Summary and analysis of comments and counter comments received on Draft Manual for Assessment of Digital Connectivity under Rating of Properties for Digital Connectivity Regulations, 2024

1. Background

1.1. The past decade has witnessed an unprecedented surge in digitalization, transforming every facet of daily life—from the way we work and communicate, to how we access education, healthcare, and public services. Digital technologies have become central to economic development, innovation, and social well-being.

1.2. With the majority of data consumption now taking place indoors, reliable in-building digital connectivity has become indispensable, particularly as advanced 4G and 5G networks require robust indoor infrastructure to deliver high-speed data services. However, these high-frequency signals are often attenuated by building materials and architectural layouts, making property-level digital connectivity a priority for the nation's digital growth.

1.3. To address this emerging need, the Telecom Regulatory Authority of India (TRAI) notified the **"Rating of Properties for Digital Connectivity Regulations, 2024"** on 25th October 2024 hereunder referred as regulation. This regulation introduces a standardized and collaborative approach for assessing and rating properties based on their digital connectivity infrastructure. Properties achieving higher digital connectivity ratings are expected to see increased interest from users, buyers, and investors, ultimately enhancing their demand.

1.4. In line with this regulation, TRAI issued a '*Draft Manual for Assessment of Digital Connectivity under Rating of Properties for Digital Connectivity Regulations,2024*' on 13th May 2025 inviting comments from the stakeholders. This manual will serve as a practical guide for implementing the rating framework. The manual outlines a clear methodology for evaluating properties across key parameters such as fiber readiness, mobile network availability, in-building connectivity solutions, and Wi-Fi infrastructure etc. as provided in the regulations. Its primary aim is to provide all stakeholders—including property managers, digital connectivity rating agencies (DCRAs), and service providers—with a transparent, consistent, and fair guidelines for assessing digital connectivity.

2. Notice Inviting Comments from Stakeholders on the Draft Manual for Assessment of Digital Connectivity under Rating of Properties for Digital Connectivity Regulations, 2024

2.1. The Draft Manual was published by TRAI on **13th May 2025**. The Draft Manual was organized into eleven chapters, systematically covering all critical elements of the rating framework. It began with the objectives and scope, defined the roles of stakeholders, and detailed the processes for registration and the rating lifecycle. Separate assessment methodologies were outlined for Category A and Category B properties. The manual further explained the procedures for awarding and renewing digital connectivity ratings, mechanisms for reporting and feedback, appeals, and the process for regular review and updates. To support effective implementation, it also presented best practices for digital connectivity in properties and provides reference materials in its appendix.

2.2. Stakeholders were invited to submit their comments and feedback on the Draft Manual by 2nd June 2025, with a subsequent opportunity for counter-comments by 9th June 2025. Based on stakeholder requests, the consultation period was extended by one week to ensure maximum participation and input. Total fourteen stakeholders including service providers, infrastructure providers, consumer organisations and prospective rating agencies submitted their comments. One consumer organisation also submitted counter comments.

2.3. The Rating Manual has been developed solely to operationalize and implement the "Rating of Properties for Digital Connectivity Regulations, 2024." The manual's objective is to establish a structured, transparent, and standardized approach for the assessment of digital connectivity in properties, in strict accordance with the provisions of the Regulation.

2.4. The manual has been developed within the framework of the Regulation**.** Its purpose is limited to covering the operational and implementation aspects necessary for smooth and consistent implementation of the Regulation. The invitation for comments was intended to solicit stakeholder views exclusively on the content and processes of the manual itself, not on the Regulation or any related policy matters, which are outside the scope of this manual.

2.5. The inputs/comments and counter-comments, received on the draft rating manual has been grouped in two sections for the ease of summarisation and analysis. The Section-A covers general comments which are not specific to the provisions of draft manual while the Section-B covers the comments and counter-comments with regard to provisions in the draft rating manual.

A. General Comments

3. General Inputs, Analysis and Conclusion

3.1. The initiative for a Digital Connectivity Rating framework is a progressive step.

a) Input of Stakeholders:

i. Some stakeholders appreciated TRAI's initiative, stating that introducing a digital connectivity rating framework is a timely and commendable measure which will allow property seekers to make informed decisions regarding connectivity infrastructure in buildings, and simultaneously encourage builders and property managers to improve their in-building connectivity standards.

ii. It was submitted that while the TRAI Act, 1997 may not explicitly empower the Authority to rate buildings, the initiative is nonetheless aligned with TRAI's role of promoting quality of service and safeguarding consumer interests and thus is a welcome extension of its mandate.

iii. It was pointed out that referencing standard infrastructure codes such as the National Building Code (NBC) and Model Building Bye-Laws (MBBL) enhances credibility and ensures that the manual remains aligned with nationally recognized standards and guidelines.

iv. Stakeholders expressed that the framework will likely create long-term incentives for new constructions to integrate connectivity infrastructure at the design stage, and existing buildings will be encouraged to undertake upgrades in order to remain competitive.

b) Analysis and Conclusion:

The comments are well noted.

