



Independent Communications Authority of South Africa

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TERMS OF REFERENCE FOR THE DEVELOPMENT OF IMT ROADMAP

1. Overview

- 1.1 The Authority's primary objective is the assurance of spectrum efficiency, universal availability of broadband services as well as the establishment of a vibrant and competitive telecommunications industry that is attractive for investors in accordance with section 2 (c), (e) and (f) of the Electronic Communications Act, 2005 (Act No. 36 of 2005) ("ECA"), the National Development Plan, Vision 2030 and the Broadband Policy articulated in SA-Connect.
- 1.2 The implementation of the International Mobile Telecommunications (IMT) Roadmap ("the IMT Roadmap) is an enormous spectrum management undertaking in both scale and scope.
- 1.3 A key driver for the deployment of International Mobile Telecommunications (IMT) frequency bands is the need to ensure that mobile broadband plays its role in meeting the objectives of 'broadband for all' encapsulated in the targets of SA Connect.
- 1.4 The focus is the development and implementation of the IMT Roadmap plan which spans over five (5) to ten (10) years.
- 1.5 The rules for the use of the frequency bands for IMT are to be specified in the Radio Frequency Spectrum Assignment Plans (RFSAP's).
- 1.6 The Final RFSAP(s) for IMT is the baseline document for the assignment process that is to take place through an Invitation To Apply (ITA) in terms of regulations 6 and 7 of the Radio Frequency Spectrum Regulations 2015.
- 1.7 The Authority Strategic Outcome Oriented Goal (SOOG) is to facilitate investment in and access to broadband infrastructure for Sustainable Socio-economic development and the Strategic Objective is to increase access to Broadband Spectrum from the currently assigned bandwidth of 850 MHz to

make available at least 18 588 MHz for assignment by 2030. To this end, Engineering and Technology Division has to update the IMT Roadmap 2014 and 2019, including the development and implementation of the IMT Roadmap, to align with those allocations and identifications for IMT made in the NRFP. This includes the development of the Radio Frequency Spectrum Assignment Plans for IMT.

1.8 The Authority developed and published the NRFP in terms of section 34, of the Electronic Communications Act, 2005 (Act No. 36 of 2005) ("ECA").

1.9 The NRFP was developed in line with the International Telecommunications Union's (ITU) Radio Regulations Edition 2020, which is a treaty, Governing the use of Radio Frequency Spectrum and Orbital Resources as agreed to at the World Radio Conference (WRC) 2019, by member states.

1.10 In terms of Section 34 (16) of the ECA:

"The Authority may, where the national radio frequency plan identifies radio frequency spectrum that is occupied and requires the migration of the users of such radio frequency spectrum to other radio frequency bands, migrate the users to such other radio frequency bands in accordance with the national radio frequency plan, except where such migration involves governmental entities or organisations, in which case the Authority— (a) must refer the matter to the Minister; and (b) may migrate the users after consultation with the Minister."

1.11 The Final IMT Roadmap is to be developed in terms of section 2, read with sections 30, 31, and 33 of the ECA.

1.12 When it has been established that migration is required, and the identification for the deployment of IMT is made, then the critical issue is to determine the time frame that is required for the existing radio frequency spectrum user to migrate, in a manner consistent with practical Radio Frequency Spectrum Management. It may be necessary to carry out a feasibility study for the frequency bands identified through the allocation and identification made in the NRFP 2021, where the migration is of complex nature.

1.13 The requirement for a feasibility study may be indicated in the Frequency Migration Plan and/or in the IMT Roadmap. Where the results of the feasibility study indicate a change in the usage of the frequency band in question, a Radio Frequency Spectrum Assignment Plan for IMT shall be developed and

must be subjected to a consultation process in accordance with regulation 5 of the Radio Frequency Migration Regulations 2013.

1.14 The development of the Radio Frequency Spectrum Assignment Plans for IMT is one of the key processes of implementation as described in regulation 3 of the Radio Frequency Spectrum Regulations 2015, read with the Radio Frequency Migration Regulations 2013. The second key process is the amendment of affected Radio Frequency Spectrum Licences to effect the migration, in accordance with regulation 6 of the Radio Frequency Migration Regulations 2013.

