

ICASA

2nd Draft Radio-Frequency Spectrum
Assignment Plans (RFSAPs) for
Frequency bands 450MHz, 850MHz and
1500MHz

Nokia's response to the consultation



1 About Nokia

At Nokia, we are pioneering the future where networks meet cloud. These networks go beyond connecting people and things: they're intelligent, as-a-Service and uncompromisingly resilient.

We are a B2B technology innovation leader in networking, bringing together the world's people, machines, and devices to realize the potential of digital in every industry

Networks are the key enabler for the digitalization of industries and the realization of the broader potential of the metaverse. As we enter the next technological era, digitalization will be key to unlocking massive gains in sustainability, productivity, and accessibility. Networks will be critical to this transformation, and we see our increasingly valuable role in driving it.

No single player can realize the potential of digital alone. We're building global ecosystems that bring networking, industry, research, and business experts together. By opening up networks for innovation and collaboration, we can work with our partners to create the digital services and applications of the future.

The next decade will be marked by unparalleled technological progress – presenting new opportunities for our customers and Nokia. To enable this future, the world needs the performance only networks, alongside cloud, can deliver.

Through our innovation platforms, communities, and physical labs, we're bringing partners and technologies together to create the digital services and applications of the future.

We lead the development of global standards, inventor-friendly policies and patent families to drive industry innovation. Our research is propelled by Nokia Bell Labs, winner of multiple Nobel Prizes and global leader in disruptive research on networks, software, AI, automation and IoT.

For more information: <https://www.nokia.com/>

2 Nokia Position

Digitalization and transformative technologies have an increasingly important role in shaping the ways we live and work. At Nokia, we engage with governments, regulators, associations, and other stakeholders to drive policy discussions on topics underpinning successful digital transformations. These policy discussions include the twin transition, critical and trustworthy infrastructures, industrial transformation, and emerging technologies, amongst others. Together, we can ensure that everyone benefits from the innovations enabled and accelerated by broadband connectivity.

Nokia welcomes the opportunity to respond to ICASA's consultation on "Draft Radio Frequency Spectrum Assignment Plans (RFSAPs)" that sets the direction of future developments of the telecommunication sector in South Africa in the upcoming period.

Nokia strongly encourages ICASA to further align in its technical decisions with the international trends and with global standards such as 3GPP. This allows the licensees to benefit from the associated global economies-of-scale and more diverse product ecosystem, hence supporting overall 5G deployment, while the entire society can take advantage of standardised equipment.

Hereinafter, we provide Nokia's view on the specific frequency bands under consultation and our recommendations based on our global expertise.

3 Feedback

3.1 1427 MHz to 1518 MHz

Nokia acknowledges the decision from ICASA to implement IMT in the entire band 1427-1518 MHz, extending as such the availability of the L band to more than the initial core portion of it. We also note ICASA's decision to implement it in a TDD configuration.

The TDD configuration that ICASA considers falls into the 3GPP standardized sub-bands 1432-1517 MHz (band b50/n50), complemented at its lower end by 1427-1432 MHz (band b51/n51).

The two sub-bands are 3GPP standardized both in TDD configuration (bands b51/b50 for LTE and n51/n50 for 5G-NR) and SDL configuration (bands b76/b75 for LTE and n76/n75 for 5G-NR). Nokia provides equipment for both 5G-NR configurations, TDD and FDD.

We would also like to emphasize the fact that both configurations - TDD and SDL - have little ecosystem. According to GSA's GAMBOD database, as of February 2023:

- For the TDD 5G-NR configuration: band n50 has 1 (Apple) device; band n50 has no ecosystem.
- For the SDL 5G-NR configuration: band n75 has 22 devices; band n76 has 16 devices and band b75/b76 has no ecosystem.
- In the SDL configuration, the L-band b32 has an ecosystem of 345 devices.

While ecosystem for the 5G-NR is in its incipient phase, decisions across markets like Latin America, Middle East, Africa and Asia to allocate the overall 1427-1518 MHz spectrum for TDD operations will have a positive impact on the market demand and we expect ecosystem to grow accordingly.

We also note that SDL option will continue to grow in relevance in other regions, like Europe, in accordance with the existing regulation for band b32.

If ICASA is to assign this spectrum to the market, our recommendation is for the highest contiguous bandwidth per licensee to allow carriers of at least 20 MHz, with increments of 10 MHz, for the efficient usage of this spectrum. Nokia sees the highest benefit deriving from the using of at least 40 MHz per licensee in this band.

3.2 450 MHz to 470 MHz

Nokia acknowledges ICASA's decision to implement IMT in the 450 MHz band using a 3GPP frequency arrangement.

Regarding the preferred 3GPP arrangement in the 450 MHz band, Nokia acknowledge ICASA's view on the feasibility of the D14 (3GPP band 31) option.

With the growing interest and adoption of the band 31 for professional use, we are seeing an increase in the number of vendors of chipsets, modules, and devices for industrial use. The Global mobile Supplier Association (GSA) database (GAMBOD, <https://gambod.gsacom.com/dashboard>) has identified 233 modules and devices available for band 31 and the numbers are steadily growing.

3.3 825 MHz to 830MHz and 870MHz to875MHz

Nokia acknowledges ICASA's proposal to repeal the IMT850 RFSAP, all existing transmissions from 825 to 830 MHz paired with 870 to 875 MHz band should be cleared and no new assignment for 825 to 830 MHz paired with 870 to 875 MHz band will be approved.

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