3.2. Improvements are needed in the structure, clarity, and usability of the manual:

a) Input of Stakeholders:

i. A view was expressed in comments and counter comments that the manual, although comprehensive, could benefit from simplification of language, clearer definitions, and streamlined structure, so that property managers and other non-technical users can engage with it more effectively.

ii. It was suggested that the process and documentation required from applicants and DCRAs should be standardized and well-structured to ensure transparency and eliminate ambiguity in execution.

iii. Some stakeholders recommended that rigid or fixed timelines for application and rating processes be avoided, particularly in the initial implementation phase, and that a degree of flexibility be built in.

iv. It was also submitted that the framework should emphasize ease of use and minimal procedural burden, thereby encouraging voluntary participation rather than enforcing compliance through complexity.

b) Analysis and Conclusion:

The objective of the manual is to make process of evaluation of digital connectivity simple and transparent. Accordingly, sufficient details have been provided in simple easy to understand language. However, some of the evaluation criteria are technical in nature meant for the DCRAs and use of technical terms is essential. Further, the simple process of registration of DCRAs has already been finalised by the Authority and is available on TRAI website. The timelines, for assessment process, provided in the regulations for DCRAs and the Property Managers are flexible enough and to be triggered by the Property Manager.

3.3. Greater transparency and consumer empowerment is required in the rating framework:

a) Input of Stakeholders:

i. A recommendation was made that buildings be mandated to display their digital connectivity ratings in brochures, websites, and marketing materials, thereby enabling consumers to make informed decisions when choosing properties.

ii. It was proposed that an online, publicly accessible registry of ratings be maintained, including not only the overall scores but also observations or deficiencies noted during assessments.

iii. It was further suggested that the framework include a consumer grievance mechanism to enable tenants or users to raise issues or appeal where the actual experience differs from the published rating.

b) Analysis and Conclusion:

The digital connectivity 'Star' rating of the rated properties will be publicly available on rating platform of TRAI as per the provisions of the regulations including the provision for submission of feedback by concerned stakeholder.

3.4. The allocation of roles and responsibilities among stakeholders must be clearly defined:

a) Input of Stakeholders:

i. It was submitted that the principal responsibility for provisioning and funding digital connectivity infrastructure should rest with property owners or managers, who directly benefit from the enhanced marketability and value of their properties.

ii. Stakeholders emphasized that Telecom Service Providers (TSPs) should not be assigned responsibilities outside their licensed scope and should not be financially or operationally burdened with in-building infrastructure requirements.

iii. A stakeholder expressed concern that telecom infrastructure is increasingly treated as a revenue-generating add-on by developers, who charge high access fees to TSPs. They recommended that in-building digital connectivity infrastructure be treated as a basic utility, akin to power and water, to be funded by the property itself.

iv. It was also noted that the responsibilities of various stakeholders—property managers, TSPs, DCRAs, and regulators—must be clearly delineated to avoid overlaps and accountability gaps.

b) Analysis and Conclusion:

As already mentioned above, the rating manual has been developed solely to operationalize and implement the "Rating of Properties for Digital Connectivity Regulations, 2024." The good digital connectivity provides win-win scenario for the service provider, property manager and

the consumer. The rating framework brings all the stakeholders together to collaborate within their regulatory framework. The Authority has already given its recommendations to the Government to empower the property managers to install the in-building solutions. Further, the Model Building Bye-Laws (MBBL) broadly cover the role and responsibilities of the property manager.