2 The Radio Frequency Migration Plan and the IMT Roadmap must identify the destination bands for migrating users or uses to the appropriate destination band, which will vary from user to user, depending on the specific requirements of the user and its uses. A key driver for the deployment of IMT bands is the need to ensure that mobile broadband plays its role in meeting the objectives of 'broadband for all' which is encapsulated in the targets of SA Connect and a key part of the document concerns the deployment of the 700 MHz and 800 MHz digital dividend bands (and potentially the 450-470 MHz Band) to provide universal service. As noted in South Africa (SA) Connect:

"The efficient assignment and subsequent use of high demand spectrum to meet this demand is vital and the cost of making this spectrum available is vital and the cost of not doing so is high."

3 Scope

3.1 The Authority's primary objectives are to ensure universal availability of broadband services as well as a vibrant and competitive telecommunications industry and which promotes investments.

3.2 The growing demand for mobile broadband in South Africa indicates a need for more mobile broadband bandwidth capacity in general. At the same time, many rural areas do not have access to mobile bandwidth indicating a need for a more universal mobile broadband coverage, a need best served by deploying low, Mid and High frequency bands.

- 3.3 The IMT road map project is the latest in a series of steps carried out by the Authority to build up spectrum management and long-term planning.
- 3.4 The IMT Roadmap Project is to take into consideration the framework for the future development of IMT 2030, including those elements contained in the Future Technology Trends Report developed by the International Telecommunication Union Radiocommunications Sector (ITU-R).
- 3.5 The envisaged IMT Roadmap involves the migration of a number of current licensees out of and/or within frequency bands identified for Mobile services including IMT applications.
- 3.6 Regarding the frequency bands where costs and benefits of the migration is not straightforward, the Authority is to conduct further feasibility studies to determine the appropriateness of the migration.
- 3.7 The Authority therefore seeks to appoint a service provider to assist with the:
- 3.7.1 development of the IMT Roadmap, and updating of the IMT Roadmap 2014 and 2019, taking into consideration the allocations and identifications made in the NRFP 2021 leading to the achievements of the Capabilities of IMT 2030.
 - 3.7.2 The implementation of IMT Roadmap for the Radio Frequencies identified in the IMT Roadmap by developing consequential Radio Frequency Spectrum Assignment Plans for IMT, including those indicated in **Annexure A** hereto.
- 3.8 The IMT Roadmap will be developed taking into consideration the Technical and Economic Feasibility Studies to be undertaken including those for the IMT Roadmap 2014 and 2019 IMT Roadmap, in accordance with the Radio Frequency Migration Regulations 2013, the Radio Frequency Spectrum Regulations 2015, the NRFP 2021 and Chapter 5 of the ECA.
- 3.9 The purpose of the feasibility studies report is to advise the Authority in the determination of the time frame for migration of users and services and the implementation of the IMT Roadmap.

- 3.10 The resultant update and review of the IMT Roadmap is to be realised through the development of the Radio Frequency Spectrum Assignment Plans (RFSAPs) based on feasibility studies result for all the frequency bands identified for IMT.

4 Specifications

The objectives of the project are:

- 4.1 Developing a strategic plan or roadmap to give direction of the required work for the deployment of IMT spectrum in South Africa. This is to support targets set by the SA Connect broadband initiative in terms of ensuring widespread area coverage and adequate bandwidth capacity.
- 4.2 Alignment with the IMT specifications to provide a basis for worldwide harmonization and reduce ecosystem fragmentation in several ways. The objective of the IMT roadmap and is to present the decision of the Authority in respect of the roadmap for radio frequency spectrum for IMT for the deployment of IMT 2030 and beyond.
- 4.3 The IMT Roadmap is to take into consideration the capabilities contained in the IMT – “Framework and overall objectives of the future development of the terrestrial component of IMT for 2030 and beyond”.
- 4.4 The following guiding principles have to be taken into consideration in the determining of the Roadmap for IMT:
- 4.4.1 Spectrum Harmonisation
 - 4.4.2 Technical Standards
 - 4.4.3 Spectrum efficiency
 - 4.4.4 Availability of device
 - 4.4.5 Maturity of the Eco- System
 - 4.4.6 Interoperability
 - 4.4.7 Affordability, and
 - 4.4.8 Equipment Lifespan
- 4.5 The following issues are to be taken into consideration:
- 4.5.1 Global Trends for IMT.
 - 4.5.2 IMT Spectrum Forecasts for South Africa.
 - 4.5.3 IMT Roadmap: Implementation Time Frame
 - 4.5.4 IMT Spectrum and Universal Service Obligations.

