

INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

NOTICE 4043 OF 2026

FEASIBILITY STUDIES FOR ADDITIONAL IMT BANDS

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About this document

1. This document contains feasibility studies for international mobile telecommunications (“IMT”) services the following bands:

- 1.1 1880 - 1920 MHz;
- 1.2 3600 - 3800 MHz;
- 1.3 4800 - 4990 MHz;
- 1.4 6425 - 7125 MHz;
- 1.5 24.25 - 27.5 GHz;
- 1.6 37 - 43.5 GHz;
- 1.7 45.5 - 47 GHz;
- 1.8 47.2 - 48.2 GHz; and
- 1.9 66 - 71 GHz (E-Band).

The structure of the feasibility studies is as set out in the draft IMT Roadmap 2025, and is as follows:

- 1.10 Introduction;
- 1.11 Regulatory context;
- 1.12 Economic feasibility for IMT;
- 1.13 Technical feasibility;
- 1.14 Maturity of the IMT ecosystem;
- 1.15 International considerations;
- 1.16 Stakeholder comments; and
- 1.17 Considerations in favour of and against IMT allocation.



ELECTRONIC COMMUNICATIONS ACT, 2005 (ACT NO. 36 OF 2005)

**HEREBY ISSUES A NOTICE REGARDING THE FEASIBILITY STUDIES FOR
THE FREQUENCY BANDS ALLOCATED TO THE MOBILE
RADIOCOMMUNICATIONS SERVICES AND IDENTIFIED INTERNATIONAL
MOBILE TELECOMMUNICATIONS IN THE NATIONAL RADIO FREQUENCY
PLAN.**

1. The Independent Communications Authority of South Africa ("the Authority"), on 28 March 2024, published the Draft International Mobile Telecommunications (IMT) Roadmap, in Government Gazette No. 50413 (Notice 4584 of 2024) inviting Written Representations.
2. On 13 September 2024, in Government Gazette 51244 (Notice 5209 of 2024) the Authority published a "Notice Communicating the Outcome of the Consultation Process of the Draft IMT Roadmap 2025.
3. The Authority, in Government Gazette 53883 (Notice 3712 of 2025), published the Second Draft International Mobile Telecommunications (IMT) Roadmap 2025, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005).
4. Now therefore, the Authority, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005) hereby publishes the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan.
5. Interested persons are hereby invited to submit written representations on the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan in both

Microsoft Word (MS) and Portable Document Format (PDF) by no later than 16:00 on **4 September 2026**.

6. Persons making representations are further invited to indicate whether they require an opportunity to make oral representations.

7. Written representations or enquiries may be directed by email to:

Attention:

Mr Manyapelo Richard Makgotlho

e-mail: rmakgotlho@icasa.org.za

Copy: jdikgale@icasa.org.za

8. Where persons making representations require that their representation, or part thereof, be treated as confidential, then an application in terms of section 4D of the ICASA Act, 2000 (Act No 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation, together with a non-confidential, redacted version of the submission. If, however, the request for confidentiality is not granted, the person making the request will be allowed to withdraw the representation or document in question.

9. The guidelines for confidentiality requests are contained in Government Gazette Number No 41839 of 17 August 2018.

10. All written representations submitted to the Authority pursuant to this notice will be made available for inspection by interested persons from **11 September 2026** at the Authority's Library. Electronic copies of such representations are obtainable on request and printed versions will be obtainable on payment of a fee.

11. The feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan and the non-confidential representations will be uploaded to the Authority's website under this link: <https://www.icasa.org.za/legislation-and-regulations/radio-frequency-spectrum-plans/draft-radio-frequency-spectrum-plans>.



Mothibi G. Ramusi

CHAIRPERSON



Feasibility Study

1880 MHz to 1900 MHz

1 Glossary of Terms, Abbreviations, and Acronyms

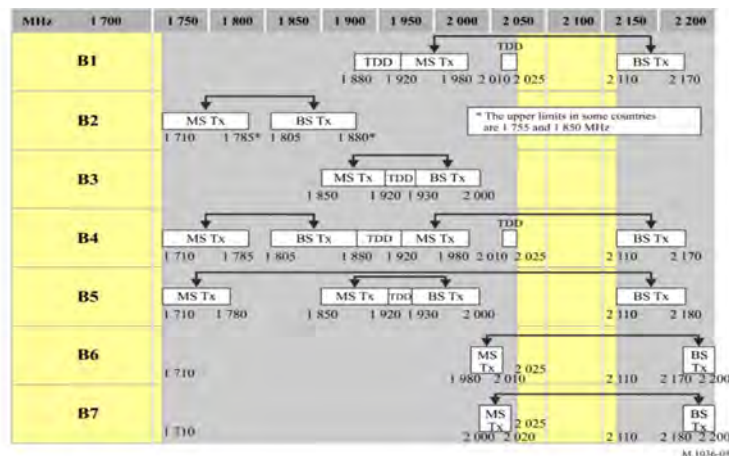
Acronym	Explanation
3G	Third generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication relating to the ITU-R IMT-2000 specifications.
4G	Fourth Generation Network Technology relating to ITU-R IMT-Advanced specifications.
5G	Fifth Generation Network Technology, relating to the ITU-R IMT-2020 specifications.
6G	Sixth Generation Network Technology, relating to the ITU-R IMT-2030 specifications.
Act	Electronic Communications Act, 2005 (Act No. 36 of 2005).
AAS	Active antennae systems.
Administration	Members States of the International Telecommunications Union.
Allocation	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space <i>radiocommunication services</i> or the <i>radio astronomy service</i> under specified conditions.
Assignment	The authorisation given by the authority to a licensee to use a radio frequency or radio frequency channel under specified conditions.
ATU	African Telecommunications Union.
Authority	The Independent Communications Authority of South Africa.
BFWA	Broadband Fixed Wireless Access.
CEPT	Conference of European Posts and Telecommunications Authorities.
CRASA	Communications Regulators' Association of Southern Africa.
DC-MSS-IMT	Direct Connectivity between Mobile-Satellite Service space station and IMT UEs.
DECT	Digital Enhanced Cordless Telecommunications 1880 - 1900 MHz which is a digital communication standard, primarily used for creating cordless phone systems.
ECA	The Electronic Communications Act of South Africa, Act No 36 of 2005.
EIRP	Effective isotropically radiated power.
ERP	Effective radiated power, which is the product of the power supplied to an antenna and its gain relative to a half wave dipole in a given direction.
FDD	Frequency Division Duplex.
FWA	Fixed Wireless Access.
FS	Fixed Service.
FSS	Fixed Satellite Service.
Gbps	Gigabits per second.
GHz	Gigahertz of Radio Frequency Spectrum.
GSM	Global System for Mobile Communications, (originally Groupe Spécial Mobile), and is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe technologies for second generation (2G) digital cellular networks.
GSMA	Global System for Mobile Communications Association.
IMT	The name that encompasses IMT-2000, IMT-Advanced, IMT-2020 and IMT-2030 collectively known as International Mobile Telecommunications.
IMT-2000	The International Mobile Telecommunications, as envisioned in ITU-R Recommendation ITU-R M.687 and M.816.
IMT-Advanced	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.1645.
IMT-2020	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2083.

Acronym	Explanation
IMT-2030	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2160.
IoT	Internet of Things.
ITU	International Telecommunication Union.
ITU RR	International Telecommunication Union Radio Regulations.
kHz	Kilohertz of Radio Frequency Spectrum.
LTE	Long Term Evolution and is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies.
M2M	Machine to Machine.
MHz	Megahertz of Radio Frequency Spectrum.
MIMO	Multiple-Input and Multiple-Output and is the use of multiple antennas at both the transmitter and receiver to improve communication performance.
NRFP	The National Radio Frequency Plan for South Africa.
NTN	Non-terrestrial Network
PMSE	Programme making and special events applications (PMSE)
PRASA	Passenger Rail Agency of South Africa.
PTM	Point to Multipoint.
PTP	Point to Point.
Radio-communication	All electronic communication by means of radio waves.
RATG	Radio Access Technology Group.
Revocation Period	A period of transition during which incumbent users are migrated out of the band in question to clear sufficient spectrum for new service providers.
RFSAP	Radio Frequency Spectrum Assignment Plan.
RLAN	Radio Local Access Network and is the high data rate two-way (duplex) wireless data communications network.
SABRE	South African Band Re-Planning Exercise.
SADC	Southern African Development Community.
SADC RFSAP	Southern African Development Community Frequency Allocation Plan.
SAPS	South African Police Service.
Service licence	BS, ECS or ECNS licence.
SF	Single Frequency.
SFN	Single Frequency Network.
TDD	Time Division Duplex.
VSAT	Very small aperture terminal used for fixed satellite services.
WAS	Wireless Access Systems and is end-user radio connections to public or private core networks.

2 Introduction

- 2.1 The frequency arrangements for this band are set out in Section 5 of ITU-R M.1036-7. This band forms part of Band 4 for the overall range between 1710MHz and 2200MHz (see Figure 1). There are other users of this band, such as for Digital Enhanced Cordless Telecommunications ("DECT") technologies.

Figure 1: Frequency arrangements between 1710MHz-2200MHz



Source: ITU M.1036

3 Regulatory context

- 3.1 The NRFP allocations for this band are shown in the NRFP.
- 3.2 The IMT1900 TDD (1880 – 1900 MHz) band is allocated to mobile services on a primary basis in the NRFP.

4 Economic feasibility for IMT

- 4.1 The 1880-1900 MHz band is currently allocated to DECT. Shure has proposed expanding the DECT band to include using the band 1910-1920 MHz for DECT services, at least in the United Kingdom ("UK")¹, however it is not clear how many users would be served by allocating parts of the band to DECT services.
- 4.2 Given that it is unlikely that a significant number of consumers use DECT services in South Africa, it is unlikely that the band should remain allocated to DECT. Furthermore, given the scarcity of mid-band spectrum between 1GHz and 6GHz, it is likely that this band would be highly valued for IMT services. In addition, the adjacent band 1900-

¹ See: <https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-1-10-weeks/future-authorisation-of-the-19001920-mhz-band/responses/shure-uk-ltd.pdf?v=403939>

1915MHz is likely to be allocated to IMT services (FRMCS). Accordingly, the band is likely to be highly valued for IMT services.

5 Technical feasibility

- 5.1 There are risks of interference between DECT and IMT services in the 1880-1900MHz band.

6 Maturity of the IMT ecosystem

- 6.1 There is already a strong device ecosystem that supports this band (n39), which is likely to grow further given the identification of the band 1880-1900 MHz for IMT services by the ITU, as shown on Figure 1 above.

7 International considerations

- 7.1 South Africa has an obligation in accordance with the Act to harmonise its allocations of spectrum with other countries in Region 1, including countries in the EU and the UK, which are in the process of allocating the band to mobile services.

8 Stakeholder comments

- 8.1 Refer to Table 1 below for a summary of the stakeholders' comments on the Draft IMT Roadmap 2024, Second Draft IMT Roadmap 2025, and Draft Radio Frequency Migration Plan 2024, alongside the Authority's response.

Table 1: Stakeholder comments and the Authority's responses for the 1880 – 1900 MHz band

Stakeholder comments	Authority's comment
Vodacom and Cell C support the allocation of this band for IMT. Vodacom expresses scepticism about the band's use for DECT services and considers that the IMT1900 band has strong terminal support, and recommends a deployment of band b/n39. Vodacom further asserts that there already exists a strong device ecosystem for this band. Cell C recommends that incumbent users should be mandated to reapply for IMT spectrum.	The Authority will consider information on the value of this band for IMT use, such as potential auction values, the network costs avoided by using this band for IMT, and any other benefits that stakeholders may wish to provide information on.
The DECT Forum has previously expressed concern, when commenting on the Draft Radio Frequency Migration Plan 2024, regarding the interference of new technologies with incumbent DECT users in the 1880-1900 MHz subrange. The Forum has further expressed their interest in introducing DECT NR+ to this subrange, which may be used for technologies such as Programme Making and Special Events (PMSE). Their recommendation is to allocate the entire 1880-1920 MHz band to DECT.	There is substantial demand for additional spectrum for IMT use including for railway mobile communications, as set out in the feasibility study for FRMCS, and it is improbable that alternative niche uses such as DECT and PMSE command equally high demand. Nonetheless, the Authority is considering information on the value of the use of these bands for alternative services, and stakeholders are
Shure has previously alluded, when commenting on the Draft Radio Frequency Migration Plan 2024, to the importance of PMSE in the 1880-1900 MHz band, suggesting that the Authority studies the compatibility of IMT services with the	

Stakeholder comments	Authority's comment
band's incumbent DECT technologies.	encouraged to provide information on this. Stakeholders are encouraged to comment in this regard.
Telkom is of the view that only the band 1900-1920MHz is currently available for IMT use.	
Telkom advised that no VSAT services have been deployed in this band.	The Authority has made this correction.

9 Considerations in favour of and against IMT allocation

9.1 The advantages of allocating the band for IMT are:

- 9.1.1 The NRFP has proposed the allocation of the 1880-1900 MHz band to IMT;
- 9.1.2 There is a high likelihood that the highest value use of the band is for IMT rather than alternatives such as DECT;
- 9.1.3 The allocation of this band to IMT is technically feasible, i.e. that this will not interfere with systems in adjacent bands;
- 9.1.4 There are a number of jurisdictions proposing the allocation of the band for IMT, and thus there is a likely developing ecosystem;
- 9.1.5 Other countries in Region 1 are allocating the band for IMT, and South Africa must harmonise its allocations with other countries in Region 1;
- 9.1.6 Several stakeholders consider that the band should be allocated for IMT.

9.2 The disadvantage of allocating the band to IMT is that DECT users will have to migrate out of the band. Nevertheless, given the likely very small number of DECT users, compared to the very large number of potential mobile users in the band, it is highly unlikely that the disadvantages of allocating the band to IMT outweigh the advantages, and so this band ought to be allocated to IMT.



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Mothibi G. Ramusi

CHAIRPERSON



Feasibility Study

3600 MHz to 3800 MHz

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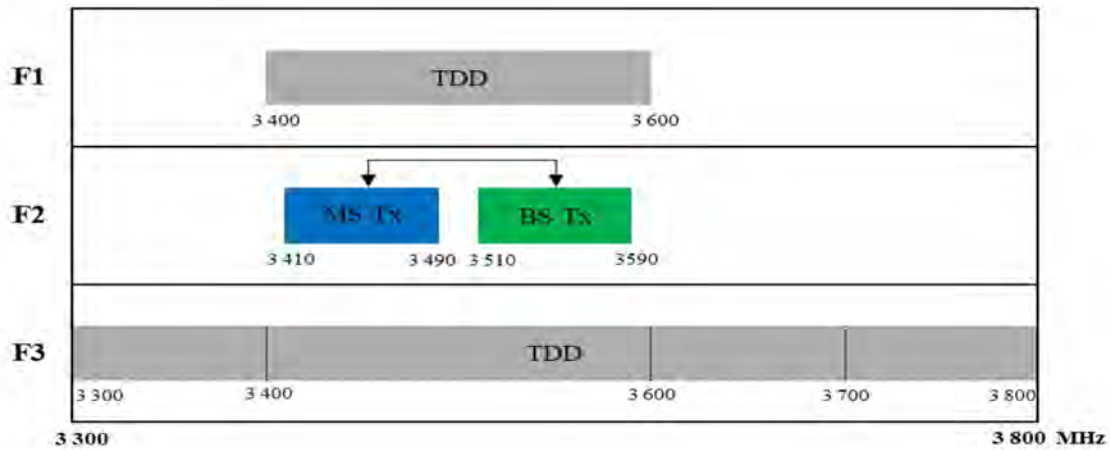
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Radio-communication	All electronic communication by means of radio waves.
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SAPS	South African Police Service.
Service licence	BS, ECS or ECNS licence.
SF	Single Frequency.
SFN	Single Frequency Network.
TDD	Time Division Duplex.
VSAT	Very small aperture terminal used for fixed satellite services.
WAS	Wireless Access Systems and is end-user radio connections to public or private core networks.

