Implications of Spectrum Licensing and Management in the Telecommunication Sector

August 2020



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About the SACF

- The SACF is an industry association that represents a broad range of members across the ICT value chain
- Our primary focus is policy and regulatory advocacy that seeks to create a competitive, inclusive sector able to attract and sustain investment

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Introductory Comments

- The world and ICT sector in August 2020 is fundamentally different from that of March 2020
- The pandemic has brought the 4IR forward and highlighted challenges and chasms of the system
- The digital divide has never mattered more than it did during the pandemic where people without access to connectivity and devices were unable to work and learn from home.
- ICTs and ICT infrastructure became one of the most critical infrastructure together with a stable power supply
- Everything on all the time makes spectrum critical to participation in the digital economy or 4IR

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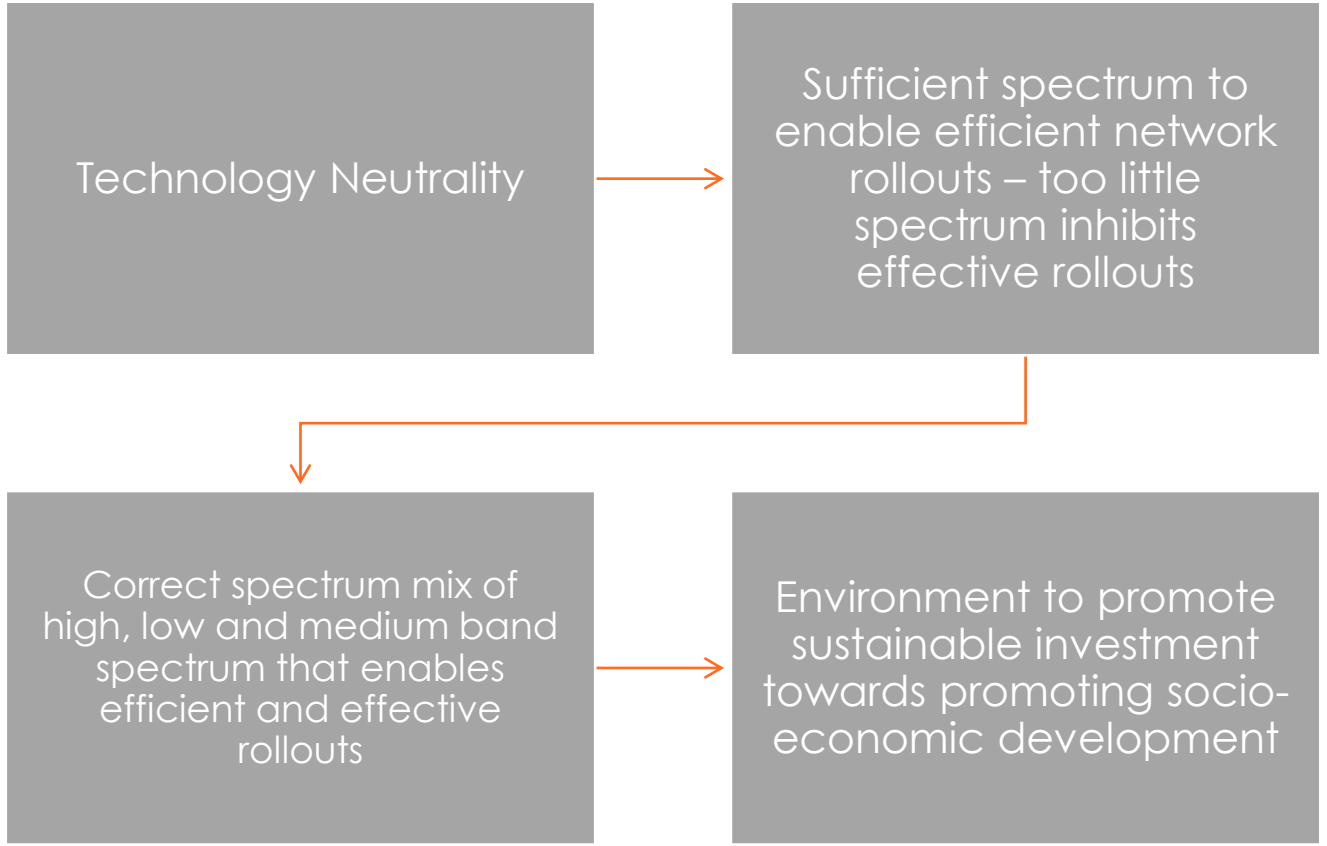
Key issues



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Spectrum Overview

- Spectrum environment consists of licensed and unlicensed access to spectrum
  - Licensed spectrum attracts obligations and licence fees
  - Unlicensed spectrum attracts neither

Licensed and unlicensed providers compete for the same market, albeit on an uneven basis.