- 4.6 The service provider shall assist the Authority with the development, update, and review of the IMT Roadmaps as well as the consequential respective Radio Frequency Spectrum Assignment Plans ("RFSAP") for IMT in accordance with the NRFP 2021¹ read with chapter 5 of the ECA.
- 4.7 The Following details summarise the phases to be considered in executing the project:

Development, update, and review of the IMT Roadmap

- 4.7.1 Phase 1 (develop, update, and review the IMT Roadmap): To update the IMT Roadmap 2014² and 2019³, and to develop the IMT Roadmap taking into consideration the NRFP 2021 by conducting technical and economic feasibilities studies considering the regulatory framework in so far as managing and assigning the radio frequency spectrum, including the capabilities of IMT 2030 as well as its future trends.
- 4.7.2 Phase 2 (Implementation of the IMT Roadmap): To develop and or revise the Radio Frequency Spectrum Assignment Plans (RFSAP) for IMT in order to enable the implementation of the IMT Roadmap 2014, 2019 and the updated IMT Roadmap, taking into consideration the capabilities of IMT 2030 and the future trends, including those listed in **Annexure A** to this document.

5 Program Milestones

The IMT Roadmap will be implemented in four stages:

Stage 1: Update and review IMT Roadmap 2014 and 2019 including development of the IMT Roadmap for public consultation.

Stage 2: Development of the final IMT Roadmap.

Stage 3: conduct a feasibility study and develop the draft Radio Frequency Spectrum Assignment Plans for IMT based on the final IMT Roadmap.

Stage 4: IMT Roadmap implemented through the development of final RFSAPs for IMT

¹ Government Gazette No. 46088 (Notice 911 of 2022).

² Government Gazette No. 38213 (Notice 1009 of 2014).

³Government Gazette No. 42829 (Notice 600 of 2019).

- 5.1 In undertaking the development of IMT Roadmap, the service provider will be expected to, among others, undertake the following into consideration and activities:
- 5.1.1 The latest International Telecommunication Union Radiocommunications Sector (ITU-R) Reports, Recommendations, and Resolutions on Radiocommunications systems and beyond;
 - 5.1.2 The latest developments and proposals within the ITU System on future Spectrum Requirements;
 - 5.1.3 International benchmark on Recommendations and Reports from other ITU-R Regions.
 - 5.1.4 The socio-economic cost benefits associated with the development and update of the IMT Roadmap;
 - 5.1.5 Any other relevant international technical and regulatory aspects;
 - 5.1.6 Any relevant policy and or regulation geared towards the achievement of universal service in terms of access to broadband services and connecting the unconnected;
 - 5.1.7 Any other relevant aspects that will ensure the increase in broadband penetration, speed, capacity, and capabilities;
 - 5.1.8 Any International, Regional and National recommended imperatives deemed necessary and appropriate;
 - 5.1.9 The service provider shall submit project costing with the details on the project plan, project charter, project timelines and work breakdown structure;
 - 5.1.10 The service provider may be invited to give a presentation as and when required during the delivery of the project;
 - 5.1.11 Conduct technical and economic feasibility studies in line with the IMT Roadmap 2014 and 2019 as well as the latest version of the IMT Roadmap as mandated by the NRRP 2021; and
 - 5.1.12 Provide a detailed report on the outcome of the feasibility studies with recommendations on scenario plans, in line with the implementation of the IMT Roadmap with regard to uses, users and services. The report should include but not limited to:
 - 5.1.12.1 Detailed cost analysis of the IMT Roadmap process and the affected users in the frequency bands being migrated and or considered for the deployment of IMT;