2 Introduction

- 2.1 This band forms part of Band F3 for the overall range between 3300-3800MHz. F3 has a Time Division Duplex (“TDD”) band plan (see Figure 2).² There are other uses of this band, such as for Fixed Services (“FS”), Fixed-Satellite Services (“FSS”), and Broadband Fixed Wireless Access (“BFWA”).

Figure 2: Frequency arrangements between 3300MHz-3800MHz



Source: ITU-R M.1036-7

3 Regulatory context

- 3.1 The 3600-3800MHz band has been allocated to IMT in Region 1.³ The band is allocated to mobile services (excluding aeronautical mobile services) on a co-primary basis with FS and FSS in the NRFP. There is provision for IMT in the entire 3600-3800MHz band. Within F3, spectrum can be allocated either wholly or partially to IMT.

² See Section 8 of ITU-R M.1036-7.

³ See WRC-19 Resolution 223: Footnotes 5.343A and 5.343B.

4 Economic feasibility

4.1 The indications are that the highest value use for this band is for IMT services. Auction results in Australia⁴, Croatia⁵, Nigeria⁶, Tanzania⁷, and the UK⁸, suggest that the band is highly valued for IMT. While there are other users of this band, including BFWA, FS, and FSS, various approaches to shared use of this band ensure encouraged investment into mobile communications.⁹ The aforementioned auction results are as follows, expressed in 2025 Rands:

4.1.1 In Australia, 1035 MHz of spectrum were awarded within the 3600-3800 MHz range to three licensees during the 2018 auction, with an approximate value of R62.06 million per 10 MHz.¹⁰

4.1.2 In Croatia, 200 MHz of spectrum were awarded within the 3600-3800 MHz range to two licensees during the 2021 auction, with an approximate value of R15.22 million per 10 MHz.¹¹

⁴ Australia Communications and Media Authority Auction summary - 3.6 GHz band (2018), available at: <https://www.acma.gov.au/auction-summary-36-ghz-band-2018>

⁵ See HAKOM awarded radio frequency spectrum for the fifth-generation mobile communications, available at: <https://www.hakom.hr/en/hakom-awarded-radio-frequency-spectrum-for-the-fifth-generation-mobile-communications/9081>

⁶ See: 5G: Mafab, MTN Emerge Winners in Nigeria's 3.5GHz Spectrum Auction, available at: <https://ncc.gov.ng/media-centre/press-releases/breaking-press-statement-35ghz-spectrum-mtn-mafab-pay-licences>

⁷ See Tanzania Communications Regulatory Authority Public Notice: Results of the auction of radio frequency spectrum in IMT band (3600-3800 MHz), available at: https://tcra.go.tz/uploads/documents/en-1752158214-Public_Note_Spectrum_Auction_1032107643381814476641029946369102376331752154874696.pdf

⁸ See Ofcom Award of the 700 MHz and 3.6-3.8 GHz spectrum bands, available at: <https://www.ofcom.org.uk/spectrum/spectrum-awards/700-mhz-and-3.6-3.8-ghz-auction>

⁹ See GSMA Spectrum Policy Trends 2023, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2023/02/Spectrum-Policy-Trends-2023-1.pdf>

¹⁰ In Australia's 2018 auction, 1035 MHz of spectrum were awarded for the value of AUD 4.51 million per 10 MHz. This figure is converted to 2018 rands using an exchange rate of AUD 0.0996/R and subsequently inflated to 2025 Rands. For exchange rate data, see: <https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates> ; for CPI data see: <https://www.statssa.gov.za/publications/P0141/CPIHistory.pdf>

¹¹ In Croatia's 2021 auction, 200 MHz of spectrum were awarded for the value of HRK 5.37 million per 10 MHz. This figure is converted to 2021 USD using an exchange rate of HRK 6.4/USD, then from USD to Rands using R14.8/USD and subsequently inflated to 2025 Rands. For exchange rate data, see: <https://data.worldbank.org/indicator/PA.NUS.FCRF> ; for CPI data see: <https://www.statssa.gov.za/publications/P0141/CPIHistory.pdf>

- 4.1.3 In Nigeria, 200 MHz of spectrum in the 3700-3800 MHz range were awarded to two licensees during the 2022 auction, with an approximate value of R476.75 million per 10 MHz.¹²
- 4.1.4 In Tanzania, 200 MHz of spectrum were awarded to three licensees during the 2025 auction, with an approximate value of R81.06 million per 10 MHz.¹³
- 4.1.5 In the UK, Ofcom awarded 120 MHz of spectrum within the 3600-3800 MHz range to three licensees during the 2021 auction, with an approximate value of R1.07 billion per 10 MHz.¹⁴
- 4.1.6 These assignments reflect the potential high value of this band for IMT services in South Africa.
- 4.2 In the United States of America (the "US"), satellite operators Intelstat and SES received 4.9 billion USD¹⁵ and 3.99 billion USD¹⁶, respectively, from 2021 to 2023 to clear spectrum in the 3.7-4.0GHz range for IMT deployment. This translates to R0.84/MHz per person in South Africa for Intelstat (approximately R16 billion) and R0.68/MHz per person in South Africa for SES (approximately R13 billion)¹⁷. At the same time, the true valuation of the spectrum in South Africa in the hands of satellite operators is not clear, since:
- 4.2.1 The US example related to 300MHz rather than the 200MHz being considered here,
- 4.2.2 The US has significantly higher demand for data services given the substantially higher gross domestic product per capita.

¹² In Nigeria's 2022 auction, 200 MHz of spectrum were awarded for the value of USD 27.36 million per 10MHz. This figure is converted to 2022 Rands using an exchange rate of R15.27/USD and subsequently inflated to 2025 Rands. For exchange rate data, see: <https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates> ; for CPI data see: <https://www.statssa.gov.za/publications/P0141/CPIHistory.pdf>

¹³ In Tanzania's 2025 auction, 200 MHz were awarded for the value of TZS 11.79 billion per 10 MHz. This figure is converted to 2025 Rands using an exchange rate of TZS149.37/R. For exchange rate data, see: <https://ws15.standardbank.co.za/finSnapShot/GetforexServlet>

¹⁴ In the UK's 2021 action, the 3720-3760 MHz range was awarded for the value of £176.4 million, equivalent to £44.1 million per 10 MHz. This figure is converted to 2021 Rands using an exchange rate of R19.81/£ and subsequently inflated to 2025 Rands. For exchange rate data, see: <https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates> ; for CPI data see: <https://www.statssa.gov.za/publications/P0141/CPIHistory.pdf>

¹⁵ See <https://www.intelsat.com/newsroom/intelsat-completes-c-band-spectrum-clearing-for-5g-deployment/>

¹⁶ See <https://www.ses.com/press-release/ses-completes-fccs-c-band-transition-clearing-and-relocation-plan-us>

¹⁷ These amounts were calculated by dividing the USD amount by the amount of spectrum (300MHz) and the 2023 US population (roughly 333 million) and converting to South African Rands (ZAR) at an exchange rate of R17.11 to the USD. These amounts were then multiplied by the amount of spectrum (300MHz) and the South African population (64 million).

- 4.3 It is also important to note that there are three broadband fixed wireless access ("BWFA") licensees in the band, licensed on a secondary basis, that have rolled out IMT systems in the band. These stakeholders, including rain, Mthinté, and One Telecom, provided information to the effect that they have invested large sums of money in innovative network infrastructure that services large numbers of consumers. Changing the primary allocation to IMT may trigger a need for them to migrate out of the band, unless they were to bid for and successfully win radio frequency spectrum through a competitive assignment process. Their rollout of IMT infrastructure in the band provides further evidence that the band's highest value use is for IMT.
- 4.4 Overall, while there is some uncertainty on the valuation of 200MHz of 3.6GHz spectrum in South Africa, given the auctions of the spectrum to IMT providers in other African countries, it is likely that its highest value use is for IMT.

5 Technical feasibility

- 5.1 There may be concerns of interference or incompatibility between IMT services and incumbent users, particularly with FS and FSS. The ITU has identified measures that can be implemented to mitigate interference.¹⁸ Techniques that can be implemented include:
- 5.1.1 Sector pointing to reduce emission power towards FSS earth station;
 - 5.1.2 Multiple input, multiple output ("MIMO") technique;
 - 5.1.3 Antenna downtilting;
 - 5.1.4 Low/medium power networks for local coverage;
 - 5.1.5 Filtering of unwanted emissions of IMT transmitting stations;
 - 5.1.6 Inter-service frequency separation; and
 - 5.1.7 Distance-based mitigation.
- 5.2 The ITU also suggests the compilation of a registry of all FSS earth stations to gather information regarding geographical location and radio frequency allocations. This will ensure that regulators are aware of incumbent users and can implement appropriate

¹⁸ See ITU Radiocommunication Study Groups. 2024. Mitigation measures between FSS and IMT in the frequency band 3 400-3 600 MHz. Document 4/28-E, available at: https://www.itu.int/dms_pub/itu-r/opb/rep/R-REP-S.2546-2025-PDF-E.pdf

coordination strategies¹⁹. The Global Satellite Operators' Association supports this recommendation.²⁰

- 5.3 Alternatively, incumbent users may be migrated from the band to allocate more spectrum to IMT. This transition may be difficult in some African countries, where satellite service providers are reliant on C-band frequencies (3400-4200MHz).²¹
- 5.4 There have been different approaches to shared use of this band, including for private networks in Finland and Germany. For instance, mobile operators were permitted to deploy a private network on request, or sub-license the spectrum for that area, which has ensured efficient spectrum use.²² In Tanzania, the 3600-3800MHz range has been reserved for mobile services, while other ranges of the C-band have been assigned to FS and FSS²³. In South Africa, incumbent users may need to be migrated from the band to clear more spectrum for IMT.²⁴

6 Maturity of the IMT ecosystem

- 6.1 The 3600-3800MHz has been allocated to mobile on a co-primary basis in all three ITU Regions. There are already many devices that support C-band frequencies.²⁵ As more countries allocate the band to IMT, either on a primary or secondary basis, the ecosystem is likely to continue growing.

7 International considerations

- 7.1 The band has been harmonised for mobile services in Europe since 2008²⁶. Other non-African countries in Region 1 that have already allocated the band to IMT include the

¹⁹ See ITU Radiocommunication Study Groups. 2024. Mitigation measures between FSS and IMT in the frequency band 3 400-3 600 MHz. Document 4/28-E, available at: https://www.itu.int/dms_pub/itu-r/opb/rep/R-REP-S.2546-2025-PDF-E.pdf

²⁰ See GSOA Adjacent band sharing 5G and FSS receiving stations in C-band, available at: <https://www.icasa.org.za/uploads/files/GSOA-supplementary-submission-on-Draft-Consultation-Document-on-Spectrum-Outlook.pdf>

²¹ See WRC-19 Resolution 246.

²² See GSMA Spectrum Policy Trends 2023, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2023/02/Spectrum-Policy-Trends-2023-1.pdf>

²³ See https://tcra.go.tz/uploads/text-editor/files/NATIONAL%20FREQUENCY%20ALLOCATION%20CHART,%202024_1717745723.pdf

²⁴ See Miller et al. 2021, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2023/07/Sub-Saharan-Africa-Roadmaps-for-5G-Spectrum.pdf>

²⁵ See ATU-R recommendation relating to International Mobile Telecommunications (IMT) Spectrum Roadmap For Africa. 2025, available at: <https://atuuat.africa/wp-content/uploads/2025/08/Project-4-IMT-Spectrum-Roadmap-for-Africa-Final.pdf>

²⁶ See CEPT Decision 2008/411/EC.

United Arab Emirates, Qatar, and Kuwait²⁷. In Africa, Tanzania²⁸ and Nigeria²⁹ have auctioned spectrum to mobile service providers. South Africa has an obligation, as per the Act, to harmonise its allocations of spectrum with other countries in Region 1.

8 Stakeholder comments

- 8.1 Refer to Table 2 for a summary of stakeholders' comments on the Draft IMT Roadmap 2024, Second Draft IMT Roadmap 2025, and Draft Radio Frequency Migration Plan 2024, alongside the Authority's response.

Table 2: Stakeholder comments and the Authority's responses for the 3600 – 3800 MHz band

Stakeholder comments	Authority's comment
Vodacom, Comsol, Cell C, Huawei, MTN, Qualcomm, rain, and Telkom support the allocation of this band for IMT. MTN explains that the band is adjacent to the 3500MHz band which was sold at high values at auction by the Authority. Huawei considers that allocating this band to IMT will complete the 3300-3800MHz corridor of IMT spectrum.	The Authority is in the process of developing an RFSAP for IMT services in this band.
Rain previously suggested, in their comment on the Draft IMT Roadmap 2024, that due to their deployment of the latest compatible 5G equipment, licensees such as themselves, Mthint, and One Telecom, do not need to be migrated from this band. rain further requests their direct participation in the feasibility study for this band, as they currently control 80MHz within this band. Rain's submission regarding the Second Draft IMT Roadmap 2025 contains similar comments.	It is not possible for coexistence between BFWA licensee incumbents and IMT within this band. Thus, incumbents licensed for BFWA in this band may need to migrate their services outside of the band.
MTN and Vodacom support the migration of incumbents from this band. Vodacom proposes that this should take place because some BWFA incumbents have small numbers of users, and the band is being denied to mass-market users. MTN proposes that migration recommendations take into account the life of the equipment deployed by licensees in this band.	
MTN, Telkom, and Comsol note that this band is allocated for BFWA use on a secondary basis, and that there are also FS PTP and/or FSS. Comsol explained that the European Conference of Postal and Telecommunications Regulators ("CEPT") supports allocation of the band to IMT, with the same conditions applying across the 3400-3800MHz band, and provided that there are no undue constraints on existing services. There is a PFD-limit and coordination procedures that protect fixed-satellite services. If the PFD limit at the border is exceeded, then coordination under no. 9.21 applies.	Stakeholders are encouraged to comment on coexistence with FS PTP and FSS in this band.

²⁷ See Kirtay et al. 2020. Upgrading mobile service allocation in 3600-3800 MHz, available at: <https://plumconsulting.co.uk/upgrading-mobile-service-allocation-in-3600-3800-mhz/>

²⁸ See https://tcra.go.tz/uploads/documents/en-1752158214-Public_Notice_Spectrum_Auction_1032107643381814476641029946369102376331752154874696.pdf

²⁹ See https://www.ncc.gov.ng/media-centre/press-releases/5g-mafab-mtn-emerge-winners-nigerias-35ghz-spectrum-auction?utm_source=chatgpt.com

Stakeholder comments	Authority's comment
GSOA previously expressed concern, in its response to the 2024 Draft IMT Roadmap, that deploying IMT services could create incompatibility issues for satellite uses, potentially resulting in the displacement of the latter from this band. The GSOA requested information on what protection would be put in place for satellite operators in this band. Further, C-band currently comprises 31% of satellite capacity in Africa. MTN notes that where allocations to different BFWA operators overlap, coordination is required between these operators, as well as FS PTP and FSS systems. Cell C urges the importance of setting out co-existence guidelines.	
Huawei has advised against the use of this band for private networks.	Private network licenses are currently being considered only a limited geographic basis. Stakeholders are encouraged to comment on this question.