3.5. Technical requirements and methodology must be standardized and robust:

a) Input of Stakeholders:

i. It was recommended that a standardized testing methodology be prescribed for all DCRAs to ensure consistency and comparability across assessments.

ii. A stakeholder suggested that rather than relying solely on single-day testing, the framework should incorporate longitudinal network performance data to reflect a building's connectivity performance more accurately over time.

iii. It was also proposed that crowdsourced datasets—such as those from mobile speed test applications—be used to complement official assessments and enhance reliability.

iv. There was a suggestion to require DCRAs to use digital tools capable of producing detailed audit trails, which would support accountability and allow future verification of the rating process.

v. It was submitted that in-building Wi-Fi infrastructure plays a critical role in digital connectivity, especially in broadband environments, and should therefore be assessed as part of the rating.

vi. It was also highlighted that outdoor telecom infrastructure, including tower siting and fiber availability, significantly influences indoor performance and should be addressed in parallel.

b) Analysis and Conclusion:

The assessment methodology provided in the rating manual is quite elaborate to ensure consistency in assessment. Standardized methodology has been added wherever required in manual to improve clarity. Now the proposed methodology also covers the peak usage hours across days for the purpose of the measurement of service performance. The tools to be used in assessment of service performance are already indicated in the rating manual. The service providers and property managers need to collaborate for improving the indoor digital connectivity and ensure external fibre and tower availability.

3.6. IP-1s must be formally included and supported in framework:

a) Input of Stakeholders:

i. A Stakeholder emphasized the need for explicit recognition of IP-1 entities as key contributors to in-building digital infrastructure, recommending their inclusion in the framework's implementation model.

ii. Stakeholders noted that TRAI's stance on IP-1s appears inconsistent—appreciative in some contexts but critical in others—and called for a unified policy supporting their role in the ecosystem.

iii. It was submitted that assigning telecom infrastructure responsibilities to unregulated entities, such as property managers, without proper oversight or telecom licensing, could raise national security, service quality, and accountability concerns.

b) Analysis and Conclusion:

It is again emphasised that the objective of this manual is to implement the provisions of "Rating of Properties for Digital Connectivity Regulations, 2024." and in no way define or comments upon the role of any licensed or authorised entity as it is beyond the scope of this manual. The section 2.3 & 2.4 of Chapter 2 of the rating manual has been amended to include the relevant stakeholders. Further, the collaboration among property manager and licensed

entities can drive the improvement in indoor digital connectivity and thereby improving quality of service.

3.7. The manual must be aligned with legal and policy frameworks:

a) Input of Stakeholders:

i. It was stated that the rating framework must remain within the legal remit of TRAI under the TRAI Act and telecom regulations and must not intrude into areas governed by local bodies or real estate regulators.

ii. Some obligations proposed in the manual—such as provisioning of DCI by builders—may need enabling changes in real estate and building laws to ensure enforceability.

iii. Stakeholders emphasized that the framework should be aligned with national missions such as Digital India and Smart Cities and must not introduce compliance obligations that contradict broader sectoral reforms.

iv. It was submitted that implementation of the framework hinges on clarity regarding the proposed Digital Connectivity Infrastructure Provider (DCIP) license under DoT. TRAI is advised to await DoT's position before moving forward.

v. Stakeholders suggested that a formal Regulatory Impact Assessment (RIA) be conducted to evaluate the financial, legal, and operational implications of the proposed framework.

b) Analysis and Conclusion:

The rating manual is fully aligned with the provisions of "Rating of Properties for Digital Connectivity Regulations, 2024.". The stakeholders are advised to read the provisions of the rating manual carefully. Further, the regulation itself is a step in the direction of strengthening the pillar of Digital India mission by rating the level of digital connectivity in different categories of the properties in the country. The other relevant recommendations of the Authority are already under consideration of the Government.

3.8. A phased implementation approach is essential for effective adoption:

a) Input of Stakeholders:

i. It was recommended that the framework be implemented in phases, beginning with voluntary participation, and gradually moving to mandatory coverage of key building categories such as public offices or large residential complexes. In counter comments, it was also recommended that rating should be first implemented for categories other than Residential, in a phased manner and learnings from these implementations should be incorporated in rating framework and its operations.

ii. It was also pointed out that foundational prerequisites—such as the DCIP licensing regime, updates to building bye-laws, and state-level adoption—are not yet fully in place, and that enforcement should be deferred until these are resolved.

iii. Concerns were raised that buildings should not be penalized under the framework for systemic or regulatory delays—such as RoW or tower access issues—that are outside the control of property owners or TSPs.

iv. A stakeholder opined that the draft manual is premature and should only be finalized after the necessary regulatory groundwork has been laid and approvals obtained. In counter comments, a stakeholder recommended that the initiative should be deferred till there is a legal basis.

b) Analysis and Conclusion:

The regulation 14 is self-explanatory. The property managers need to apply on rating platform to get their properties rated for digital connectivity. The other relevant recommendations, referred by the stakeholders, will further accelerate the adoption of rating framework. As far the issues outside the properties are concerned, the property managers and respective service providers should collaborate to extend the digital connectivity.