- Licensees annually invest tens of billions in the maintenance and upgrade of networks regardless of size
  - Consumer demand drives higher capacity, with lower latency – the exponential growth of cloud-based services and applications has heightened the need
  - Access to critical bands fosters innovation of service delivery
  - Liberalized spectrum regulatory regimes contribute significantly to efficient and cost-effective rollouts

- Delays in spectrum licensing have
  - Severely constrained the capacity of incumbent networks
  - Societal demands are highly dependent on spectrum – playing catchup as a result of delays in spectrum licensing

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Current Context

- The COVID 19 pandemic has presented an opportunity for licensees to access critical high demand spectrum, even if only on a temporary basis
- COVID 19 has fundamentally changed usage patterns, demand – resulted sustained increased demand as a result of working and learning from home -
  - South Africa between 30% and 60% traffic growth on average
  - Developed countries on average over 70% increases
- Changed economic circumstances – resulting from the investment downgrades to below sub-investment grade
- Delays in digital migration has resulted in the delayed availability of critical coverage spectrum – no clear timeframes
- Access to temporary spectrum without a licence fee has enabled licensees to drive network rollout, although rollouts have been inhibited by the limited spectrum available in the critical IMT 700 and IMT 800 bands due to delays in digital migration

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Extending access

- Over R100 billion combined investment over the past decade to extend 99% population coverage
- Essential to continue to drive investment in the current depressed economic climate
- Increased value to consumers – QOS, products, coverage
- Network efficiency rivals best global networks
- Smart rollouts to ensure coverage while continuing to drive continued investment and network extension
- Reducing taxation on terminal and network equipment will improve the accessibility of consumers to networks as well as efficiency of network and services rollout
- Skills and content are critical to driving digital literacy and enhancing usage

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Access to Temporary Spectrum

- Access to temporary spectrum has provided a peek into what could be achieved
- At the beginning of the COVID pandemic the SACF and our members motivated to the Minister and ICASA for the licensing of temporary spectrum to meet the anticipated increase in data demand
- Demand forecasts were based on global experiences
- The Minister issued a Policy Direction paving the way for the temporary licensing of high demand IMT spectrum
- ICASA also provided for the licensing of newer technologies such as TV White Spaces
- ICASA issued
  - Regulations and
  - Licences

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Positive Impact of the Temporary Spectrum

Supported increased traffic demand

Enabled working and learning from home – changed working as we knew it

Significant economic contribution by enabling continued economic activity during the lockdown

Enabled preparations for spectrum rollout post the auction assuming that licensees are able to get the same spectrum

Significant investments in equipment to enable the use of the bands licensed temporarily – IMT 700, 800, 2300, 2600, 3500

Enabled 5G trials

4IR no longer became a future discussion, it became the present and highlighted challenges to be resolved

BUT, there were significant challenges to rolling out the temporary spectrum

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Challenges with deploying Temporary Spectrum

Interference levels limited that amount of temp. spectrum that could be deployed

Currency Depreciation diminished buying power for network infrastructure

Significant lead times to get equipment into the networks – longer term planning was required

Theft and vandalism hampered the efforts to improve and maintained networks

Accessibility to newer terminals for consumers limited the impact of temp spectrum deployment

Limited timing of temporary spectrum assignment did not allow for long-term investment

Uncertainty in the Transition plan from temp spectrum to ITA - networks need to cater for increased demand

In spite of these challenges, this process has demonstrated what can be achieved with a forward-looking framework

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Key Principles: Licensing of high demand spectrum

- Regulatory certainty ensuring that all licence rights to spectrum are clear
- The urgent licensing of high demand spectrum
- Assignment of sufficient spectrum to enable effective and efficient rollouts. Inefficient assignment are likely to be more expensive.
- Sustainable long-term investment
- Appropriate pricing of the spectrum
- Inclusive procedurally fair process
- Obligations need to balance cost of spectrum and sustained investment
- Obligations need to be focussed on socio-economic needs and investment required to rollout

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Licensing of Spectrum – Best Practice Lessons

- Forward looking licensing regime – make as much spectrum available as possible, else it's a lost opportunity
- Manage bundling of spectrum lots carefully, as this leads to sub-optimal outcomes.
- High reserve price have the potential to impact affordable pricing and effective and timeous rollouts of infrastructure
- Balance the trade-off between spectrum and investment costs against social needs to ensure sustainable growth.
- Factors outside the scope of network deployment needs to be addressed in order to ensure effective and efficient deployment of new spectrum (e.g. Power, security, cost of capital)

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The way forward

Interim

Planned return – 30 November 2020 was based on ICASA's planned licensing in December 2020

Support the growth in consumer demand – high expectations of continuity

Re-assess alignment of temp spectrum and ITA processes

Digital Migration

Freeing up the spectrum unavailable due to delay in digital migration process

Urgent Licensing of Spectrum

Key objective is to extend services as widely as possible urgently

Spectrum should be priced to promote ubiquitous rollouts and sustained investment

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