9 Considerations in favour of and against IMT allocation

9.1 There are a number of advantages to allocating this band to IMT:

9.1.1 The NRFP proposed the allocation of the 3600-3800 MHz to IMT;

9.1.2 The allocation of this band to IMT is economically feasible;

9.1.3 The IMT ecosystem is likely to continue growing;

9.1.4 Other countries in Region 1 have already or are in the process of allocating this band to mobile services;

9.1.5 While some stakeholders voice concern, several stakeholders consider that the band should be allocated to IMT;

9.1.6 However, there are some disadvantages:

9.1.7 There is risk of interference when the band is shared amongst IMT and other users;

9.1.8 Other African countries are reliant on FS and FSS that operate within this band;

9.1.9 Incompatibility with satellite users is likely;

9.1.10 Incumbent users will potentially need to migrate outside of this band.

9.2 Despite the risk of interference with other users and likely incompatibility with satellite incumbents which means migration of incumbent users is probable, as well as the reliance of African countries on FS and FSS, auction results from other countries clearly indicate that the band is valuable for IMT which is supported by allocations in other Region 1 countries and stakeholder backing. The considerations in favour of the allocation of this band for IMT, therefore, outweigh those against doing so.



ELECTRONIC COMMUNICATIONS ACT, 2005 (ACT NO. 36 OF 2005)

**HEREBY ISSUES A NOTICE REGARDING THE FEASIBILITY STUDIES FOR
THE FREQUENCY BANDS ALLOCATED TO THE MOBILE
RADIOCOMMUNICATIONS SERVICES AND IDENTIFIED INTERNATIONAL
MOBILE TELECOMMUNICATIONS IN THE NATIONAL RADIO FREQUENCY
PLAN.**

1. The Independent Communications Authority of South Africa ("the Authority"), on 28 March 2024, published the Draft International Mobile Telecommunications (IMT) Roadmap, in Government Gazette No. 50413 (Notice 4584 of 2024) inviting Written Representations.
2. On 13 September 2024, in Government Gazette 51244 (Notice 5209 of 2024) the Authority published a "Notice Communicating the Outcome of the Consultation Process of the Draft IMT Roadmap 2025.
3. The Authority, in Government Gazette 53883 (Notice 3712 of 2025), published the Second Draft International Mobile Telecommunications (IMT) Roadmap 2025, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005).
4. Now therefore, the Authority, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005) hereby publishes the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan.
5. Interested persons are hereby invited to submit written representations on the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan in both

Microsoft Word (MS) and Portable Document Format (PDF) by no later than 16:00 on **4 September 2026**.

6. Persons making representations are further invited to indicate whether they require an opportunity to make oral representations.

7. Written representations or enquiries may be directed by email to:

Attention:

Mr Manyapelo Richard Makgotlho

e-mail: rmakgotlho@icasa.org.za

Copy: jdikgale@icasa.org.za

8. Where persons making representations require that their representation, or part thereof, be treated as confidential, then an application in terms of section 4D of the ICASA Act, 2000 (Act No 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation, together with a non-confidential, redacted version of the submission. If, however, the request for confidentiality is not granted, the person making the request will be allowed to withdraw the representation or document in question.

9. The guidelines for confidentiality requests are contained in Government Gazette Number No 41839 of 17 August 2018.

10. All written representations submitted to the Authority pursuant to this notice will be made available for inspection by interested persons from **11 September 2026** at the Authority's Library. Electronic copies of such representations are obtainable on request and printed versions will be obtainable on payment of a fee.

11. The feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan and the non-confidential representations will be uploaded to the Authority's website under this link: <https://www.icasa.org.za/legislation-and-regulations/radio-frequency-spectrum-plans/draft-radio-frequency-spectrum-plans>.



Mothibi G. Ramusi

CHAIRPERSON



Feasibility Study

4800 MHz to 4990 MHz

1 Glossary of Terms, Abbreviations, and Acronyms

Acronym	Explanation
3G	Third generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication relating to the ITU-R IMT-2000 specifications.
4G	Fourth Generation Network Technology relating to ITU-R IMT-Advanced specifications.
5G	Fifth Generation Network Technology, relating to the ITU-R IMT-2020 specifications.
6G	Sixth Generation Network Technology, relating to the ITU-R IMT-2030 specifications.
Act	Electronic Communications Act, 2005 (Act No. 36 of 2005).
AAS	Active antennae systems.
Administration	Members States of the International Telecommunications Union.
Allocation	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space <i>radiocommunication services</i> or the <i>radio astronomy service</i> under specified conditions.
Assignment	The authorisation given by the authority to a licensee to use a radio frequency or radio frequency channel under specified conditions.
ATU	African Telecommunications Union.
Authority	The Independent Communications Authority of South Africa.
BFWA	Broadband Fixed Wireless Access.
CEPT	Conference of European Posts and Telecommunications Authorities.
CRASA	Communications Regulators' Association of Southern Africa.
DC-MSS-IMT	Direct Connectivity between Mobile-Satellite Service space station and IMT UEs.
DECT	Digital Enhanced Cordless Telecommunications 1880 - 1900 MHz which is a digital communication standard, primarily used for creating cordless phone systems.
ECA	The Electronic Communications Act of South Africa, Act No 36 of 2005.
EIRP	Effective isotropically radiated power.
ERP	Effective radiated power, which is the product of the power supplied to an antenna and its gain relative to a half wave dipole in a given direction.
FDD	Frequency Division Duplex.
FWA	Fixed Wireless Access.
FS	Fixed Service.
FSS	Fixed Satellite Service.
Gbps	Gigabits per second.
GHz	Gigahertz of Radio Frequency Spectrum.
GSM	Global System for Mobile Communications, (originally Groupe Spécial Mobile), and is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe technologies for second generation (2G) digital cellular networks.
GSMA	Global System for Mobile Communications Association.
IMT	The name that encompasses IMT-2000, IMT-Advanced, IMT-2020 and IMT-2030 collectively known as International Mobile Telecommunications.
IMT-2000	The International Mobile Telecommunications, as envisioned in ITU-R Recommendation ITU-R M.687 and M.816.
IMT-Advanced	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.1645.
IMT-2020	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2083.

Acronym	Explanation
IMT-2030	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2160.
IoT	Internet of Things.
ITU	International Telecommunication Union.
ITU RR	International Telecommunication Union Radio Regulations.
kHz	Kilohertz of Radio Frequency Spectrum.
LTE	Long Term Evolution and is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies.
M2M	Machine to Machine.
MHz	Megahertz of Radio Frequency Spectrum.
MIMO	Multiple-Input and Multiple-Output and is the use of multiple antennas at both the transmitter and receiver to improve communication performance.
NRFP	The National Radio Frequency Plan for South Africa.
NTN	Non-terrestrial Network
PMSE	Programme making and special events applications (PMSE)
PRASA	Passenger Rail Agency of South Africa.
PTM	Point to Multipoint.
PTP	Point to Point.
Radio-communication	All electronic communication by means of radio waves.
RATG	Radio Access Technology Group.
Revocation Period	A period of transition during which incumbent users are migrated out of the band in question to clear sufficient spectrum for new service providers.
RFSAP	Radio Frequency Spectrum Assignment Plan.
RLAN	Radio Local Access Network and is the high data rate two-way (duplex) wireless data communications network.
SABRE	South African Band Re-Planning Exercise.
SADC	Southern African Development Community.
SADC RFSAP	Southern African Development Community Frequency Allocation Plan.
SAPS	South African Police Service.
Service licence	BS, ECS or ECNS licence.
SF	Single Frequency.
SFN	Single Frequency Network.
TDD	Time Division Duplex.
VSAT	Very small aperture terminal used for fixed satellite services.
WAS	Wireless Access Systems and is end-user radio connections to public or private core networks.

2 Introduction

- 2.1 The frequency arrangements for this band are set out in Section 9 of ITU-R M.1036-7. The frequency range 4800-4990MHz falls under band H1, which has a TDD band plan (see Figure 3)³⁰. This arrangement is suitable for IMT and has been identified as “*key mid-band spectrum for 5G expansion*.”³¹ The ITU has allocated this band to mobile services and FS on a primary basis, and to radio astronomy on a secondary basis.

Figure 3: Frequency arrangements between 4800MHz-4990MHz

MHz	4 800	4 990
H1	TDD	
	4 800	4 990

M.1036-09

Source: ITU-R M.1036

3 Regulatory context

- 3.1 This band has been allocated to mobile services on a primary basis in all three Regions, and has been identified for IMT in the NRFP. In Region 1 and in SA, the band is allocated to FS and mobile services on a co-primary basis, and to radio astronomy on a secondary basis. There is provision for IMT in the entire band. Spectrum can be allocated either wholly or partially to IMT.

4 Economic feasibility for IMT

- 4.1 The indications are that the highest value use for this band is for IMT services. While there are other users of this band, auction results in Hong Kong³² suggest that the band is highly valued for IMT. The auction results are as follows, expressed in 2025 Rands:
- 4.1.1 In Hong Kong, 80 MHz of spectrum in the 4840-4920 MHz range were awarded to two licensees during the 2019 auction, with an approximate value of R73.82 million per 10 MHz.³³

³⁰ See Section 9 of ITU-R M.1036-7.

³¹ See Miller et al. 2021, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2023/07/Sub-Saharan-Africa-Roadmaps-for-5G-Spectrum.pdf>

³² See Hong Kong Office of Communications Authority Auction of Radio Spectrum in the 4.9 GHz Band for the Provision of Public Mobile Services: Successful Bidder Notice, available at: https://www.ofca.gov.hk/en/news_info/press_releases/index_id_2014.html

³³ In Hong Kong's 2019 auction, 80 MHz of spectrum were awarded for the value of HK\$30 000 000 per 10MHz. This figure is converted to 2019 Rands using an exchange rate of HK\$0.5354/R and subsequently inflated to 2025

5 Technical feasibility

- 5.1 While the band has been identified for IMT, the identification does not establish priority for IMT. Any IMT use is subject to agreement with incumbent users.³⁴ This may pose a risk of interference. If the band is allocated to IMT, coordination strategies within the band and compatibility measures with adjacent frequency bands may be necessary.

6 Maturity of the IMT ecosystem

- 6.1 This band has a growing device ecosystem, with new IMT assignments in China and Japan.³⁵ There are 993 devices that support this band (n79).³⁶

7 International considerations

- 7.1 The band has been identified for IMT use in all 3 Regions. South Africa has an obligation, as per the Act, to harmonise spectrum allocation with other countries in Region 1.

8 Stakeholder comments

- 8.1 Refer to Table 3 below for a summary of stakeholders' comments on the Draft IMT Roadmap 2024, Second Draft IMT Roadmap 2025, and Draft Radio Frequency Migration Plan 2024, alongside the Authority's response.

Table 3: Stakeholder comments and the Authority's responses for the 4800 – 4990 MHz band

Stakeholder comments	Authority's comment
Vodacom, Huawei, MTN, Cell C, and Telkom support the allocation of this band for IMT. Vodacom further recommends the expedited migration of current incumbents who are not licensed to provide IMT services in this band. Cell C recommends that coexistence and migration guidelines are issued for this band. MTN, Vodacom, and Huawei note the moderate, but growing device ecosystem due to increased assignments in the Asia-Pacific and Latin American regions, most notably in China. MTN comments that the band is likely to have similar characteristics to the highly-valued IMT3500MHz band. Similarly, Huawei comments that this band complements the 3300-3800MHz corridor.	The Authority is in the process of developing an RFSAP for IMT services in this band.

Rands. For exchange rate data, see: <https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates> ; for CPI data see: <https://www.statssa.gov.za/publications/P0141/CPIHistory.pdf>

³⁴ See WRC-19 Footnote 5.441B.

³⁵ See GSMA Spectrum Policy Trends 2023, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2023/02/Spectrum-Policy-Trends-2023-1.pdf>

³⁶ See ATU-R recommendation relating to International Mobile Telecommunications (IMT) Spectrum Roadmap For Africa. 2025, available at: <https://atuuat.africa/wp-content/uploads/2025/08/Project-4-IMT-Spectrum-Roadmap-for-Africa-Final.pdf>

9 Considerations in favour of and against IMT allocation

9.1 There are a number of advantages to allocating this band to IMT, including:

9.1.1 The NRFP identified 4800-4990 MHz for IMT;

9.1.2 The allocation of the band to IMT is economically feasible;

9.1.3 Most stakeholders consider the band to be suitable for IMT;

9.1.4 There is a moderate, but growing, device ecosystem;

9.2 However, there is risk of interference with incumbent users if they are not migrated from the band.

9.3 Despite the risk of interference with incumbent users, the band is clearly valuable for IMT, and its allocation is supported by stakeholders. The considerations in favour of the allocation of this band for IMT, therefore, outweigh those against doing so.



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Mothibi G. Ramusi

CHAIRPERSON



Feasibility Study

6425 MHz to 7125 MHz

1 Glossary of Terms, Abbreviations, and Acronyms

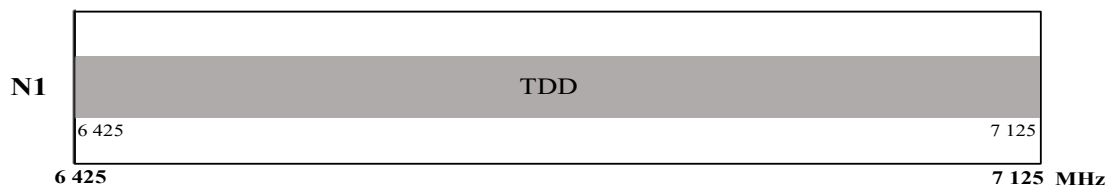
Acronym	Explanation
3G	Third generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication relating to the ITU-R IMT-2000 specifications.
4G	Fourth Generation Network Technology relating to ITU-R IMT-Advanced specifications.
5G	Fifth Generation Network Technology, relating to the ITU-R IMT-2020 specifications.
6G	Sixth Generation Network Technology, relating to the ITU-R IMT-2030 specifications.
Act	Electronic Communications Act, 2005 (Act No. 36 of 2005).
AAS	Active antennae systems.
Administration	Members States of the International Telecommunications Union.
Allocation	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space <i>radiocommunication services</i> or the <i>radio astronomy service</i> under specified conditions.
Assignment	The authorisation given by the authority to a licensee to use a radio frequency or radio frequency channel under specified conditions.
ATU	African Telecommunications Union.
Authority	The Independent Communications Authority of South Africa.
BFWA	Broadband Fixed Wireless Access.
CEPT	Conference of European Posts and Telecommunications Authorities.
CRASA	Communications Regulators' Association of Southern Africa.
DC-MSS-IMT	Direct Connectivity between Mobile-Satellite Service space station and IMT UEs.
DECT	Digital Enhanced Cordless Telecommunications 1880 - 1900 MHz which is a digital communication standard, primarily used for creating cordless phone systems.
ECA	The Electronic Communications Act of South Africa, Act No 36 of 2005.
EIRP	Effective isotropically radiated power.
ERP	Effective radiated power, which is the product of the power supplied to an antenna and its gain relative to a half wave dipole in a given direction.
FDD	Frequency Division Duplex.
FWA	Fixed Wireless Access.
FS	Fixed Service.
FSS	Fixed Satellite Service.
Gbps	Gigabits per second.
GHz	Gigahertz of Radio Frequency Spectrum.
GSM	Global System for Mobile Communications, (originally Groupe Spécial Mobile), and is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe technologies for second generation (2G) digital cellular networks.
GSMA	Global System for Mobile Communications Association.
IMT	The name that encompasses IMT-2000, IMT-Advanced, IMT-2020 and IMT-2030 collectively known as International Mobile Telecommunications.
IMT-2000	The International Mobile Telecommunications, as envisioned in ITU-R Recommendation ITU-R M.687 and M.816.
IMT-Advanced	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.1645.
IMT-2020	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2083.