- 5.1.12.2 A detailed analysis identifying destination frequency bands for the incumbent services in the IMT Roadmap;
 - 5.1.12.3 A detailed analysis identifying destination frequency bands for the incumbent services where this is not identified by the frequency migration plan;
 - 5.1.12.4 Detailed project phases for the development and update of the IMT Roadmap for the identified frequency bands;
 - 5.1.12.5 The best fit in terms of Internationally and/or Regionally Harmonised Channel/Frequency Arrangements and plans with provision for options for spectrum re-use;
 - 5.1.12.6 Estimated time frames for the implementation of the IMT Roadmap and migration to identified destination bands for radiocommunications systems; and
 - 5.1.12.7 Provide a detailed report of the feasibility studies in line with project phases for the implementation of the IMT Roadmap.
- 5.1.13 Development, updating and review of the Radio Frequency Spectrum Assignment Plans (RFSAP) for the IMT Roadmap as mandated by the NRFP 2021 include those identified in **Annexure A**.
- 5.1.14 Participate and contribute during the development of the consultation documents including participating in public hearings and processes, as necessary.
- 5.1.15 In conducting the activities covered above, the service provider will work with the project team of the Authority and ensure capacity building including the provision of training to at least twelve (12) committee members on the process of the development of the IMT Roadmap and the Radio Frequency Spectrum Assignment Plans for IMT.
- 5.2 The service provider is expected to work closely with the project team in order to transfer knowledge to the project team.
- 5.3 The Project Leader within the Authority will liaise with the Project Leader of the service provider to arrange a work programme and to schedule meetings with stakeholders.

6 Period of assignment

- 6.1. All work is to be carried out in accordance with the time schedule as agreed with the Authority for a period of not more than twelve (12) months from the date of finalisation of the contract with the service provider.

12 Months (i.e. from Contract signature date = X)

Project Schedule

No.	Item	Due Date (Calendar days)
1.	Commencement of work.	X
2.	Kick-off Meeting.	X + 5
3.	Inception report.	X + 20
4.	Development of the draft IMT Roadmap incorporating IMT Roadmap 2014 and 2019 in alignment with the NRFP 2021 for public consultation, involving analysis of Regulatory, Technical and Economic factors. In each case, providing relevant Regional and International best practices including the socio-economic benefits, the value to society, International Benchmark studies, maturity of the ecosystem, scenario plans, deployment costs, proposed timelines for clearing the frequency bands, co-existence scenarios.	X + 60
5.	Development of the Final IMT Roadmap, taking into consideration public representations, involving an analysis of Regulatory, Technical and Economic factors. In each case, providing relevant Regional and International best practices including the socio-economic benefits, the value to society, International Benchmark studies, maturity of the ecosystem, scenario plans, deployment costs, proposed timelines for clearing the frequency bands, co-existence scenarios.	X + 150
6.	The Feasibility report with preliminary recommendations on the cost-benefit analysis scenario ranking.	X + 180
7.	The development of the consultation documents for the Implementation of the IMT Roadmap, through the	X + 240

	development of the draft Radio Frequency Spectrum Assignment Plans for IMT.	
8.	The development of the Final Radio Frequency Spectrum Assignment Plans, taking into consideration representations made by stakeholders through a public consultation process	X + 270
9.	Development of the final documents (Reasons document and/or Explanatory memo), taking into consideration representations made by stakeholders through a public consultation process.	X + 330
10.	Submission of final reports	X + 360

7. Briefing Session

7.1. There will be a virtual **non-compulsory** briefing session.

8. Evaluation of the Bids

- 8.1. The bidder's proposed personnel resource(s) must have degrees or equivalent in Engineering, Telecommunications, and Economics, Commerce, or any other equivalent degree relevant to this assignment, from a recognized institution.
- 8.2. The bidder's proposed resource must have Information Communications Technology (ICT) knowledge focused on Telecommunications and demonstrate practical experience and understanding of the industry with a strategic focus on developments around the IMT systems planning and/or re-farming processes and planning, preferably at National and International Level.
- 8.3. The bidder's proposed resource must have the technical knowledge and demonstrate practical experience in the development of the IMT systems planning processes, development of strategies on the implementation of the IMT systems planning for services and an understanding of the rollout of new technologies as it relates to spectrum. Scoring for the proposed resource will be based on the relevance of experience performed to the requirement.
- 8.4. The bidder, including its key personnel resource, must have at least ten (10) years' experience in developing strategy for the deployment of the IMT systems planning and/or planning related to the table of frequency

allocations, and planning for wireless broadband, including network planning with an insight on new technologies and gaining consensus of the participants, preparing appropriate documentation to the satisfaction of the project team. "Key personnel resource" means the person(s) that will be responsible for managing and overseeing the entire work.