3.9. Inter-agency consultation and stakeholder involvement is necessary.

a) Input of Stakeholders:

i. Stakeholders emphasized the importance of engaging directly with property managers, who will bear a significant share of the implementation burden, to understand challenges and build support.

ii. It was also referred that TRAI has proceeded with activities such as webinars and draft consultations without formal clearance from DoT on its recommendations, resulting in procedural uncertainty.

iii. It was suggested that effective implementation will require coordination between TRAI, DoT, the Ministry of Housing and Urban Affairs, and state-level authorities to harmonize building codes, connectivity mandates, and licensing requirements.

b) Analysis and Conclusion:

The rating manual has been finalised duly considering relevant comments of the stakeholders. Inputs from few prominent builder organisations were also sought while finalization of the manual. However, some of the above comments are not relevant for the rating manual. The regulations have already been notified after a detailed consultation with the concerned stakeholders including the property managers and service providers.

B. Comments on Draft Manual

4. Comments on Chapter 1,2,3:

4.1. Chapter 1 Introduction:

a) Input of Stakeholders:

i. One stakeholder submitted that the manual should clearly define the roles of all stakeholders, including consumers, particularly in the context of commercial buildings. It was also suggested that tenants/occupants (consumer) be explicitly included as stakeholders, and the manual should also serve as guidance for them.

ii. Another stakeholder submitted that the definition of Digital Connectivity Infrastructure (DCI) used in the manual is still under review by DoT and not yet approved, and hence its inclusion at this stage may be considered premature.

b) Analysis and Conclusion:

Please refer Para 1.5. Objectives of the Rating Manual. The Rating Manual is intended to serve as a structured framework designed to ensure a fair, transparent, and standardized approach to assessing digital connectivity under the provisions of the regulation. The regulation provides the analysis of stakeholders in Fig. 1 of E.M. The view of the Authority on definition of Digital Connectivity Infrastructure (DCI) may be seen in Response to the Back Reference dated 19.03.2025 received from Department of Telecommunications on the Recommendations dated 20.02.2023 of TRAI dated 22.05.2025.

4.2. Chapter 2 Role of Stakeholders:

a) Input of Stakeholders:

A stakeholder submitted that the list of stakeholders in Chapter 2 may be expanded to include all relevant access and auxiliary service providers beyond Telecom Service Providers (TSPs). It was suggested that entities such as fixed-line ISPs, Wi-Fi service providers (e.g., PDOs/PDOAs), Building Management Service providers, and M2M service providers be explicitly included, as meaningful in-building connectivity requires coordinated contributions from multiple players. This would enhance clarity and avoid misinterpretation.

b) Analysis and Conclusion:

The chapter 2 of the Rating Manual only covers the stakeholders who are involved in providing digital connectivity or digital connectivity infrastructure. Accordingly, the section 2.3 of Chapter 2 of the rating manual has been amended to include the relevant service providers.

4.3. Chapter 2, Section 2.1 Digital Connectivity Rating Agency (DCRA):

a) Input of Stakeholders:

i. Few stakeholders submitted that the stakeholder ecosystem under the Digital Connectivity Readiness Assessment (DCRA) framework should be broadened to include IP-1 entities. It was also suggested that standardized audit mechanisms be established to assess and ensure compliance of telecom infrastructure developed under IP-1 registration provisions.

ii. One stakeholder submitted that standardized formats should be prescribed for application submission, along with a clear process for evaluation and communication of deficiencies or observations.

b) Analysis and Conclusion:

The eligible entities including IP-1 are meeting the eligibility criteria provided in Section III of the "Rating of Properties for Digital Connectivity Regulations, 2024" are free to apply for the registration as DCRA. Further, the application submission and other activities will be implemented through standardised process in the rating platform.

4.4. Chapter 2, Section 2.2 Property Manager (PM):

a) Input of Stakeholders:

i. Few stakeholders submitted that the role of Property Managers should be limited to facilitation, as they are not authorized to install or maintain telecom infrastructure under existing regulatory provisions. It was suggested that the definition of Property Manager may be revised to "person or entity" instead of only "person," and the phrase "maintain compliance with regulatory standards" may be deleted. Further, sub-sections 2.2(ii) on documentation and compliance and 2.2(iii) on maintenance of digital connectivity infrastructure may be removed from the Property Manager's responsibilities and included under the role of DCIP, broadened to include IP-1 entities. It was also suggested to include a new section on collaboration with DCRA, with the role expanded to incorporate IP-1 entities.

ii. One stakeholder submitted that Property Managers may appoint qualified consultants to manage the properties. It was suggested that such consultants should also be brought within the scope of the manual, as they play a key role in ensuring implementation of robust digital connectivity systems in projects.