Acronym	Explanation
IMT-2030	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2160.
IoT	Internet of Things.
ITU	International Telecommunication Union.
ITU RR	International Telecommunication Union Radio Regulations.
kHz	Kilohertz of Radio Frequency Spectrum.
LTE	Long Term Evolution and is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies.
M2M	Machine to Machine.
MHz	Megahertz of Radio Frequency Spectrum.
MIMO	Multiple-Input and Multiple-Output and is the use of multiple antennas at both the transmitter and receiver to improve communication performance.
NRFP	The National Radio Frequency Plan for South Africa.
NTN	Non-terrestrial Network
PMSE	Programme making and special events applications (PMSE)
PRASA	Passenger Rail Agency of South Africa.
PTM	Point to Multipoint.
PTP	Point to Point.
Radio-communication	All electronic communication by means of radio waves.
RATG	Radio Access Technology Group.
Revocation Period	A period of transition during which incumbent users are migrated out of the band in question to clear sufficient spectrum for new service providers.
RFSAP	Radio Frequency Spectrum Assignment Plan.
RLAN	Radio Local Access Network and is the high data rate two-way (duplex) wireless data communications network.
SABRE	South African Band Re-Planning Exercise.
SADC	Southern African Development Community.
SADC RFSAP	Southern African Development Community Frequency Allocation Plan.
SAPS	South African Police Service.
Service licence	BS, ECS or ECNS licence.
SF	Single Frequency.
SFN	Single Frequency Network.
TDD	Time Division Duplex.
VSAT	Very small aperture terminal used for fixed satellite services.
WAS	Wireless Access Systems and is end-user radio connections to public or private core networks.

2 Introduction

- 2.1 The frequency range 6425-7125MHz has a TDD band plan (N1). The frequency arrangement is shown below on Figure 4. The band is used for FS and FSS. This band is considered to be “key mid-band spectrum for 5G expansion” in Africa.³⁷

Figure 4: Frequency arrangements between 6425MHz-7125MHz



Source: ITU WG5D

3 Regulatory context

- 3.1 The ITU has identified this band for IMT. The NRFP for this band has primary allocations for FS, FSS, and mobile services.

4 Economic feasibility

- 4.1 It is likely that the highest value use for this band is a combination of outdoor IMT services and FSS and FS links being deployed on a coordinated basis.
- 4.2 Auction results in Hong Kong³⁸ suggest that the band is highly valued for IMT. Specifically, 300 MHz of spectrum in the 6570-7025 MHz range were awarded to three licensees during the 2024 auction, with an approximate value of R50.25 million per 10 MHz (expressed in 2025 Rands).³⁹
- 4.3 In order to provide an indicative valuation of assigning the band to IMT, 500MHz of mid-band spectrum was added to the Authority's call termination rate cost model.⁴⁰ This

³⁷ See Miller et al. 2021, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2023/07/Sub-Saharan-Africa-Roadmaps-for-5G-Spectrum.pdf>

³⁸ See Hong Kong Office of Communications Authority Auction of Radio Spectrum in the 6/7 GHz Band for the Provision of Public Mobile Services: Successful Bidder Notice, available at: https://www.ofca.gov.hk/en/news_info/press_releases/index_id_2365.html

³⁹ In Hong Kong's 2024 auction, 300 MHz of spectrum were awarded for the value of HK\$21 000 000 per 10MHz. This figure is converted to 2024 Rands using an exchange rate of HK\$0.4314/R and subsequently inflated to 2025 Rands. For exchange rate data, see: <https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates> ; for CPI data see: <https://www.statssa.gov.za/publications/P0141/CPIHistory.pdf>

⁴⁰ See <https://www.icasa.org.za/legislation-and-regulations/bu-mobile-cost-model-v6-2>

resulted in additional TDD spectrum being used by the hypothetical mobile network operator, which is able to avoid costs of approximately R2.3bn. This would result in avoided costs of almost R7bn if awarded to three operators. This suggests that this spectrum is highly valued for IMT.

4.4 The band is thus highly valued for IMT services.

5 Technical feasibility

5.1 The use of this band for IMT may not come at the expense of migration of all other services (FS in the entire band, and FSS in the band 6425-7075MHz), given the opportunities for coordination and coexistence. In particular, the ITU has drafted a document that provides guidance on coordination between FS and IMT stations.⁴¹ The ITU has also identified measures that can be implemented to mitigate interference in related bands.⁴² Techniques that can be implemented include:

5.1.1 Sector pointing to reduce emission power towards FSS earth station;

5.1.2 Multiple input, multiple output (“MIMO”) technique;

5.1.3 Antenna downtilting;

5.1.4 Low/medium power networks for local coverage;

5.1.5 Filtering of unwanted emissions of IMT transmitting stations;

5.1.6 Inter-service frequency separation; and

5.1.7 Distance-based mitigation.

5.2 The ITU also suggests the compilation of a registry of all FSS earth stations to gather information regarding geographical location and radio frequency allocations. This will ensure that regulators are aware of incumbent users and can implement appropriate coordination strategies⁴³. The Global Satellite Operators' Association supports this recommendation.⁴⁴

⁴¹ See ITU Radiocommunication Study Groups. 2025. Guidance for national and bilateral coordination of stations in the fixed service with IMT stations in the frequency band 6 425-7 125 MHz. Document 5/88-E

⁴² See ITU Radiocommunication Study Groups. 2024. Mitigation measures between FSS and IMT in the frequency band 3 400-3 600 MHz. Document 4/28-E, available at: https://www.itu.int/dms_pub/itu-r/opb/rep/R-REP-S.2546-2025-PDF-E.pdf

⁴³ See ITU Radiocommunication Study Groups. 2024. Mitigation measures between FSS and IMT in the frequency band 3 400-3 600 MHz. Document 4/28-E, available at: https://www.itu.int/dms_pub/itu-r/opb/rep/R-REP-S.2546-2025-PDF-E.pdf

⁴⁴ See GSOA Adjacent band sharing 5G and FSS receiving stations in C-band, available at: <https://www.icasa.org.za/uploads/files/GSOA-supplementary-submission-on-Draft-Consultation-Document-on-Spectrum-Outlook.pdf>

5.3 Alternatively, incumbent users may be migrated from the band to allocate more spectrum to IMT.

6 Maturity of the IMT ecosystem

6.1 The device ecosystem is limited. There are no devices that support this band.⁴⁵

7 International considerations

7.1 The band 6425-7125MHz was identified for IMT at WRC-23 (Resolution 220). The allocation of the band for IMT was also the African common proposal to WRC-23 in relation to allocation to mobile and identification for IMT.

8 Stakeholder comments

8.1 Refer to Table 4 for a summary of stakeholders' comments on the Draft IMT Roadmap 2024, Second Draft IMT Roadmap 2025, and Draft Radio Frequency Migration Plan 2024, alongside the Authority's response.

Table 4: Stakeholder comments and the Authority's responses for the 6425 – 7125 MHz band

Stakeholder comments	Authority's comment
Huawei, Telkom, Cell C, Qualcomm, and MTN support the allocation of this band for IMT. Vodacom supports the feasibility study yet recommends a consultative process before the migration of existing incumbents. MTN and Vodacom also explain that this is a key capacity expansion band for IMT services. MTN explains that the large and contiguous nature of the block means that it is valuable for IMT, suggesting that large blocks of 200MHz may be needed by mobile network operators in future. Huawei comments on a range of countries that are in the process of allocating either the entire band or the bulk of it to IMT.	The Authority is in the process of developing an RFSAP for IMT services in this band given that it has been identified for IMT in WRC-23.
Huawei supports a feasibility study regarding the coexistence and migration frameworks for fixed services.	The Authority will consider how coexistence / shared use of the band could be included in the RFSAP. See Section 5. Stakeholders are encouraged to share further comment in this regard.
MTN encourages the development of a migration plan for incumbent FS links, taking into account equipment life and alternative spectrum allocations. Telkom cites studies indicating not all FS links will need to be migrated, as these could coexist with IMT in rural areas. Vodacom comments that a feasibility needs to be carried out on how microwave assignments in 6GHz and lower 7GHz can be migrated to suitable alternatives sub-8GHz that achieve similar throughputs and distances.	
Viasat has previously expressed, in its response to the Draft Radio Frequency Migration Plan 2024, that it does not support the deployment of this band for IMT due to its current use for	

⁴⁵ See ATU-R recommendation relating to International Mobile Telecommunications (IMT) Spectrum Roadmap For Africa. 2025, available at: <https://atuuat.africa/wp-content/uploads/2025/08/Project-4-IMT-Spectrum-Roadmap-for-Africa-Final.pdf>

Stakeholder comments	Authority's comment
mobile satellite services. The Dynamic Spectrum Alliance (DSA) previously disputed, in its response to the Draft Radio Frequency Migration Plan 2024, that the WRC-23 has allocated the use of this band for IMT on a primary basis, citing that as per WRC-23, identification for IMT should not take preference over the current allocation of the band to RLAN/WAS. The DSA further urged that the band should be used for RLAN/WAS to avoid migration costs. Similarly, the Wireless Access Providers' Association of South Africa (WAPA) suggests that despite the identification by WRC-23, this band is not suitable for IMT, citing the lack of device ecosystem. WAPA further suggests that IMT allocation will unavoidably result in interference for incumbents. WAPA further notes that 25% of the spectrum available in the band was unsold in the Hong Kong auction, and the assignment process in Brazil has been delayed. The Wi-Fi Alliance (WFA) previously proposed using the band for RLAN/WAS, in its response to the 2024 Draft Radio Frequency Migration Plan. The WFA reiterated the high costs involved in an unavoidable migration process should the band be deployed for IMT. The WFA further cited the advantages of the use of this band by RLAN/WAS, such as the support of over 296 million devices that will be introduced to the Wi-Fi 7 market in 2024. The performance of Wi-Fi 7, as per the WFA, would be reduced substantively without access to the entire band. However, Telkom does not support the use of this band for RLAN/WAS systems, since coordination is not possible between IMT and RLAN/WAS in the same area, and permitting RLAN/WAS will thus negatively impact on the valuation of spectrum for IMT. Similarly, Vodacom considers that there is a proliferation of RLAN/WAS devices that would make future use of IMT difficult in this band, and it is thus important for the Authority not to permit RLAN/WAS in the band. MTN adopts a similar position, setting out that coordination between IMT and RLAN/WAS is not feasible. Huawei suggests that while there are possibilities for shared use, this requires the deployment of sophisticated methods. Huawei also comments that the lower-6GHz band, already allocated to RLAN/WAS, is currently unlikely to be substantially used, and so it is unnecessary to expand the use of RLAN/WAS to the upper-GHz band too.	The Authority will not consider spectrum usage by RLAN/WAS systems as this band has been allocated to IMT on a primary basis in the NRFP.

9 Considerations in favour of and against IMT allocation

9.1 There are a number of advantages to allocating this band to IMT services:

9.1.1 The band has been identified for IMT use by the ITU and in the NRFP;

9.1.2 The band is likely of high value for IMT;

9.1.3 Shared use with incumbent users is technically feasible;

9.2 There are also several disadvantages:

- 9.2.1 The device ecosystem is limited;
- 9.2.2 There is a lack of regional harmonisation of this band;
- 9.2.3 While most IMT stakeholders consider the band suitable for IMT, some stakeholders do not.
- 9.3 Despite the limited device ecosystem and concern from incumbent stakeholders regarding alternative applications, it is evident from auction results in Hong Kong and the estimated avoided costs of using the band for IMT suggest that it is highly valued for IMT. The considerations in favour of the allocation of this band for IMT, therefore, outweigh those against doing so.



ELECTRONIC COMMUNICATIONS ACT, 2005 (ACT NO. 36 OF 2005)

**HEREBY ISSUES A NOTICE REGARDING THE FEASIBILITY STUDIES FOR
THE FREQUENCY BANDS ALLOCATED TO THE MOBILE
RADIOCOMMUNICATIONS SERVICES AND IDENTIFIED INTERNATIONAL
MOBILE TELECOMMUNICATIONS IN THE NATIONAL RADIO FREQUENCY
PLAN.**

1. The Independent Communications Authority of South Africa ("the Authority"), on 28 March 2024, published the Draft International Mobile Telecommunications (IMT) Roadmap, in Government Gazette No. 50413 (Notice 4584 of 2024) inviting Written Representations.
2. On 13 September 2024, in Government Gazette 51244 (Notice 5209 of 2024) the Authority published a "Notice Communicating the Outcome of the Consultation Process of the Draft IMT Roadmap 2025.
3. The Authority, in Government Gazette 53883 (Notice 3712 of 2025), published the Second Draft International Mobile Telecommunications (IMT) Roadmap 2025, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005).
4. Now therefore, the Authority, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005) hereby publishes the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan.
5. Interested persons are hereby invited to submit written representations on the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan in both

Microsoft Word (MS) and Portable Document Format (PDF) by no later than 16:00 on **4 September 2026**.

6. Persons making representations are further invited to indicate whether they require an opportunity to make oral representations.

7. Written representations or enquiries may be directed by email to:

Attention:

Mr Manyapelo Richard Makgotlho

e-mail: rmakgotlho@icasa.org.za

Copy: jdikgale@icasa.org.za

8. Where persons making representations require that their representation, or part thereof, be treated as confidential, then an application in terms of section 4D of the ICASA Act, 2000 (Act No 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation, together with a non-confidential, redacted version of the submission. If, however, the request for confidentiality is not granted, the person making the request will be allowed to withdraw the representation or document in question.

9. The guidelines for confidentiality requests are contained in Government Gazette Number No 41839 of 17 August 2018.

10. All written representations submitted to the Authority pursuant to this notice will be made available for inspection by interested persons from **11 September 2026** at the Authority's Library. Electronic copies of such representations are obtainable on request and printed versions will be obtainable on payment of a fee.

11. The feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan and the non-confidential representations will be uploaded to the Authority's website under this link: <https://www.icasa.org.za/legislation-and-regulations/radio-frequency-spectrum-plans/draft-radio-frequency-spectrum-plans>.