- 8.5. The bidder must have the necessary tools and appropriate resources to perform the development of the IMT strategy and planning processes.
- 8.6. The bidder must note that experience claimed, but not substantiated with specific work assignments will be awarded minimum points.
- 8.7. The bidder's proposals must be submitted with all required information containing technical information as well as price information.
- 8.8. The bidder must provide a work breakdown structure and project plan with details on how they intend to deliver the project.
- 8.9. The proposal must include, amongst others, the following:
 - 8.9.1. A list of credible and contactable references on the work undertaken by the bidder. The reference letter should be on the letterhead of the referee;
 - 8.9.2. A proposed plan of action to ensure the achievements of the assignments described in section 4 above;
 - 8.9.3. A comprehensive skill transfer plan;
 - 8.9.4. Work breakdown structure; and
 - 8.9.5. And any other relevant documentation deemed necessary as appropriate.
- 8.10. The received bids will be evaluated on the 80/20 procurement principle as per the Supply Chain Management Policy and the relevant Treasury Regulations. The bid will also be evaluated for functionality as per the functionality table below.
- 8.11. The bidder will be evaluated on:
 - 8.11.1. submission of the required documents;
 - 8.11.2. functionality; and
 - 8.11.3. Price and specific goals.
- 8.12. Only bidders who meet the cut-off score of 70 out of 100 points for functionality will be considered further for price evaluation.
- 8.13. For Functionality, please refer to table 1:

Table 1: Bid Functionality Criteria:

No	Category (Cut-off 70)	Points
A.	Functionality: Qualification criteria (cut-off 70)	
	Functional Proposal	
<p>1. Proposed Solution/ Methodology</p> <p>Proposed methodology to be used to undertake development of the Final IMT Roadmap and Radio Frequency Spectrum Assignment Plans for IMT, involving an analysis of Regulatory, Technical and Economic factors.</p> <p>In each case, providing relevant Regional and International best practices including the socio-economic benefits, International Benchmark studies, the maturity of the ecosystem, scenario plans, deployment costs, proposed timelines for clearing the frequency bands, co-existence scenarios, based on analytical processes and as well as simulations using appropriate tools techniques to achieve the desired outcome in performing feasibility studies for the frequency bands as mandated by the IMT Roadmap and the Radio Frequency IMT Roadmap 2014 and 2019 to yield resultant cost-effective solution for the migration of users and uses;</p>	<p>Evaluation criteria:</p> <ul style="list-style-type: none"> • Provided no information on methodology, analytical process, and simulation tools to be used = 1 point • Did not provide technical methodology, analytical processes, and simulation tools to be used = 2 points • Provided technical and Economic methodology, analytical processes, and simulation tools to be used = 3 points • Provided regulatory, technical, and economic methodology, analytical processes, and simulation tools to be used, with international benchmarks and recommended the preferred option = 4 points • Provided regulatory, Technical, economic methodology, analytical processes, and simulation tools to be used based on International Standards, International Benchmarks on the maturity of the ecosystem, Scenario Plans, 	30

No	Category (Cut-off 70)	Points
A.	Functionality: Qualification criteria (cut-off 70)	
	Functional Proposal	
	Deployment costs estimates, Proposal on timelines for clearing the frequency bands, co-existence scenarios, based on analytical processes and as well as simulations using appropriate tools techniques and recommend the preferred option = 5 points	
<p>2. Project Implementation</p> <p>Provide a draft implementation plan for the development of the IMT Roadmap, that is to lead to the final implementation of the project culminating with the final Radio Frequency Spectrum Assignment Plans for IMT to be completed within a period of 12 months.</p>	<p>Evaluation criteria:</p> <ul style="list-style-type: none"> ○ Provided no information on the proposed implementation plan = 1 points ○ Provided information on how to implement the draft IMT Roadmap = 2 points ○ Provide information on how to implement the IMT Roadmap and details on the first Phase of the Implementation of the IMT Roadmap showing a clear consideration of: <ul style="list-style-type: none"> - any relevant policy and or regulation geared towards the achievement of universal service in terms of access to broadband services and connecting the unconnected 	30