iii. One stakeholder submitted that all costs for rating and DCI enhancement should lie with the Property Managers, including during construction. In case of no mutual agreement with TSPs/IPs, permissions should be granted at RoW-prescribed rates. It was further submitted that Property Managers should be barred from exclusive arrangements and must provide non-discriminatory access to all licensed TSPs. The stakeholder also recommended mandating interoperability of DCI, enabling compatibility with all TSPs/ISPs, and allowing end-users to switch providers as per their preference.

iv. A Stakeholder has suggested that the role of property manager should clearly include the responsibility and ownership regarding all costs to be borne for ensuring digital connectivity infra, connectivity and taking rating.

v. One stakeholder submitted that standardized formats should be prescribed for application submission, along with a clear process for evaluation and communication of deficiencies or observations.

b) Analysis and Conclusion:

Please refer Para 1.5. Objectives of the Rating Manual. The Rating Manual is intended to serve as a structured framework designed to ensure a fair, transparent, and standardized approach to

assessing digital connectivity under the provisions of the regulation. The rating manual only provides the details of the rating framework already provided in the "Rating of Properties for Digital Connectivity Regulations, 2024". Further, the regulation defines the Property Manager as "the person who is either the owner of the property to be rated for digital connectivity or has any legal right to control or manage the property." Therefore, the owner or any entity having legal right to control or manage the property, can apply for the rating under the provisions of the regulation. Further the stakeholders are advised to refer the provisions of Section V (General Obligations of the Property Manager) of the "Rating of Properties for Digital Connectivity Regulations, 2024" dated 25th October 2024.

4.5. Chapter 2, Section 2.3 Telecom Service Providers (TSPs):

a) Input of Stakeholders:

Few stakeholders have suggested to include in the rating manual the section which says that no service provider shall enter into exclusive arrangement or tie-up arrangement with any property manager for development or access of digital connectivity or digital connectivity infrastructure in their property.

b) Analysis and Conclusion:

Please refer provision 20 and 23 of the "Rating of Properties for Digital Connectivity Regulations, 2024" dated 25th October 2024.

4.6. Chapter 2, Section 2.4 Digital Connectivity Infrastructure Providers (DCIPs):

a) Input of Stakeholders:

i. Few stakeholders have suggested formal inclusion of IP-1 by replacing "DCIP" with "DCIP including IP-1s". They also want to DCIPs to **Own the** digital communication Infrastructure and not just design, build and maintain. They are of the opinion that "Documentation and Compliance" and "Maintenance of digital connectivity Infrastructure" are also included as responsibilities of DCIP like Property Manager.

ii. One stakeholder also mentioned the inclusion of TSPs/ISPs along with DCIPs.

b) Analysis and Conclusion:

The Chapter 2 of the rating manual provides the overview of the role of different stakeholders in the digital connectivity infrastructure under the relevant licensing and regulatory framework. The broad description of DCIP covers all infrastructure providers (IP) who are authorized to create digital connectivity infrastructure under the extant licensing framework. Accordingly, the section 2.3 and 2.4 of Chapter 2 of the rating manual has been amended to include the relevant stakeholders.

4.7. Chapter 3, Section 3.2 Registration Process of DCRA:

a) Input of Stakeholders:

i. Few Stakeholders have suggested that the registration process of DCRA or any review thereafter should also involve evaluation of their application by an Empowered Committee, which should also include technical experts from TSPs.

ii. A Stakeholder has also suggested to publish list of the authorized DCRA on the website and to update that time to time.

iii. The stakeholder has requested that during registration of DCRA, authority should avoid asking the applicant to appear in person and rather allow to have resubmission or otherwise allow to have a virtual meeting.

b) Analysis and Conclusion:

The regulation provides the eligibility criteria and general obligations for the DCRA. For more details, relevant provision of the regulation can be referred. Further, the details of registered

DCRA will be available to the Property Managers through the rating platform. The process of registration of DCRA is already prescribed in the regulation.

4.8. Chapter 3, Section 3.2.1 Grant of Registration and Listing on Rating Platform

a) Input of Stakeholders:

A Stakeholder has suggested that registration validity of DCRA should be valid for 2 years as there would be many improvements on the infrastructure to obtain better ratings.

b) Analysis and Conclusion:

Kindly refer to the TRAI Order dated 4th April 2025 which mentions that "Authority shall, on being satisfied that an applicant meets the eligibility criteria under regulation 5 of the Regulations, grant registration to the applicant on the rating platform for a period of 5 years….".