Mothibi G. Ramusi

CHAIRPERSON



Feasibility Study

24.25 GHz to 27.5 GHz

1 Glossary of Terms, Abbreviations, and Acronyms

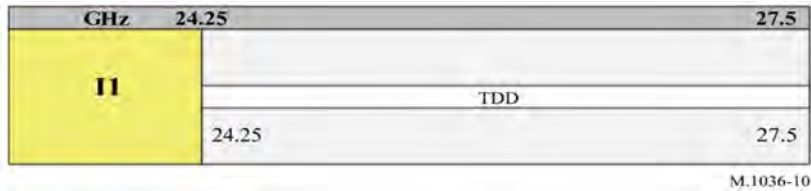
Acronym	Explanation
3G	Third generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication relating to the ITU-R IMT-2000 specifications.
4G	Fourth Generation Network Technology relating to ITU-R IMT-Advanced specifications.
5G	Fifth Generation Network Technology, relating to the ITU-R IMT-2020 specifications.
6G	Sixth Generation Network Technology, relating to the ITU-R IMT-2030 specifications.
Act	Electronic Communications Act, 2005 (Act No. 36 of 2005).
AAS	Active antennae systems.
Administration	Members States of the International Telecommunications Union.
Allocation	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space <i>radiocommunication services</i> or the <i>radio astronomy service</i> under specified conditions.
Assignment	The authorisation given by the authority to a licensee to use a radio frequency or radio frequency channel under specified conditions.
ATU	African Telecommunications Union.
Authority	The Independent Communications Authority of South Africa.
BFWA	Broadband Fixed Wireless Access.
CEPT	Conference of European Posts and Telecommunications Authorities.
CRASA	Communications Regulators' Association of Southern Africa.
DC-MSS-IMT	Direct Connectivity between Mobile-Satellite Service space station and IMT UEs.
DECT	Digital Enhanced Cordless Telecommunications 1880 - 1900 MHz which is a digital communication standard, primarily used for creating cordless phone systems.
ECA	The Electronic Communications Act of South Africa, Act No 36 of 2005.
EIRP	Effective isotropically radiated power.
ERP	Effective radiated power, which is the product of the power supplied to an antenna and its gain relative to a half wave dipole in a given direction.
FDD	Frequency Division Duplex.
FWA	Fixed Wireless Access.
FS	Fixed Service.
FSS	Fixed Satellite Service.
Gbps	Gigabits per second.
GHz	Gigahertz of Radio Frequency Spectrum.
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GSMA	Global System for Mobile Communications Association.
IMT	The name that encompasses IMT-2000, IMT-Advanced, IMT-2020 and IMT-2030 collectively known as International Mobile Telecommunications.
IMT-2000	The International Mobile Telecommunications, as envisioned in ITU-R Recommendation ITU-R M.687 and M.816.
IMT-Advanced	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.1645.
IMT-2020	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2083.

Acronym	Explanation
IMT-2030	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2160.
IoT	Internet of Things.
ITU	International Telecommunication Union.
ITU RR	International Telecommunication Union Radio Regulations.
kHz	Kilohertz of Radio Frequency Spectrum.
LTE	Long Term Evolution and is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies.
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PRASA	Passenger Rail Agency of South Africa.
PTM	Point to Multipoint.
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Radio-communication	All electronic communication by means of radio waves.
RATG	Radio Access Technology Group.
Revocation Period	A period of transition during which incumbent users are migrated out of the band in question to clear sufficient spectrum for new service providers.
RFSAP	Radio Frequency Spectrum Assignment Plan.
RLAN	Radio Local Access Network and is the high data rate two-way (duplex) wireless data communications network.
SABRE	South African Band Re-Planning Exercise.
SADC	Southern African Development Community.
SADC RFSAP	Southern African Development Community Frequency Allocation Plan.
SAPS	South African Police Service.
Service licence	BS, ECS or ECNS licence.
SF	Single Frequency.
SFN	Single Frequency Network.
TDD	Time Division Duplex.
VSAT	Very small aperture terminal used for fixed satellite services.
WAS	Wireless Access Systems and is end-user radio connections to public or private core networks.

2 Introduction

2.1 This band is arrangement I1, the frequency range 24.25-27.5 GHz (“26 GHz”), as shown on Figure 5 below. I1 has a TDD band plan. This band is suitable for IMT. It falls under the high-frequency range from 24-100GHz known as millimetre wave (“mmWave”) which is ideal for IMT use⁴⁶. The band is currently mainly used for FS links, and it is also used for mobile and inter-satellite services (excluding aeronautical mobile), and FSS.

Figure 5: Frequency arrangements between 24.25GHz-27.5GHz



Source: ITU-R M.1036

3 Regulatory context

3.1 The 26 GHz band is allocated to mobile services on a primary basis in all three ITU regions. This band has been identified for IMT in the NRP. There is provision for IMT in the entire band.

4 Economic feasibility for IMT

4.1 The benefits of using this band for IMT are considerable. While there are other users of this band, such as FS and FSS, auction results in the Austria⁴⁷, Croatia⁴⁸, Finland⁴⁹, and the UK⁵⁰ suggest that the band is highly valued for IMT.⁵¹ The 26 GHz band is

⁴⁶ See GSA. 2025. Hot Topic Millimetre Wave, available at: <https://gsacom.com/paper/millimetre-wave-spectrum-july-2025/>

⁴⁷ See Austria Telecommunications and Postal Division Auction result 26 GHz/3600 MHz., available at: https://www.rtr.at/TKP/was_wir_tun/telekommunikation/spectrum/procedures/26G_3600M_2024/Results.en.html

⁴⁸ See HAKOM awarded radio frequency spectrum for the fifth generation mobile communications, available at: <https://www.hakom.hr/en/hakom-awarded-radio-frequency-spectrum-for-the-fifth-generation-mobile-communications/9081>

⁴⁹ See Finland Ministry of Transport and Communications Press Release: 5G spectrum auction concluded, available at: <https://valtioneuvosto.fi/en/-/1410829/5g-spectrum-auction-concluded-1206517>

⁵¹ Note that a value per 10 MHz cannot be calculated from the UK auction results due to the reporting format used by Ofcom.

considered to be one of the “*most promising*” bands for IMT-2020 services.⁵² The aforementioned auction results are as follows, expressed in 2025 Rands:

- 4.1.1 In Austria, 1 400 MHz of spectrum in the 26 GHz range were awarded to three licensees during the 2024 auction, with an approximate value of R2.45 million per 10 MHz.⁵³
- 4.1.2 In Croatia, 1 000 MHz of spectrum were awarded to four licensees during the 2021 auction, with an approximate value of R1.07 million per 10MHz.⁵⁴
- 4.1.3 In Finland, 2 400 MHz of spectrum in the 25.1-27.5 GHz were awarded to three licensees during the 2020 auction, with an approximate value of R2.11 million per 10 MHz.⁵⁵
- 4.2 Although the African Telecommunications Union (“ATU”) has encouraged the allocation of this band to IMT⁵⁶, the use of mmWave in Africa is hampered by deployment costs and economic barriers.⁵⁷

5 Technical feasibility

- 5.1 While the band has been identified for IMT in all three regions, IMT services do not have priority use of the band, nor does the identification prevent the application of other services within the band.⁵⁸ Therefore, there is a risk of interference with incumbent users. In the UK, Ofcom has allocated the bulk of the band (25.1GHz-27.5GHz) to IMT in

⁵² See GSMA. 2018. IMT Spectrum Between 24.25 and 86 GHz GSMA Public Policy Position. 2018. Available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2018/12/AI-1.13-Positions.pdf>

⁵³ In Austria’s 2024 auction, 1400 MHz of spectrum were awarded for the value of EUR115 736 per 10MHz. This figure is converted to 2024 Rands using an exchange rate of R20.5562/EUR and subsequently inflated to 2025 Rands. For exchange rate data, see: <https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates> ; for CPI data see: <https://www.statssa.gov.za/publications/P0141/CPIHistory.pdf>

⁵⁴ In Croatia’s 2021 auction, 1000 MHz of spectrum were awarded for the value of HRK376 881 per 10 MHz. This figure is converted to 2021 USD using an exchange rate of HRK 6.4/USD, then from USD to Rands using R14.8/USD and subsequently inflated to 2025 Rands. For exchange rate data, see: <https://data.worldbank.org/indicator/PA.NUS.FCRF> ; for CPI data see: <https://www.statssa.gov.za/publications/P0141/CPIHistory.pdf>

⁵⁵ In Finland’s 2020 Auction, 2400 MHz of spectrum were awarded for the value of EUR87 500 per 10 MHz. This figure is converted to 2020 Rands using an exchange rate of R18.9371/EUR and subsequently inflated to 2025 Rands. For exchange rate data, see: <https://www.resbank.co.za/en/home/what-we-do/statistics/key-statistics/selected-historical-rates> ; for CPI data see: <https://www.statssa.gov.za/publications/P0141/CPIHistory.pdf>

⁵⁶ See ATU-R Recommendation 005-0. 2021, available at: https://atuuat.africa/wp-content/uploads/2021/08/En_ATU-R-Recommendation-005-0.pdf

⁵⁷ See GSA. 2025. Hot Topic Millimetre Wave, available at: <https://gsacom.com/paper/millimetre-wave-spectrum-july-2025/> 4646

⁵⁸ See WRC-19 Footnote 5.532AB.

dense areas where mmWave deployments are most likely, while permitting shared access in 25.25GHz-25.1GHz across the country, and shared access in the remainder of the band outside of dense urban areas⁵⁹. Incumbents in dense urban areas in the exclusive part of the band must migrate out of the band.

- 5.2 If this band is allocated to IMT in South Africa, it is likely that incumbent users in high-demand areas, such as towns and metropolitan areas, will need to be migrated. This transition process may be informed by Ofcom's interference and coordination strategy for the 26GHz range⁶⁰:
 - 5.2.1 A Revocation Period (i.e., period of transition) is defined. By the end of this period, incumbent users will be transitioned out of the band to clear sufficient spectrum for mobile services.
 - 5.2.2 During the Revocation Period, coordination zone maps are developed to determine whether IMT deployment will cause harmful interference to incumbent users.
 - 5.2.3 If there is no risk of interference, the operator can proceed with deployment.
 - 5.2.4 If there is a risk of interference, the operator must submit a detailed technical coordination plan and can only proceed with deployment once the coordination plan has been approved.
- 5.3 This strategy can help to ensure that harmful interference between mobile services and incumbent users is minimized, and to assist with the smooth transition of FS and FSS outside of the band.

6 Maturity of the IMT ecosystem

- 6.1 The device ecosystem is moderately developed and growing. There are 57 devices that support band plan n258 (24.25-27.5GHz), and the ATU notes that this band is already allocated to IMT under regional or national licenses in countries outside of Africa.⁶¹ However, spectrum allocation is not as harmonised as it is for the mid-band frequency

⁵⁹ See Ofcom. 2025, Enabling mmWave spectrum for new uses, available at: <https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-1-10-weeks/237135-enabling-mmwave-spectrum-for-new-uses/associated-documents/nov-204-updates/annex-5-coordination-procedures-under-the-spectrum-access-high-density-26-ghz-and-40-ghz-licences-sept-25.pdf?v=402787>

⁶⁰ See Ofcom. 2025, Enabling mmWave spectrum for new uses, available at: <https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-1-10-weeks/237135-enabling-mmwave-spectrum-for-new-uses/associated-documents/nov-204-updates/annex-5-coordination-procedures-under-the-spectrum-access-high-density-26-ghz-and-40-ghz-licences-sept-25.pdf?v=402787>

⁶¹ See ATU-R recommendation relating to International Mobile Telecommunications (IMT) Spectrum Roadmap For Africa. 2025, available at: <https://atuuat.africa/wp-content/uploads/2025/08/Project-4-IMT-Spectrum-Roadmap-for-Africa-Final.pdf>

ranges. Europe has pioneered 26GHz IMT allocation in Region 1, while in Africa and the Middle East, the use of mmWave has been conducted primarily on a trial basis⁶².

7 International considerations

- 7.1 This band was identified for IMT in Resolution 224 of WRC-19. The ATU has recommended that a contiguous block of 800-1000MHz of spectrum within this band be assigned to licensees⁶³ In the UK, three operators have each been assigned blocks of 800MHz of spectrum in this range for IMT services in high density areas.⁶⁴ South Africa is obligated, as per the Act, to harmonise its frequency allocation with those of other countries in the Region.

8 Stakeholder comments

- 8.1 Table 5 below shows a summary of various stakeholder comments on the Draft IMT Roadmap 2024, Second Draft IMT Roadmap 2025, and Draft Radio Frequency Migration Plan 2024, alongside the Authority's response.

Table 5: Stakeholder comments and the Authority's responses for the 24.25 – 27.5 GHz band

Stakeholder comments	Authority's comment
MTN, Telkom, Vodacom, Huawei, Qualcomm, and Cell C support the allocation of this band for IMT. Vodacom cites that the device ecosystem for this band already encompasses a fairly wide selection. Further, MTN and Vodacom recommend that the Authority places focus on the 26.5-27.5 GHz subrange due to its popularity in a number of countries. Vodacom comments that there are 60 devices supporting band n257 and 64 device variants supporting n258. Huawei notes that this band has the most developed ecosystem of the mmWave bands, but that even though spectrum in the band has been released in European markets, deployments are modest.	The Authority is in the process of developing an RFSAP for IMT services in this band given that it has been recommended for IMT in WRC-23.
Telkom proposes that coordination with FS links may be possible in this band, particularly outside of high-density areas. Telkom further notes that the current main use of this band is for FS links. MTN notes that while migration may need to take place for some users, there are portions of the band that can be fast-tracked for assignment. Vodacom proposes that detailed use of the band for fixed links be provided for transparency purposes. Cell C notes that measures should be put in place to ensure compatibility with passive services and FSS gateway stations in adjacent bands.	Coordination / coexistence will be considered during the course of developing the feasibility study and RFSAP for the band, as discussed in Section 5. The current main use of this band has been reflected as FS links. Stakeholders are encouraged to provide comments in this regard.

⁶² See GSA. 2025. Hot Topic Millimetre Wave, available at: <https://gsacom.com/paper/millimetre-wave-spectrum-july-2025/>

⁶³ See ATU Recommendation 005. 2021, available at: https://atuuat.africa/wp-content/uploads/2021/08/En_ATU-R-Recommendation-005-0.pdf

⁶⁴ See Ofcom. 2025. Award of the mmWave (26 GHz and 40 GHz) spectrum bands, available at: <https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-1-10-weeks/237135-enabling-mmwave-spectrum-for-new-uses/associated-documents/oct-25-updates/regulation-120-results-of-the-mmwave-auction.pdf?v=406750>

9 Considerations in favour of and against IMT allocation

9.1 There are a number of advantages to allocating the band for IMT:

9.1.1 The band has been allocated to mobile services in all three regions;

9.1.2 The band has been identified for IMT in the NRFP;

9.1.3 There is a high likelihood that the highest value use of the band is for IMT rather than alternatives such as FS or FSS;

9.1.4 There is a possibility of shared/coordinated use, including on a geographic basis;

9.1.5 There is a growing device ecosystem;

9.1.6 Various jurisdictions in Region 1 have identified the band for IMT use;

9.1.7 Countries in Region 1 plan to (or have already) allocate large blocks in the 24.25-27.5 MHz range to IMT operators;

9.1.8 Several stakeholders consider the band suitable for IMT;

9.2 However, there are costs and economic barriers that may hinder the deployment of mmWave for IMT;

9.3 Despite barriers to deployment of mmWave for IMT, is it evident from auctions in other countries that this band is valuable for IMT, in addition to the possibility for spectrum sharing on a geographic basis, a growing device ecosystem, and stakeholder support. The considerations in favour of the allocation of this band for IMT, therefore, outweigh those against doing so.