No	Category (Cut-off 70)	Points
A.	Functionality: Qualification criteria (cut-off 70)	
	Functional Proposal	
	<ul style="list-style-type: none"> - The latest ITU-R reports, recommendations, and resolutions for the frequency band allocated to the Mobile Radiocommunications and Identified for the deployment of IMT systems and beyond. - The latest developments and proposals within the ITU System on future Spectrum Requirements = 3 points <ul style="list-style-type: none"> o Provide information on how to implement the IMT Roadmap and details on the first Phase and second phase of the Implementation of the IMT Roadmap showing a clear consideration of: <ul style="list-style-type: none"> - any relevant policy and or regulation geared towards the achievement of universal service in terms of access to broadband services and connecting the unconnected - The latest ITU-R reports, recommendations, and resolutions for the frequency band allocated to the Mobile 	

No	Category (Cut-off 70)	Points
A.	Functionality: Qualification criteria (cut-off 70)	
	Functional Proposal	
	<p>Radiocommunications and Identified for the deployment of IMT systems and beyond; and</p> <ul style="list-style-type: none"> - The latest developments and proposals within the ITU System on future Spectrum Requirements - The socio-economic cost benefits associated with the implementation of the IMT Roadmap = 4 points <p>○ Provide information on how to implement the IMT Roadmap and details on the first Phase of the Implementation of the IMT Roadmap showing a clear consideration of the following:</p> <ul style="list-style-type: none"> - The latest ITU-R reports, recommendations, and resolutions for the frequency band allocated to the Mobile Radiocommunications and Identified for the deployment of IMT systems and beyond; - The latest developments and proposals within the ITU System on future Spectrum Requirements; 	

No	Category (Cut-off 70)	Points
A.	Functionality: Qualification criteria (cut-off 70)	
	Functional Proposal	
	<ul style="list-style-type: none"> - The socio-economic cost benefits associated with the implementation of the IMT Roadmap; - Any other relevant international technical and regulatory aspects deemed necessary and appropriate; and - Any relevant policy and or regulation geared towards the achievement of universal service in terms of access to broadband services and connecting the unconnected <p>=5 points</p>	
<p>3. Qualification and Experience of Employed Personnel.</p> <p>The bidder’s proposed personnel resource(s) should have degrees or equivalent in Engineering, Telecommunications, and Economics, Commerce, or any other equivalent degree relevant to this assignment, from a recognized Institution. The bidder’s proposed resource should have:</p> <ul style="list-style-type: none"> - Engineering/ICT knowledge and demonstrate practical experience; - understanding of the Information and Communication Technologies (ICT) with a strategic focus on 	<p>Evaluation criteria:</p> <ul style="list-style-type: none"> o At least one key project personnel resource has appropriate qualifications, technical knowledge, ICT knowledge, less than eight (8) years’ experience in developing the IMT Systems and or planning. = 1 point o At least one key project personnel resource has appropriate qualifications, technical knowledge, ICT knowledge, eight (8) to ten 	15

No	Category (Cut-off 70)	Points
A.	Functionality: Qualification criteria (cut-off 70)	
	Functional Proposal	
<p>developments around the IMT Roadmap and the planning of frequency migration and/or re-farming processes and Spectrum Planning, preferably at national and International Level.</p>	<p>(10) years' experience in developing the IMT Systems Planning and or planning IMT Systems Planning and or planning. = 2 points</p> <ul style="list-style-type: none"> ○ At least two key project personnel resource has appropriate qualifications, technical knowledge, ICT knowledge, ten (10) to twelve (12) years' experience in developing the IMT Systems Planning and or planning. = 3 points ○ At least two key project personnel resource has appropriate qualifications, technical knowledge, ICT knowledge, twelve (12) to fourteen (14) years' experience in developing IMT Systems Planning and or planning = 4 points ○ At least two of the key project personnel resource has appropriate qualification, technical knowledge, ICT knowledge, more than fourteen (14) years' experience in developing the IMT Systems 	

