum should be assigned to mobile operators. Are these proposals in the best interests of South Africa? The analysis in this report, commissioned by the GSMA suggests not.

We find that ICASA's proposals:

- Are fundamentally out of line with international best practice for assignment of spectrum for mobile broadband use. In particular they propose a mix of direct assessment and beauty contests rather than competitive auctions
- Would double the number of mobile operators in South Africa - from four to eight. Yet both empirical evidence and theoretical arguments suggest that the best balance between competition and cost efficiency in a country like South Africa is achieved when there are three or four operators
- Proposes direct assignment of spectrum to entities which have a poor track record to date in using broadband spectrum efficiently
- Are likely to lead to limited and inefficient use of new spectrum by entrants who have little or no expertise in providing mobile services and have limited access to capital markets to make the substantial investments required
- Would assign a substantial proportion of the new spectrum to two wholesale-only operators. A wholesale-only model may have merit in terms of generating economies of scale in the provision of radio access networks. Unfortunately the ICASA proposals failed to capture this effect, while retaining the main disadvantages of such a model - in terms of limited innovation and limited opportunities for product and price differentiation.

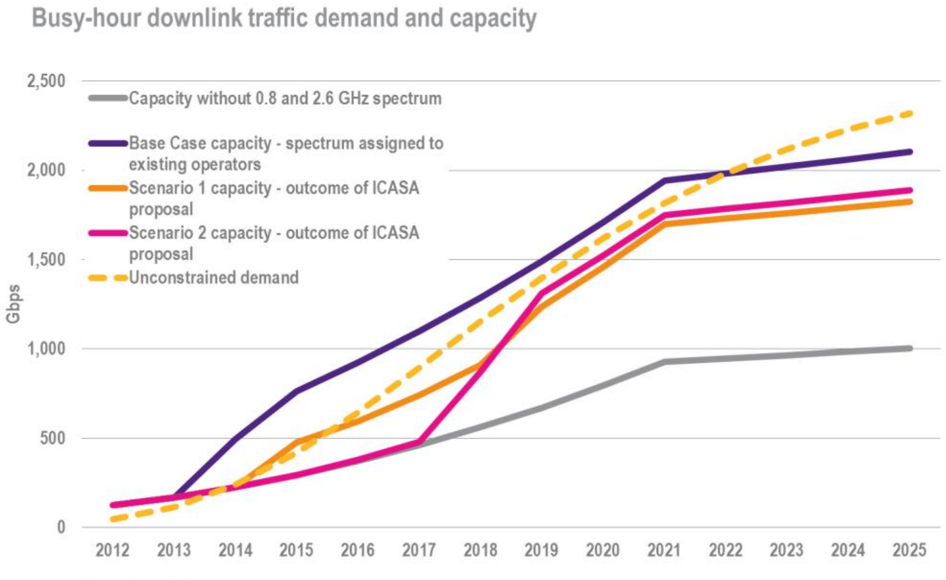
Based on this analysis, we have developed two scenarios for the likely outcome of the ICASA proposals. We have compared these with a base case in which spectrum is assigned to the four existing operators and with the situation in which the new spectrum is not released at all. Figure S1 presents our findings.

It shows that:

- Without the new spectrum, mobile broadband capacity in South Africa is a long way below demand by 2020
- Capacity keeps pace with demand under the base case until 2022[1]
- Under the ICASA proposals capacity falls well short of demand by 2015.

[1] By which time additional new spectrum may become available for mobile broadband

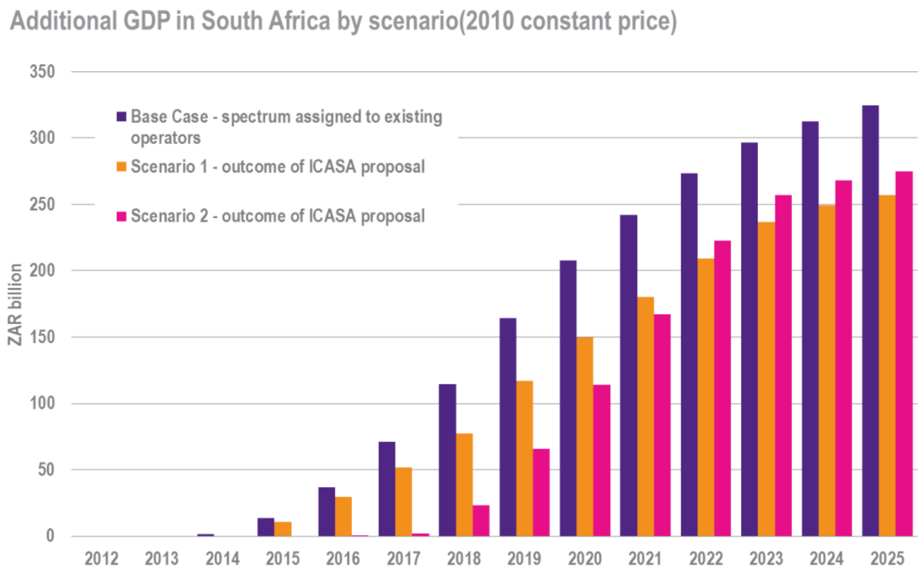
Figure S1: Mobile broadband demand and capacity in South Africa



Source: Plum Consulting

This shortfall in capacity will affect GDP growth, government tax revenues and jobs. Figure S2 plots the additional GDP which mobile broadband might generate in South Africa, following release of the new spectrum, for the base case and under the ICASA proposals.

Figure S2: Additional GDP in South Africa, 2012 - 2025



Source: Plum Consulting

Overall we find that:

- The ICASA proposals for assigning the new spectrum would lower the net present value of GDP by between ZAR325 and ZAR480 billion over the period 2014 to 2025, when compared with assignment of the spectrum to existing operators
- The ICASA proposals would reduce the net present value of government tax revenues by between ZAR68 billion and ZAR100 billion, when compared with the base case
- The economic benefits from moving from the ICASA proposals to the base case assignment is equivalent to 500,000 additional jobs, at current South African wages.