ELECTRONIC COMMUNICATIONS ACT, 2005 (ACT NO. 36 OF 2005)

**HEREBY ISSUES A NOTICE REGARDING THE FEASIBILITY STUDIES FOR
THE FREQUENCY BANDS ALLOCATED TO THE MOBILE
RADIOCOMMUNICATIONS SERVICES AND IDENTIFIED INTERNATIONAL
MOBILE TELECOMMUNICATIONS IN THE NATIONAL RADIO FREQUENCY
PLAN.**

1. The Independent Communications Authority of South Africa ("the Authority"), on 28 March 2024, published the Draft International Mobile Telecommunications (IMT) Roadmap, in Government Gazette No. 50413 (Notice 4584 of 2024) inviting Written Representations.
2. On 13 September 2024, in Government Gazette 51244 (Notice 5209 of 2024) the Authority published a "Notice Communicating the Outcome of the Consultation Process of the Draft IMT Roadmap 2025.
3. The Authority, in Government Gazette 53883 (Notice 3712 of 2025), published the Second Draft International Mobile Telecommunications (IMT) Roadmap 2025, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005).
4. Now therefore, the Authority, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005) hereby publishes the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan.
5. Interested persons are hereby invited to submit written representations on the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan in both

Microsoft Word (MS) and Portable Document Format (PDF) by no later than 16:00 on **4 September 2026**.

6. Persons making representations are further invited to indicate whether they require an opportunity to make oral representations.

7. Written representations or enquiries may be directed by email to:

Attention:

Mr Manyapelolo Richard Makgotlho

e-mail: rmakgotlho@icasa.org.za

Copy: jdikgale@icasa.org.za

8. Where persons making representations require that their representation, or part thereof, be treated as confidential, then an application in terms of section 4D of the ICASA Act, 2000 (Act No 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation, together with a non-confidential, redacted version of the submission. If, however, the request for confidentiality is not granted, the person making the request will be allowed to withdraw the representation or document in question.

9. The guidelines for confidentiality requests are contained in Government Gazette Number No 41839 of 17 August 2018.

10. All written representations submitted to the Authority pursuant to this notice will be made available for inspection by interested persons from **11 September 2026** at the Authority's Library. Electronic copies of such representations are obtainable on request and printed versions will be obtainable on payment of a fee.

11. The feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan and the non-confidential representations will be uploaded to the Authority's website under this link: <https://www.icasa.org.za/legislation-and-regulations/radio-frequency-spectrum-plans/draft-radio-frequency-spectrum-plans>.



Mothibi G. Ramusi

CHAIRPERSON



Feasibility Study

37 GHz to 43.5 GHz

1 Glossary of Terms, Abbreviations, and Acronyms

Acronym	Explanation
3G	Third generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication relating to the ITU-R IMT-2000 specifications.
4G	Fourth Generation Network Technology relating to ITU-R IMT-Advanced specifications.
5G	Fifth Generation Network Technology, relating to the ITU-R IMT-2020 specifications.
6G	Sixth Generation Network Technology, relating to the ITU-R IMT-2030 specifications.
Act	Electronic Communications Act, 2005 (Act No. 36 of 2005).
AAS	Active antennae systems.
Administration	Members States of the International Telecommunications Union.
Allocation	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space <i>radiocommunication services</i> or the <i>radio astronomy service</i> under specified conditions.
Assignment	The authorisation given by the authority to a licensee to use a radio frequency or radio frequency channel under specified conditions.
ATU	African Telecommunications Union.
Authority	The Independent Communications Authority of South Africa.
BFWA	Broadband Fixed Wireless Access.
CEPT	Conference of European Posts and Telecommunications Authorities.
CRASA	Communications Regulators' Association of Southern Africa.
DC-MSS-IMT	Direct Connectivity between Mobile-Satellite Service space station and IMT UEs.
DECT	Digital Enhanced Cordless Telecommunications 1880 - 1900 MHz which is a digital communication standard, primarily used for creating cordless phone systems.
ECA	The Electronic Communications Act of South Africa, Act No 36 of 2005.
EIRP	Effective isotropically radiated power.
ERP	Effective radiated power, which is the product of the power supplied to an antenna and its gain relative to a half wave dipole in a given direction.
FDD	Frequency Division Duplex.
FWA	Fixed Wireless Access.
FS	Fixed Service.
FSS	Fixed Satellite Service.
Gbps	Gigabits per second.
GHz	Gigahertz of Radio Frequency Spectrum.
GSM	Global System for Mobile Communications, (originally Groupe Spécial Mobile), and is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe technologies for second generation (2G) digital cellular networks.
GSMA	Global System for Mobile Communications Association.
IMT	The name that encompasses IMT-2000, IMT-Advanced, IMT-2020 and IMT-2030 collectively known as International Mobile Telecommunications.
IMT-2000	The International Mobile Telecommunications, as envisioned in ITU-R Recommendation ITU-R M.687 and M.816.
IMT-Advanced	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.1645.
IMT-2020	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2083.

Acronym	Explanation
IMT-2030	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2160.
IoT	Internet of Things.
ITU	International Telecommunication Union.
ITU RR	International Telecommunication Union Radio Regulations.
kHz	Kilohertz of Radio Frequency Spectrum.
LTE	Long Term Evolution and is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies.
M2M	Machine to Machine.
MHz	Megahertz of Radio Frequency Spectrum.
MIMO	Multiple-Input and Multiple-Output and is the use of multiple antennas at both the transmitter and receiver to improve communication performance.
NRFP	The National Radio Frequency Plan for South Africa.
NTN	Non-terrestrial Network
PMSE	Programme making and special events applications (PMSE)
PRASA	Passenger Rail Agency of South Africa.
PTM	Point to Multipoint.
PTP	Point to Point.
Radio-communication	All electronic communication by means of radio waves.
RATG	Radio Access Technology Group.
Revocation Period	A period of transition during which incumbent users are migrated out of the band in question to clear sufficient spectrum for new service providers.
RFSAP	Radio Frequency Spectrum Assignment Plan.
RLAN	Radio Local Access Network and is the high data rate two-way (duplex) wireless data communications network.
SABRE	South African Band Re-Planning Exercise.
SADC	Southern African Development Community.
SADC RFSAP	Southern African Development Community Frequency Allocation Plan.
SAPS	South African Police Service.
Service licence	BS, ECS or ECNS licence.
SF	Single Frequency.
SFN	Single Frequency Network.
TDD	Time Division Duplex.
VSAT	Very small aperture terminal used for fixed satellite services.
WAS	Wireless Access Systems and is end-user radio connections to public or private core networks.

2 Introduction

- 2.1 The frequency range 37-43.5GHz ("40GHz") has a TDD band plan (J1) as shown on Figure 6 below. The arrangements for the band are set out in Section 11 of ITU-R M.1036-7. This band falls under the mmWave frequency range and is suitable for IMT. It has been identified as one of the "*most promising*" bands for IMT-2020.⁶⁵ The band is used for many other services, including FS, FSS, space research, and broadcasting.

Figure 6: Frequency arrangements between 37GHz-43.5GHz

GHz	37	43.5
J1	TDD	
	37	43.5

M.1036-11

Source: ITU-R M.1036

3 Regulatory context

- 3.1 In Region 1, this band is allocated to FS, FSS, mobile services, and space-to-earth research and exploration. In South Africa, the 40GHz band is allocated to mobile services on a primary basis, with some sub-bands being allocated to aeronautical and maritime mobile on a secondary basis. In the NRFP, this band has been identified for IMT.

4 Economic feasibility for IMT

- 4.1 The band is highly valued for IMT services. Auction results from the US⁶⁶ and the UK⁶⁷ suggest that the band is highly valued for IMT.⁶⁸ India also plans to hold auctions for

⁶⁵ See GSMA. 218. IMT Spectrum Between 24.25 and 86 GHz GSMA Public Policy Position. 2018, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2018/12/AI-1.13-Positions.pdf> 5252

⁶⁶ See United States Federal Communications Commission Auction 103 Winning Bidders and Incentive Payments. 2020, available at: <https://www.fcc.gov/auction/103>

⁶⁷ See Ofcom. 2025. Award of the mmWave (26 GHz and 40 GHz) spectrum bands, available at: <https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-1-10-weeks/237135-enabling-mmwave-spectrum-for-new-uses/associated-documents/oct-25-updates/regulation-120-results-of-the-mmwave-auction.pdf?v=406750>

⁶⁸ Note that a value per 10 MHz cannot be calculated from these auction results due to the reporting format used by the US and UK regulators.

spectrum in the 37-40GHz range in 2026.⁶⁹ This suggests that the band is feasible for IMT.

5 Technical feasibility

- 5.1 Incumbent users may pose an interference risk for IMT. The UK has decided to phase out fixed services in a substantial part of this band in ‘dense geographic areas’, in favour of allocating it to mobile use.⁷⁰ Outside of those areas, licensees may use the band in accordance with its shared access licensing framework. If this band is allocated to IMT in South Africa, it is likely that incumbent users in dense urban areas may need to be migrated. This transition process may be informed by Ofcom’s interference and coordination strategy for the 40GHz range⁷¹:
 - 5.1.1 A Revocation Period is defined. By the end of this period, incumbent users will be transitioned out of the band to clear sufficient spectrum for mobile services. In the UK strategy, the Revocation Period is longer for the 40GHz range than for the 26GHz range.
 - 5.1.2 Operators must submit a coordination request with a technical coordination plan before IMT deployment.
 - 5.1.3 If the request is approved, the operator can continue with deployment.
 - 5.1.4 If the request is denied due to a risk of harmful interference, operators will not be allowed to transmit on any frequency in the 40GHz range. The operator may resubmit a coordination request if it is initially denied.
- 5.2 This strategy can help to ensure that harmful interference between mobile services and incumbent users is minimized during the Revocation Period.

⁶⁹ See Telecom Regulatory Authority of India. 2025. Recommendations on the Frequency Spectrum in 37-37.5 GHz, 37.5-40 GHz, and 42.5-43.5 GHz bands Identified for IMT, available at: https://www.trai.gov.in/sites/default/files/2025-02/Recommendations_04022025.pdf 46

⁷⁰ See Ofcom Information Memorandum on 26GHz and 40GHz bands, available at: <https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-1-10-weeks/237135-enabling-mmwave-spectrum-for-new-uses/associated-documents/nov-204-updates/mmwave-information-memorandum-v3.0-002.pdf?v=402790>

⁷¹ See Ofcom. 2025, Enabling mmWave spectrum for new uses, available at: <https://www.ofcom.org.uk/siteassets/resources/documents/consultations/category-1-10-weeks/237135-enabling-mmwave-spectrum-for-new-uses/associated-documents/nov-204-updates/annex-5-coordination-procedures-under-the-spectrum-access-high-density-26-ghz-and-40-ghz-licences-sept-25.pdf?v=402787>

6 Maturity of the IMT ecosystem

- 6.1 Like most bands in the mmWave frequency range, the device ecosystem is relatively underdeveloped, especially in comparison to the mid-band frequencies. There is only 1 device that supports the band⁷².

7 International considerations

- 7.1 This band is allocated to mobile services on a primary basis in all three regions, aside from sub-bands 40.5-41MHz (which is allocated to aeronautical and maritime on a secondary basis in Region 1) and 47.47MHz (which is allocated to amateur and amateur-satellite services). While the ITU has identified the 40GHz band for the terrestrial component of IMT, this identification does not give IMT services priority use of the band, nor does it prevent the application of other services within the band.⁷³
- 7.2 Only the UK and the US have conducted spectrum auctions for IMT in this band. In India, the 42.5-43.5 frequency range will not be considered for auction due to the limited device ecosystem.⁷⁴ However, many countries in Region 1 have identified the band for IMT, and plan to assign spectrum in the mmWave frequency range in future.

8 Stakeholder comments

- 8.1 Table 6 contains a summary of stakeholders' comments on the Draft IMT Roadmap 2024, Second Draft IMT Roadmap 2025, and Draft Radio Frequency Migration Plan 2024, alongside the Authority's response.

Table 6: Stakeholder comments and the Authority's responses for the 37 – 43.5 GHz band

Stakeholder comments	Authority's comment
Cell C, Vodacom, and MTN support the allocation of this band for IMT. Vodacom supports the development of a feasibility study for the band. MTN notes that AT&T is deploying services in the 39GHz band in the USA.	An RFSAP is in the process of being developed for this band given that it has been recommended for IMT in WRC-23.
Cell C advises the development of a clear coordination procedures and a possible migration plan for incumbent users. Telkom acknowledges the possible coordination of IMT with incumbents on a geographical basis, resulting in the need for FS links to migrate only in dense urban areas.	Coordination / coexistence will be considered during the course of developing the feasibility study and RFSAP for the band, as discussed in Section 5.

⁷² See ATU-R recommendation relating to International Mobile Telecommunications (IMT) Spectrum Roadmap For Africa. 2025. <https://atuuat.africa/wp-content/uploads/2025/08/Project-4-IMT-Spectrum-Roadmap-for-Africa-Final.pdf>

⁷³ See WRC-19 Footnote 5.550B.

⁷⁴ See Telecom Regulatory Authority of India. 2025. Recommendations on the Frequency Spectrum in 37-37.5 GHz, 37.5-40 GHz, and 42.5-43.5 GHz bands Identified for IMT, available at: https://www.trai.gov.in/sites/default/files/2025-02/Recommendations_04022025.pdf

Stakeholder comments	Authority's comment
	Stakeholders are encouraged to provide comments in this regard.
Huawei, however, notes the limited device ecosystem.	The Authority is considering information on the maturity of this band for IMT. Stakeholders are encouraged to provide comments in this regard.
Viasat previously commented, in its response to the 2024 Draft Radio Frequency Migration Plan, that it is carrying out tests in this band and requested that the Authority considers recent developments regarding high throughput satellite services when conducting a feasibility study, as well as when designing the RFSAP. MTN notes the protections provided for passive earth-exploration satellite services in this band.	The Authority is gathering information on test results and other information that could assist in the development of an RFSAP for this band, including on how coordination with satellite services could take place. Stakeholders are encouraged to provide comment in this regard.

9 Considerations in favour of and against IMT allocation

9.1 There are a number of advantages to allocating the band for IMT:

9.1.1 The band has been allocated for IMT in the NRFP;

9.1.2 The allocation of this band to IMT is economically feasible;

9.1.3 There is a possibility of shared use of the band with incumbent users, including on a geographic basis;

9.1.4 There is potential for the implementation of short-term coordination and long-term migration strategies;

9.1.5 There is a limited, but growing number of devices suitable for this band;

9.1.6 There is growing interest in the band globally and within Region 1;

9.1.7 Stakeholders have expressed interest in the band.

9.2 Given the evident lack of disadvantages regarding the allocation of this band for IMT, the considerations in favour of the allocation outweigh those against doing so.



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1. The Independent Communications Authority of South Africa ("the Authority"), on 28 March 2024, published the Draft International Mobile Telecommunications (IMT) Roadmap, in Government Gazette No. 50413 (Notice 4584 of 2024) inviting Written Representations.
2. On 13 September 2024, in Government Gazette 51244 (Notice 5209 of 2024) the Authority published a "Notice Communicating the Outcome of the Consultation Process of the Draft IMT Roadmap 2025.
3. The Authority, in Government Gazette 53883 (Notice 3712 of 2025), published the Second Draft International Mobile Telecommunications (IMT) Roadmap 2025, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005).
4. Now therefore, the Authority, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005) hereby publishes the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan.
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e-mail: rmakgotlho@icasa.org.za

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8. Where persons making representations require that their representation, or part thereof, be treated as confidential, then an application in terms of section 4D of the ICASA Act, 2000 (Act No 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation, together with a non-confidential, redacted version of the submission. If, however, the request for confidentiality is not granted, the person making the request will be allowed to withdraw the representation or document in question.