4.9. Chapter 3, Section 3.3 General Obligations of DCRA:

a) Input of Stakeholders:

Few stakeholders have suggested to include a provision which requires DCRA to engage in structured collaboration with IP-1 registered entities and IBS providers / DCIPs throughout the assessment process.

b) Analysis and Conclusion:

The Property manager is responsible to apply for the rating of their properties for digital connectivity. Therefore, the Property Manager may seek support from the concerned DCIP, if applicable, during the assessment of digital connectivity by the DCRA.

4.10. Chapter 3, Section 3.5 General Obligations of Product Manager:

a) Input of Stakeholders:

i. A Stakeholder has suggested an addition to general obligations for Property manager where it should be mentioned that the responsibility for bearing the cost of establishing network infra, power, and associated equipment should rest with property manager.

ii. One stakeholder submitted that, during the initial period, a service provider may enter into an exclusive or tie-up arrangement with a Property Manager for developing or accessing digital connectivity infrastructure. However, it was stated that the Property Manager must ensure equal access to all TSPs without preferential treatment and uphold market-driven commercial terms for all services.

iii. A Stakeholder also suggested that in addition to "No exclusive arrangement with the service providers", the manual should also mention about **"Non-discriminatory access to Service Providers".**

b) Analysis and Conclusion:

Kindly refer the provisions Section V and Section VI of the regulation. In addition, the stakeholder may also refer the relevant provision of Addendum to Model Building Bye-Laws, 2016 issued on March 2022 by Ministry of Housing and Urban Affairs.

4.11. Chapter 3, Section 3.6 Classification of Properties for Rating:

a) Input of Stakeholders:

i. Stakeholders have suggested separate classification for standalone Cinema complex as well as standalone Digital Games etc facility. They have also suggested that shopping malls and events must fall under category B.

ii. A Stakeholder also suggested about inclusion of likely construction developments (smart residential townships, commercial co-working spaces and data-driven offices, greenfield industrial corridors / warehousing, Smart villages / semi-urban clusters, EdTech and Health Tech Hubs, Tech parks and Startup Zones).

iii. A Stakeholder has also suggested that properties should be classified with priority given to buildings having higher footfall.

b) Analysis and Conclusion:

Please refer to the Section II (Classification of Properties for Rating) of the regulation which provide broad grouping of properties under two categories. It may further be noted that the regulation does not provide any priority and property manager are free to apply for rating for their properties within the framework of this regulation.

4.12. Chapter 3, Section 3.7 Rating Process:

a) Input of Stakeholders:

i. A Stakeholder has suggested that wherever technical documentation is required from property manager, he may be allowed to be assisted by DCIP. The stakeholder also suggested to allow DCIP to represent Property Manager for any clarification during Due diligence process and for taking Corrective Actions.

ii. Few Stakeholders also suggested to provide Property Manager the flexibility to directly opt for Due Diligence II stage or opt for both stages.

iii. A Stakeholder also suggested to appoint DCRA certified consultant who can do Due Diligence stages however the final evaluation could be done by DCRA authority.

b) Analysis and Conclusion:

The two-stage due diligence process has been designed to provide a structured and progressive approach to assessments. In the first stage, basic assessment is conducted by the DCRA based on the documents submitted by the property manager related to the digital connectivity infrastructure. The observations of the Stage-1 due diligence, requirement of any missing document and possible improvement areas are communicated to the property manager for follow-up action. Once ready for Stage-2 of due diligence, which involves on-site physical assessment the property manager can request for commencement of second stage. This approach provides sufficient flexibility to the property manager to take corrective actions for improvement, if required, and get best possible ratings for their properties. Further, the property manager is free to get support from their vendors and infrastructure providers during the assessment process. In addition, the property managers are free to get the assistance of any DCI designer for planning and development of DCI in their properties for creation of robust and scalable digital connectivity infrastructure.

5. Comments on Chapter 4 Assessment Methodologies for Category 'A' Properties:

5.1. General Comments:

a) Input of Stakeholders:

i. A Stakeholders has requested the insertion of a cross-reference table mapping each assessment parameters or criterion to specific sections/clauses of relevant standards (e.g. MBBL, NBC, etc)

ii. One consumer organisation has commented upon the weightage assigned to different assessment parameters which have been summarised in the draft manual as provided in the regulations. They have also concluded that methodology relies on the self-reported data by the property managers and there should be third party audit and crowdsourcing data should be used. It has also been said that the manual lacks framework for newer technologies like 5G-FWA. It has also been suggested to include Satellite technologies, edge computing, network virtualisation, solar power, Digital Public Infrastructure (DPI) integration etc.