No	Category (Cut-off 70)	Points
A.	Functionality: Qualification criteria (cut-off 70)	
	Functional Proposal	
	Planning and/or planning. = 5 points	
<p>Bidder Experience in similar projects</p> <p>The bidder must have in the past ten (10) years' successfully completed project(s) such as development of Radio Frequency Spectrum Plans, IMT Roadmaps and/or planning related to the entire frequency spectrum ranges and band plans with insight on new emerging technologies and standards having participated in these developments and be able to prepare appropriate documentation and reports to the satisfaction of the project team. Indicate successfully completed work/projects of similar nature accompanied by contactable references, including testimonials/reference letters.</p>	<p>Evaluation criteria:</p> <ul style="list-style-type: none"> ○ Bidder has less than ten (10) years' experience in successfully delivering a project of similar nature = 1 point ○ Bidder has in the past (10) years successfully delivered a project of similar nature which are supported by one (1) reference = 2 points ○ Bidder has in the past (10) years successfully delivered projects of similar nature supported by two (2) references = 3 points ○ Bidder has in the past (10) years' successfully delivered projects of similar nature supported by three (3) references = 4 points ○ Bidder has in the past (10) years' successfully delivered projects of similar nature supported by four (4) or more references = 5 points 	25
TOTAL FOR FUNCTIONALITY PRE-QUALIFICATION CRITERIA		100

Annexure A: Some Elements of the Implementation of IMT Roadmap

The following IMT bands have been identified during the project as being “priority bucket” bands that would benefit from being on the worklist for new ICASA radio frequency migration and assignment plans (RFSAPs), and we would recommend that ICASA instigate commencement of work on this worklist in 2023. It is recommended that they are qualified and prioritised, and some RFSAPs are developed for the priority ones in the short term (i.e., less than a year), and others in the medium to long term.

	Frequency Band	Comment
1.	3.6 - 4.2GHz bands	Certain bands are the subject of discussion in anticipation of WRC-23, including the 3.6 - 4.2GHz bands. These bands were held over until these discussions are finalised.
2.	26GHz (24.25 - 27.5 GHz)	Critical for 5G and has been identified for IMT at WRC-19. Globally identified for IMT and many countries assigned for IMT. Significant interest by the industry. Ecosystem is maturing. Initial high-level judgement as feasible to allocate and assign in South Africa.
3.	3600 - 3800 MHz	Many countries assigned for IMT. <i>WRC23 agenda item</i> . Significant interest by the industry. Mature ecosystem available. Initial high-level judgement as feasible to allocate and assign in South Africa.
4.	3800 - 4200 MHz	Some countries assigned for IMT and local access schemes. Some interest from the industry. Ecosystem is evolving. Initial high-level judgement as feasible to allocate and assign in South Africa.
5.	4800 - 4990 MHz	FCC (USA) recently (Oct 2021) designated 4900MHz band for public safety.
6.	31.8 - 33.4 GHz	WRC designated this as an IMT band.
7.	37 - 40.5 GHz	WRC designated this as an IMT band including for HAPS.

8.	37 - 43.5 GHz (including 38 - 39.5 GHz for HAPS)	Globally identified for IMT. Ecosystem is yet to mature. Initial high-level judgement as feasible to allocate and assign in South Africa.
9.	45.5 - 47 GHz	Globally identified for IMT. Ecosystem is yet to mature. Initial high-level judgement as feasible to allocate and assign in South Africa.
10.	47.2 - 48.2 GHz	Globally identified for IMT - identified for IMT in Region 2 and another 69 countries from regions 1 and 3. Ecosystem is yet to mature. Initial high-level judgement as feasible to allocate and assign in South Africa.
11.	66 - 71 GHz	Globally identified for IMT. Industry interest in increasing. However, initial high-level judgement as feasible to allocate and assign in South Africa for unlicensed access like the lower half of the band from 57 - 66 GHz.