9. The guidelines for confidentiality requests are contained in Government Gazette Number No 41839 of 17 August 2018.

10. All written representations submitted to the Authority pursuant to this notice will be made available for inspection by interested persons from **11 September 2026** at the Authority's Library. Electronic copies of such representations are obtainable on request and printed versions will be obtainable on payment of a fee.

11. The feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan and the non-confidential representations will be uploaded to the Authority's website under this link: <https://www.icasa.org.za/legislation-and-regulations/radio-frequency-spectrum-plans/draft-radio-frequency-spectrum-plans>.



Mothibi G. Ramusi

CHAIRPERSON



Feasibility Study

45.5 GHz to 47 GHz

1 Glossary of Terms, Abbreviations, and Acronyms

Acronym	Explanation
3G	Third generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication relating to the ITU-R IMT-2000 specifications.
4G	Fourth Generation Network Technology relating to ITU-R IMT-Advanced specifications.
5G	Fifth Generation Network Technology, relating to the ITU-R IMT-2020 specifications.
6G	Sixth Generation Network Technology, relating to the ITU-R IMT-2030 specifications.
Act	Electronic Communications Act, 2005 (Act No. 36 of 2005).
AAS	Active antennae systems.
Administration	Members States of the International Telecommunications Union.
Allocation	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space <i>radiocommunication services</i> or the <i>radio astronomy service</i> under specified conditions.
Assignment	The authorisation given by the authority to a licensee to use a radio frequency or radio frequency channel under specified conditions.
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Authority	The Independent Communications Authority of South Africa.
BFWA	Broadband Fixed Wireless Access.
CEPT	Conference of European Posts and Telecommunications Authorities.
CRASA	Communications Regulators' Association of Southern Africa.
DC-MSS-IMT	Direct Connectivity between Mobile-Satellite Service space station and IMT UEs.
DECT	Digital Enhanced Cordless Telecommunications 1880 - 1900 MHz which is a digital communication standard, primarily used for creating cordless phone systems.
ECA	The Electronic Communications Act of South Africa, Act No 36 of 2005.
EIRP	Effective isotropically radiated power.
ERP	Effective radiated power, which is the product of the power supplied to an antenna and its gain relative to a half wave dipole in a given direction.
FDD	Frequency Division Duplex.
FWA	Fixed Wireless Access.
FS	Fixed Service.
FSS	Fixed Satellite Service.
Gbps	Gigabits per second.
GHz	Gigahertz of Radio Frequency Spectrum.
GSM	Global System for Mobile Communications, (originally Groupe Spécial Mobile), and is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe technologies for second generation (2G) digital cellular networks.
GSMA	Global System for Mobile Communications Association.
IMT	The name that encompasses IMT-2000, IMT-Advanced, IMT-2020 and IMT-2030 collectively known as International Mobile Telecommunications.
IMT-2000	The International Mobile Telecommunications, as envisioned in ITU-R Recommendation ITU-R M.687 and M.816.
IMT-Advanced	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.1645.
IMT-2020	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2083.

Acronym	Explanation
IMT-2030	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2160.
IoT	Internet of Things.
ITU	International Telecommunication Union.
ITU RR	International Telecommunication Union Radio Regulations.
kHz	Kilohertz of Radio Frequency Spectrum.
LTE	Long Term Evolution and is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies.
M2M	Machine to Machine.
MHz	Megahertz of Radio Frequency Spectrum.
MIMO	Multiple-Input and Multiple-Output and is the use of multiple antennas at both the transmitter and receiver to improve communication performance.
NRFP	The National Radio Frequency Plan for South Africa.
NTN	Non-terrestrial Network
PMSE	Programme making and special events applications (PMSE)
PRASA	Passenger Rail Agency of South Africa.
PTM	Point to Multipoint.
PTP	Point to Point.
Radio-communication	All electronic communication by means of radio waves.
RATG	Radio Access Technology Group.
Revocation Period	A period of transition during which incumbent users are migrated out of the band in question to clear sufficient spectrum for new service providers.
RFSAP	Radio Frequency Spectrum Assignment Plan.
RLAN	Radio Local Access Network and is the high data rate two-way (duplex) wireless data communications network.
SABRE	South African Band Re-Planning Exercise.
SADC	Southern African Development Community.
SADC RFSAP	Southern African Development Community Frequency Allocation Plan.
SAPS	South African Police Service.
Service licence	BS, ECS or ECNS licence.
SF	Single Frequency.
SFN	Single Frequency Network.
TDD	Time Division Duplex.
VSAT	Very small aperture terminal used for fixed satellite services.
WAS	Wireless Access Systems and is end-user radio connections to public or private core networks.

2 Introduction

- 2.1 The frequency arrangements for this band are set out in Section 12 of ITU-R M.1036-7. The frequency range 45.5-47GHz has a TDD band plan (K1), as shown on Figure 7. This band is suitable for IMT and falls under the mmWave frequency range. Uses of this band include mobile and radionavigation services.

Figure 7: Frequency arrangements between 45.5GHz-47GHz

GHz	45.5	47
K1		
	TDD	
	45.5	47

M.1036-12

Source: ITU-R M.1036

3 Regulatory context

- 3.1 This band is allocated to mobile services on a primary basis in Region 1. It has been identified as a band for IMT in the NRFP.

4 Economic feasibility for IMT

- 4.1 The GSMA has indicated the potential use of this band for IMT following initial feasibility studies. However, no spectrum auctions have been held for IMT, and no licensees have been recorded for this band.
- 4.2 As is the case with other mmWave bands, the feasibility of IMT deployment is hindered by economic barriers and deployment costs.⁷⁵

5 Technical feasibility

- 5.1 The identification of this band for IMT does not preclude the application of other services within the band, nor does it give IMT services priority use of the band.⁷⁶ Incumbent users may pose an interference risk for IMT, and compatibility with adjacent bands must also be considered.

⁷⁵ See GSA. 2025. Hot Topic Millimetre Wave, available at: <https://gsacom.com/paper/millimetre-wave-spectrum-july-2025/>

⁷⁶ See WRC-19 Footnote 5.553A.

6 Maturity of the IMT ecosystem

- 6.1 The device ecosystem is limited at present. There are no devices that are compatible with this band.⁷⁷

7 International considerations

- 7.1 The ITU has identified the band for IMT use and the GSMA supports the consideration of this band for IMT following initial feasibility studies.⁷⁸

8 Stakeholder comments

- 8.1 Table 7 below for a summary of stakeholders' comments on the Draft IMT Roadmap 2024, Second Draft IMT Roadmap 2025, and Draft Radio Frequency Migration Plan 2024, alongside the Authority's response.

Table 7: Stakeholder comments and the Authority's responses for the 45.5 – 47 GHz band

Stakeholder comments	Authority's comment
Cell C and Vodacom support the allocation of this band for IMT, following the development of a feasibility study and RFSAP. Telkom supports RFSAP development for this band, however, notes that this band is of lesser priority in terms of licensing than the 26 GHz and 40 GHz bands. Telkom also proposes that in fact no feasibility study is needed for this band because it is either unused, or there is minimal use of it currently.	The Authority is in the process of developing an RFSAP for this band given that it has been recommended for IMT in WRC-23. While the band may be unused, part of the reason for preparing this feasibility study is to solicit feedback from stakeholders on the use or otherwise of the band.

9 Considerations for and against IMT allocation

- 9.1 The ITU has identified the band for IMT, and the band has been allocated to IMT in the NRFP.
- 9.2 However, the device ecosystem is limited.
- 9.3 The advantages arising from the ITU's identification and the NRFP's proposal to allocate the band to IMT, outweigh the limited device ecosystem, since the latter may develop in the coming years given the identification of the band for IMT. The band should therefore be allocated for IMT.

⁷⁷ See ATU-R recommendation relating to International Mobile Telecommunications (IMT) Spectrum Roadmap For Africa. 2025, available at: <https://atuuat.africa/wp-content/uploads/2025/08/Project-4-IMT-Spectrum-Roadmap-for-Africa-Final.pdf>

⁷⁸ See GSMA. 2018. IMT Spectrum Between 24.25 and 86 GHz GSMA Public Policy Position. 2018, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2018/12/AI-1.13-Positions.pdf>



ELECTRONIC COMMUNICATIONS ACT, 2005 (ACT NO. 36 OF 2005)

**HEREBY ISSUES A NOTICE REGARDING THE FEASIBILITY STUDIES FOR
THE FREQUENCY BANDS ALLOCATED TO THE MOBILE
RADIOCOMMUNICATIONS SERVICES AND IDENTIFIED INTERNATIONAL
MOBILE TELECOMMUNICATIONS IN THE NATIONAL RADIO FREQUENCY
PLAN.**

1. The Independent Communications Authority of South Africa ("the Authority"), on 28 March 2024, published the Draft International Mobile Telecommunications (IMT) Roadmap, in Government Gazette No. 50413 (Notice 4584 of 2024) inviting Written Representations.
2. On 13 September 2024, in Government Gazette 51244 (Notice 5209 of 2024) the Authority published a "Notice Communicating the Outcome of the Consultation Process of the Draft IMT Roadmap 2025.
3. The Authority, in Government Gazette 53883 (Notice 3712 of 2025), published the Second Draft International Mobile Telecommunications (IMT) Roadmap 2025, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005).
4. Now therefore, the Authority, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005) hereby publishes the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan.
5. Interested persons are hereby invited to submit written representations on the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services

and identified international mobile telecommunications in the national radio frequency plan in both Microsoft Word (MS) and Portable Document Format (PDF) by no later than 16:00 on **4 September 2026**.

6. Persons making representations are further invited to indicate whether they require an opportunity to make oral representations.

7. Written representations or enquiries may be directed by email to:

Attention:

Mr Manyapelo Richard Makgotlho

e-mail: rmakgotlho@icasa.org.za

Copy: jdikgale@icasa.org.za

8. Where persons making representations require that their representation, or part thereof, be treated as confidential, then an application in terms of section 4D of the ICASA Act, 2000 (Act No 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation, together with a non-confidential, redacted version of the submission. If, however, the request for confidentiality is not granted, the person making the request will be allowed to withdraw the representation or document in question.

9. The guidelines for confidentiality requests are contained in Government Gazette Number No 41839 of 17 August 2018.

10. All written representations submitted to the Authority pursuant to this notice will be made available for inspection by interested persons from **11 September 2026** at the Authority's Library. Electronic copies of such representations are obtainable on request and printed versions will be obtainable on payment of a fee.

11. The feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan and the non-confidential representations will be uploaded to the Authority's website under this link: <https://www.icasa.org.za/legislation-and-regulations/radio-frequency-spectrum-plans/draft-radio-frequency-spectrum-plans>.



Mothibi G. Ramusi

CHAIRPERSON



Feasibility Study

47.2 GHz to 48.2 GHz

1 Glossary of Terms, Abbreviations, and Acronyms

Acronym	Explanation
3G	Third generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication relating to the ITU-R IMT-2000 specifications.
4G	Fourth Generation Network Technology relating to ITU-R IMT-Advanced specifications.
5G	Fifth Generation Network Technology, relating to the ITU-R IMT-2020 specifications.
6G	Sixth Generation Network Technology, relating to the ITU-R IMT-2030 specifications.
Act	Electronic Communications Act, 2005 (Act No. 36 of 2005).
AAS	Active antennae systems.
Administration	Members States of the International Telecommunications Union.
Allocation	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space <i>radiocommunication services</i> or the <i>radio astronomy service</i> under specified conditions.
Assignment	The authorisation given by the authority to a licensee to use a radio frequency or radio frequency channel under specified conditions.
ATU	African Telecommunications Union.
Authority	The Independent Communications Authority of South Africa.
BFWA	Broadband Fixed Wireless Access.
CEPT	Conference of European Posts and Telecommunications Authorities.
CRASA	Communications Regulators' Association of Southern Africa.
DC-MSS-IMT	Direct Connectivity between Mobile-Satellite Service space station and IMT UEs.
DECT	Digital Enhanced Cordless Telecommunications 1880 - 1900 MHz which is a digital communication standard, primarily used for creating cordless phone systems.
ECA	The Electronic Communications Act of South Africa, Act No 36 of 2005.
EIRP	Effective isotropically radiated power.
ERP	Effective radiated power, which is the product of the power supplied to an antenna and its gain relative to a half wave dipole in a given direction.
FDD	Frequency Division Duplex.
FWA	Fixed Wireless Access.
FS	Fixed Service.
FSS	Fixed Satellite Service.
Gbps	Gigabits per second.
GHz	Gigahertz of Radio Frequency Spectrum.
GSM	Global System for Mobile Communications, (originally Groupe Spécial Mobile), and is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe technologies for second generation (2G) digital cellular networks.
GSMA	Global System for Mobile Communications Association.
IMT	The name that encompasses IMT-2000, IMT-Advanced, IMT-2020 and IMT-2030 collectively known as International Mobile Telecommunications.
IMT-2000	The International Mobile Telecommunications, as envisioned in ITU-R Recommendation ITU-R M.687 and M.816.
IMT-Advanced	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.1645.
IMT-2020	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2083.

Acronym	Explanation
IMT-2030	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2160.
IoT	Internet of Things.
ITU	International Telecommunication Union.
ITU RR	International Telecommunication Union Radio Regulations.
kHz	Kilohertz of Radio Frequency Spectrum.
LTE	Long Term Evolution and is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies.
M2M	Machine to Machine.
MHz	Megahertz of Radio Frequency Spectrum.
MIMO	Multiple-Input and Multiple-Output and is the use of multiple antennas at both the transmitter and receiver to improve communication performance.
NRFP	The National Radio Frequency Plan for South Africa.
NTN	Non-terrestrial Network
PMSE	Programme making and special events applications (PMSE)
PRASA	Passenger Rail Agency of South Africa.
PTM	Point to Multipoint.
PTP	Point to Point.
Radio-communication	All electronic communication by means of radio waves.
RATG	Radio Access Technology Group.
Revocation Period	A period of transition during which incumbent users are migrated out of the band in question to clear sufficient spectrum for new service providers.
RFSAP	Radio Frequency Spectrum Assignment Plan.
RLAN	Radio Local Access Network and is the high data rate two-way (duplex) wireless data communications network.
SABRE	South African Band Re-Planning Exercise.
SADC	Southern African Development Community.
SADC RFSAP	Southern African Development Community Frequency Allocation Plan.
SAPS	South African Police Service.
Service licence	BS, ECS or ECNS licence.
SF	Single Frequency.
SFN	Single Frequency Network.
TDD	Time Division Duplex.
VSAT	Very small aperture terminal used for fixed satellite services.
WAS	Wireless Access Systems and is end-user radio connections to public or private core networks.

2 Introduction

- 2.1 The frequency range 47.2-48.2GHz has a TDD band plan (L1), as shown on Figure 8 below. The arrangements for the band are set out in Section 13 of ITU-R M.1036-7. This band is suitable for IMT and falls under the mmWave frequency range. The band is used for FS, FSS, and mobile services.

Figure 8: Frequency arrangements between 47.2GHz-48.2GHz

GHz	47.2	48.2
L1	TDD	
	47.2	48.2

M.1036-13

Source: ITU-R M.1036-7

3 Regulatory context

- 3.1 In Region 1, this band has been allocated to mobile services, FS, and FSS on a co-primary basis. The same allocation is applied in the NRFP. The band has been identified for IMT in the NRFP.