b) Analysis and Conclusion:

The assessment under criteria 4.1 (Compliance to Applicable Model Building Bye-Laws (MBBL) and National Building Code (NBC) for Digital Connectivity) relies on compliance

with MBBL and NBC. For this reference, an indicative list of key provisions have been added in the FAQ question xiv present in the Rating Manual. The rating manual has proposed the weightage against the sub-criteria provided in the regulations and their measurement methodology. The rating manual is not intended to amend the provisions of the regulation. Further, the rating methodology uses combination of authentic documentation and onsite verifications including the measurement of network performance. Therefore, it is not reasonable to conclude that the ratings are based on self-reporting. Further, the rating criteria, as prescribed in the regulations, are objective and relevant to the digital connectivity. The specific technologies like 5G-FWA are part of Enhance Mobile Broadband (eMBB) and are already covered under mobile connectivity assessment. Further, the edge computing, network virtualisation, solar power, Digital Public Infrastructure (DPI) integration etc. are the applications and not part of digital connectivity. Further, under scoring criteria for 4.1.1 (Approved Digital Connectivity Infrastructure (DCI) design) and 4.1.2 (DCI implementation as per approved DCI design) of the rating manual, it has been clarified on what type of deviation will be considered as minor deviations, which will give clarity to DCRA while awarding scores for the same.

5.2. Section 4.2 Provision in Civil Infrastructure, over and above MBBL and NBC requirements, for Ensuring Robust Digital Connectivity:

a) Input of Stakeholders:

i. One of the service providers has mentioned that under the Objective of Sub-Criteria (Provision for expansion of mobile and wireline connectivity), mobile connectivity should not only cover 5G/6G but should also cover 4G/5G/6G.

ii. One of the stakeholders has said that provision in civil infrastructure, over and above MBBL and NBC requirements need to be specified. Another stakeholder suggested to mandate the allocation of dedicated space within telecom rooms for the installation and operation of IP-1 / DCIP equipment.

b) Analysis and Conclusion:

Under the objective of Sub-Criteria 4.2.2 (provision for expansion of mobile and wireless connectivity) of the Rating Manual, 4G has also been added to the mobile connectivity technologies as suggested by the stakeholder. Also, the assessment sub-criteria are clearly provided in the regulations. Assessment methodology against the Criteria no 4.2 -' Provision in civil infrastructure, over and above MBBL and NBC requirements' is covered in section 4.2.1, 4.2.2 and 4.2.3 of the Rating Manual. It is reiterated that this rating manual only provides the assessment criteria and methodology within the framework of the regulations. As far as provisioning of telecom spaces is concerned, they are part of National Building Code which is currently under revision by Bureau of Indian Standards (BIS). Further, scoring criteria in 4.2.1 (Provision for expansion of telecom rooms and cable pathways) of the rating manual has been updated and is now dependent on provision of expansion for telecom rooms and horizontal and vertical pathways.

5.3. Section 4.3 Provision in Power Infrastructure, over and above MBBL or NBC requirements, for Ensuring Reliable Digital Connectivity:

a) Input of Stakeholders:

One of the stakeholders has suggested to include energy efficiency score for DCI infrastructure and requirement for annual energy audits of digital connectivity equipment. Another stakeholder is of the view that Current Sub-Criteria: 'Building Management System' should be limited to DCI since BMS for the entire facility may or may not be possible and having huge cost involvement. One stakeholder suggested to specify whether the system to be under monitoring of limited to the digital connectivity rather focusing more on HVAC, Fire, and other module.

b) Analysis and Conclusion:

The energy efficiency aspects are not part of the original regulation and therefore are not in the scope of this rating manual. Further, the requirements of the BMS in the rating manual are only limited to the items which impact the working and availability and robustness of digital connectivity i.e. environment control (HVAC), power and fire alarm.

5.4. Section 4.4 Digital Connectivity Infrastructure Resilience:

a) Input of Stakeholders:

One stakeholder suggested that infrastructure design guidelines must incorporate a mandatory provision for alternate entry paths specifically designated for DCIP / IP-1 infrastructure. Another stakeholder has suggested that common In Building Solution (IBS) systems to be accepted by TSPs and they shall not insist on installing their own IBS.

b) Analysis and Conclusion:

The purpose of alternate entry paths provides route redundancy for digital connectivity. The broad requirements of alternate entry path are covered in NBC. Further, the regulations 20 and 23 provides that the property managers and service providers shall not enter into any exclusive arrangement for use of DCI. The objective of the rating framework is to drive collaboration among property managers and service providers and encourage sharing of digital connectivity infrastructure as far as possible. Sharing of DCI including in-building solutions is in the interest of property manager and the service providers as it reduces the cost of DCI.