4 Economic feasibility for IMT

- 4.1 The indications are that the highest value use for this band is for IMT services. For instance, auction results in the US⁷⁹ suggest that this band is highly valued for IMT.⁸⁰
- 4.2 As is the case with other mmWave bands, the economic viability of this band to IMT is hindered by deployment costs.⁸¹

5 Technical feasibility

- 5.1 The identification of this band for IMT does not preclude the application of other services within the band, nor does it give IMT services priority use of the band.⁸² Incumbent users may pose an interference risk for IMT. Compatibility with adjacent bands must also be considered.

⁷⁹ See United States Federal Communications Commission Auction 103 Winning Bidders and Incentive Payments. 2020, available at: <https://www.fcc.gov/auction/103>

⁸⁰ Note that a value per 10 MHz cannot be calculated from these auction results due to the reporting format used by the US regulator.

⁸¹ See GSA. 2025. Hot Topic Millimetre Wave, available at: <https://gsacom.com/paper/millimetre-wave-spectrum-july-2025/>

⁸² See WRC-19 Footnote 5.553B.

- 5.2 Co-existence between IMT and incumbent users (particularly FSS) can be achieved. The ITU recommends the establishment of coordination areas to mitigate the risk of harmful interference. The exact calculation of a coordination area is case-specific and is determined by the level interference. However, a general outline on how to calculate the coordination area is available in Recommendation ITU-R M.2161-0.⁸³

6 Maturity of the IMT ecosystem

- 6.1 The device ecosystem is limited. There are no devices that support this band.⁸⁴

7 International considerations

- 7.1 This band has been identified for IMT, and the US has assigned spectrum in this band to IMT operators. However, there have been no spectrum auctions or licenses recorded in Region 1.

8 Stakeholder comments

- 8.1 Refer to Table 8 below for a summary of stakeholders' comments on the Draft IMT Roadmap 2024, Second Draft IMT Roadmap 2025, and Draft Radio Frequency Migration Plan 2024, alongside the Authority's response.

Table 8: Stakeholder comments and the Authority's responses for the 47.2 – 48.2 GHz band

Stakeholder comments	Authority's comment
Cell C, MTN, and Vodacom support the assignment of this band for IMT, following the development of a RFSAP. Telkom supports RFSAP development for this band, however, notes that this band is of lesser priority in terms of licensing than the 26 GHz and 40 GHz bands. Telkom also proposes that in fact no feasibility study is needed for this band because it is either unused, or there is minimal use of it currently.	The Authority is in the process of developing an RFSAP for this band given that it has been recommended for IMT in WRC-23. Given that the band is highly valuable for IMT, the Authority expects there to soon be a growing device ecosystem. While the band may be unused, part of the reason for preparing this feasibility study is to solicit feedback from stakeholders on the use or otherwise of the band.
Huawei, however, note the limited device ecosystem for this band.	
Viasat previously requested, when commenting on the 2024 Draft Radio Frequency Migration Plan, that the Authority considers recent developments regarding high throughput satellite services when conducting a feasibility study, as well as when designing the RFSAP. Cell C advises that coexistence	The Authority is considering whether and how coordination with satellite services could take place. Stakeholders are encouraged to provide comment

⁸³ See ITU-R M.2161-0, available at: https://www.itu.int/dms_pubrec/itu-r/rec/m/R-REC-M.2161-0-202312-!!!PDF-E.pdf

⁸⁴ See ATU-R recommendation relating to International Mobile Telecommunications (IMT) Spectrum Roadmap For Africa. 2025, available at: <https://atuuat.africa/wp-content/uploads/2025/08/Project-4-IMT-Spectrum-Roadmap-for-Africa-Final.pdf>

Stakeholder comments	Authority's comment
with incumbent users be considered.	in this regard.

9 Considerations in favour of and against IMT allocation

- 9.1 The band was identified for IMT by the ITU and in the NRFP;
- 9.2 The band is likely of high value for IMT;
- 9.3 However, the device ecosystem is limited;
- 9.4 Despite the limited device ecosystem and absence of recorded IMT licenses in Region 1, auction results from the US suggest that this band is highly valued for IMT and thus the considerations in favour of the allocation to IMT outweigh those against doing so.



ELECTRONIC COMMUNICATIONS ACT, 2005 (ACT NO. 36 OF 2005)

**HEREBY ISSUES A NOTICE REGARDING THE FEASIBILITY STUDIES FOR
THE FREQUENCY BANDS ALLOCATED TO THE MOBILE
RADIOCOMMUNICATIONS SERVICES AND IDENTIFIED INTERNATIONAL
MOBILE TELECOMMUNICATIONS IN THE NATIONAL RADIO FREQUENCY
PLAN.**

1. The Independent Communications Authority of South Africa ("the Authority"), on 28 March 2024, published the Draft International Mobile Telecommunications (IMT) Roadmap, in Government Gazette No. 50413 (Notice 4584 of 2024) inviting Written Representations.
2. On 13 September 2024, in Government Gazette 51244 (Notice 5209 of 2024) the Authority published a "Notice Communicating the Outcome of the Consultation Process of the Draft IMT Roadmap 2025.
3. The Authority, in Government Gazette 53883 (Notice 3712 of 2025), published the Second Draft International Mobile Telecommunications (IMT) Roadmap 2025, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005).
4. Now therefore, the Authority, in terms of section 4(3)(c) of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000), read with sections 2(e), 30, 31(4), and 33 of the Electronic Communications Act (Act No 36 of 2005) hereby publishes the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan.
5. Interested persons are hereby invited to submit written representations on the notice regarding the feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan in both

Microsoft Word (MS) and Portable Document Format (PDF) by no later than 16:00 on **4 September 2026**.

6. Persons making representations are further invited to indicate whether they require an opportunity to make oral representations.

7. Written representations or enquiries may be directed by email to:

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8. Where persons making representations require that their representation, or part thereof, be treated as confidential, then an application in terms of section 4D of the ICASA Act, 2000 (Act No 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation, together with a non-confidential, redacted version of the submission. If, however, the request for confidentiality is not granted, the person making the request will be allowed to withdraw the representation or document in question.

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11. The feasibility studies for the frequency bands allocated to the mobile radiocommunications services and identified international mobile telecommunications in the national radio frequency plan and the non-confidential representations will be uploaded to the Authority's website under this link: <https://www.icasa.org.za/legislation-and-regulations/radio-frequency-spectrum-plans/draft-radio-frequency-spectrum-plans>.



Mothibi G. Ramusi

CHAIRPERSON



Feasibility Study

66 GHz to 71 GHz

1 Glossary of Terms, Abbreviations, and Acronyms

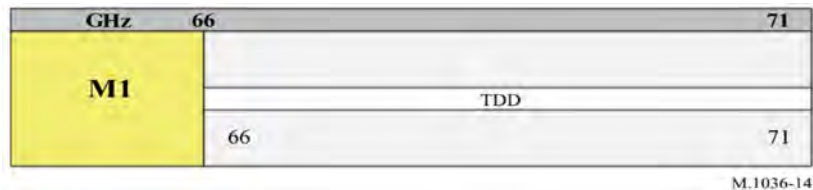
Acronym	Explanation
3G	Third generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication relating to the ITU-R IMT-2000 specifications.
4G	Fourth Generation Network Technology relating to ITU-R IMT-Advanced specifications.
5G	Fifth Generation Network Technology, relating to the ITU-R IMT-2020 specifications.
6G	Sixth Generation Network Technology, relating to the ITU-R IMT-2030 specifications.
Act	Electronic Communications Act, 2005 (Act No. 36 of 2005).
AAS	Active antennae systems.
Administration	Members States of the International Telecommunications Union.
Allocation	Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space <i>radiocommunication services</i> or the <i>radio astronomy service</i> under specified conditions.
Assignment	The authorisation given by the authority to a licensee to use a radio frequency or radio frequency channel under specified conditions.
ATU	African Telecommunications Union.
Authority	The Independent Communications Authority of South Africa.
BFWA	Broadband Fixed Wireless Access.
CEPT	Conference of European Posts and Telecommunications Authorities.
CRASA	Communications Regulators' Association of Southern Africa.
DC-MSS-IMT	Direct Connectivity between Mobile-Satellite Service space station and IMT UEs.
DECT	Digital Enhanced Cordless Telecommunications 1880 - 1900 MHz which is a digital communication standard, primarily used for creating cordless phone systems.
ECA	The Electronic Communications Act of South Africa, Act No 36 of 2005.
EIRP	Effective isotropically radiated power.
ERP	Effective radiated power, which is the product of the power supplied to an antenna and its gain relative to a half wave dipole in a given direction.
FDD	Frequency Division Duplex.
FWA	Fixed Wireless Access.
FS	Fixed Service.
FSS	Fixed Satellite Service.
Gbps	Gigabits per second.
GHz	Gigahertz of Radio Frequency Spectrum.
GSM	Global System for Mobile Communications, (originally Groupe Spécial Mobile), and is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe technologies for second generation (2G) digital cellular networks.
GSMA	Global System for Mobile Communications Association.
IMT	The name that encompasses IMT-2000, IMT-Advanced, IMT-2020 and IMT-2030 collectively known as International Mobile Telecommunications.
IMT-2000	The International Mobile Telecommunications, as envisioned in ITU-R Recommendation ITU-R M.687 and M.816.
IMT-Advanced	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.1645.
IMT-2020	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2083.

Acronym	Explanation
IMT-2030	The International Mobile Telecommunications, as envisioned in Recommendation ITU-R M.2160.
IoT	Internet of Things.
ITU	International Telecommunication Union.
ITU RR	International Telecommunication Union Radio Regulations.
kHz	Kilohertz of Radio Frequency Spectrum.
LTE	Long Term Evolution and is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies.
M2M	Machine to Machine.
MHz	Megahertz of Radio Frequency Spectrum.
MIMO	Multiple-Input and Multiple-Output and is the use of multiple antennas at both the transmitter and receiver to improve communication performance.
NRFP	The National Radio Frequency Plan for South Africa.
NTN	Non-terrestrial Network
PMSE	Programme making and special events applications (PMSE)
PRASA	Passenger Rail Agency of South Africa.
PTM	Point to Multipoint.
PTP	Point to Point.
Radio-communication	All electronic communication by means of radio waves.
RATG	Radio Access Technology Group.
Revocation Period	A period of transition during which incumbent users are migrated out of the band in question to clear sufficient spectrum for new service providers.
RFSAP	Radio Frequency Spectrum Assignment Plan.
RLAN	Radio Local Access Network and is the high data rate two-way (duplex) wireless data communications network.
SABRE	South African Band Re-Planning Exercise.
SADC	Southern African Development Community.
SADC RFSAP	Southern African Development Community Frequency Allocation Plan.
SAPS	South African Police Service.
Service licence	BS, ECS or ECNS licence.
SF	Single Frequency.
SFN	Single Frequency Network.
TDD	Time Division Duplex.
VSAT	Very small aperture terminal used for fixed satellite services.
WAS	Wireless Access Systems and is end-user radio connections to public or private core networks.

2 Introduction

- 2.1 The frequency range 66-71GHz falls under TDD band plan M1, as shown on Figure 9 below. The arrangements for the band are set out in Section 14 of ITU-R M.1036-7. This frequency range falls under the E-band, which is the frequency range from 60-90GHz band has been allocated to mobile, inter-satellite, and radionavigation-satellite services in Region 1. This band also falls under the mmWave frequency range and is suitable for IMT.

Figure 9: Frequency arrangements between 66GHz-71GHz



Source: ITU-R 1036

3 Regulatory context

- 3.1 This band is allocated to mobile services and has been identified for IMT in all three Regions.⁸⁵ The band is allocated to inter-satellite, mobile, mobile-satellite, and radionavigation-satellite services in the NRFP. There is provision for IMT allocation in the entire band.

4 Economic feasibility for IMT

- 4.1 No spectrum auctions for IMT have been held for this band, and no licenses have been recorded. However, the US Federal Communications Commission ("FCC") has allowed unlicensed IMT services within the band.⁸⁶ The highest value use of the band is somewhat uncertain at this stage.

5 Technical feasibility

- 5.1 While the band has been identified for the terrestrial component of IMT, the ITU has not established protection for IMT services in this band. Therefore, there is a risk of interference with incumbent users. For example, there may be licensees operating in this band in terms of the 2021 amendment to the Radio Frequency Spectrum Regulations⁸⁷,

⁸⁵ See WRC-19 Footnote 5.559AA.

⁸⁶ See GSMA. 2018. IMT Spectrum Between 24.25 and 86 GHz GSMA Public Policy Position. 2018, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2018/12/AI-1.13-Positions.pdf>

⁸⁷ See Government Gazette 45690 (Notice 737 of 2021).

which permits Multi-Gigabit Wireless Systems (“MGWS”). Mitigation and coordination strategies may be necessary.

6 Maturity of the IMT ecosystem

6.1 The device ecosystem is limited. There are no devices that support this band.⁸⁸

7 International considerations

7.1 This band is identified for IMT in all three Regions. However, no licenses have been granted to IMT operators in Region 1. The GSMA recommends that licenses be awarded flexibly in this band to encourage both IMT and non-IMT use.⁸⁹

8 Stakeholder comments

8.1 Table 9 below for a summary of stakeholders’ comments on the Draft IMT Roadmap 2024, Second Draft IMT Roadmap 2025, and Draft Radio Frequency Migration Plan 2024, alongside the Authority's response.

Table 9: Stakeholder comments and the Authority's response for the 66-71GHz band

Stakeholder comments	Authority's comment
Cell C, Vodacom, and MTN support the assignment of this band for IMT, following the development of a RFSAP. Telkom supports RFSAP development for this band, however, notes that this band is of lesser priority in terms of licensing than the 26 GHz and 40 GHz bands. Telkom also proposes that in fact no feasibility study is needed for this band because it is either unused, or there is minimal use of it currently.	The Authority is in the process of developing an RFSAP for this band given that it has been recommended for IMT in WRC-23. While the band may be unused, part of the reason for preparing this feasibility study is to solicit feedback from stakeholders on the use or otherwise of the band.
Cell C advises that coexistence with incumbent users be considered, proposes technology neutrality, and recommends that timelines be developed for consultation, assignment, and implementation.	Coordination / coexistence will be considered during the course of developing the feasibility study and RFSAP for the band. Stakeholders are encouraged to provide comments in this regard.
Huawei, however, notes the limited device ecosystem for this band.	Despite the current limited device ecosystem, it is likely that devices will be developed for the band given the licence-free IMT allocation in the USA.

⁸⁸ See ATU-R recommendation relating to International Mobile Telecommunications (IMT) Spectrum Roadmap For Africa. 2025, available at: <https://atuuat.africa/wp-content/uploads/2025/08/Project-4-IMT-Spectrum-Roadmap-for-Africa-Final.pdf>

⁸⁹ See GSMA. 2018. IMT Spectrum Between 24.25 and 86 GHz GSMA Public Policy Position, available at: <https://www.gsma.com/connectivity-for-good/spectrum/wp-content/uploads/2018/12/AI-1.13-Positions.pdf>

9 Considerations in favour of and against IMT allocation

- 9.1 The advantage of using this band for IMT is that it has been identified for IMT by the ITU, as well as the NRFP.
- 9.2 At the same time, there is potential for coexistence between IMT and unlicensed use for WAS/RLAN.
- 9.3 However, there is a lack of devices that support this band, and stakeholders' views on the suitability of the band for IMT are mixed.
- 9.4 Given the advantages arising from the allocation of the band for IMT in other regions, and the potential for coexistence with unlicensed use for WAS/RLAN, the considerations in favour of the allocation of the band to IMT on a shared basis with WAS/RLAN, outweigh those in favour of not doing so.