5.5. Section 4.5 Future Readiness of Digital Connectivity Infrastructure:

a) Input of Stakeholders:

i. One stakeholder also suggested to reduce the score of Criteria 5-'Future Readiness of Digital Connectivity Infrastructure' and delete criteria 5.2 -'Support for future bands' as provided in the regulations. Another stakeholder suggested that backhaul connectivity should not be restricted to fibre in para 4.5.1-ii(a) 1-Assessment Methodology under Sub-Criteria: Availability of the latest generation of mobile connectivity.

ii. One of the stakeholders suggested mandating periodic Digital Readiness checks by accredited third parties to validate compatibility with emerging technologies, scalability, and cybersecurity posture. One of the stakeholders also suggested to introduce a new scoring parameter—'Multi-Operator Tray and Ducting Layout Accessibility'.

b) Analysis and Conclusion:

As already clarified in the scope, the objective of the rating manual is to provide assessment methodology within the framework of the regulations already notified by TRAI through a consultation process. The provisions of the regulations cannot be modified through the rating manual. As far as the backhaul connectivity under 4.5.1-ii(a) 1-Assessment Methodology is concerned from Rating Manual, the same has been updated which is now not limited to fibre connectivity. Further, for the purpose of periodic monitoring of ratings, the provisions of Section IV of the ‘Rating of Properties for Digital Connectivity Regulations, 2024’ may be referred to. With regard to multi-operator tray and ducting, it may be noted that the DCI is common for all service providers and is multi-operator by-design for assessment criteria provided in section 4.7 of the rating manual.

5.6. Section 4.6 Provision of Wired Connectivity Infrastructure:

a) Input of Stakeholders:

One stakeholder suggested to increase the weightage of the criteria 6-'Provision of Wired Connectivity Infrastructure' in the regulations and add new sub-criteria 'Fixed Wireless Access Connectivity' with score 10. Another stakeholder suggested to mandate that all backhaul fibre connectivity deployments to incorporate dedicated provisions to accommodate the infrastructure requirements of infrastructure providers.

b) Analysis and Conclusion:

The rating manual provides operational procedure for the implementation of the provisions of the regulations. As far as introduction of new sub-criteria for 'Fixed Wireless Access Connectivity' is concerned, it may be noted that the wireless connectivity remains wireless connectivity whether it is used in static mode or while on the move. Further, backhaul connectivity is to be provided by the service providers /infrastructure providers to deliver services which is already covered under section 4.6 of the rating manual. Also, Objective in section 4.6.2 and 5.4.2 (Fiber connectivity till user premises) and corresponding scoring criteria in table 4.35 and 5.25 (Scoring Criteria) of the rating manual respectively have been updated to indicate that the fiber connectivity referred is from telecom room / transmission room. Under 4.6.1 (Backhaul fiber connectivity (service provider to property), the scoring criteria in Table 4.33 of the rating manual has also been updated to provide equal weightage to wireline and wireless service providers having fiber backhaul.

5.7. Section 4.7 Availability of Service Providers:

a) Input of Stakeholders:

i. One consumer organisation commented that merely listing ISPs available at a location doesn't guarantee performance. One service provider association suggested to revise the proposed criteria and assign full equal weightage (7.5) for wireline and mobile if minimum four service providers are available for each service instead of three as proposed in the draft manual. Another service provider association and service provider suggested that the gap in weightage between the presence of two Service Providers and three Service Providers should be sufficiently significant to encourage the provisioning of connectivity by at least three service providers for both 4.7.1 (Number of wireline Internet Service providers having integration with Digital Connectivity Infrastructure) and 4.7.2 (Number of Mobile Service providers having coverage or integration with Digital Connectivity Infrastructure).

ii. One service provider commented that in compliance checklist under 'Network performance test results from multiple operators' [4.7.2 (iii)], the line “Network performance test results from multiple operators” should be substituted with Network performance test results of multiple operators to be conducted by the DCRA.

b) Analysis and Conclusion:

The availability of service providers and service performance are the two distinct criteria provided in the regulations to assess the overall availability and performance of digital connectivity in the property. Further, the weightage of two sub-criteria, under availability of service providers, have been distributed equally for availability of internet and mobile service provider. The availability of three service providers is considered to provide optimum choices to the end consumers. As far as the 'Network performance test results from multiple operators' under 4.7.2(iii) is concerned in Rating Manual, these results may be available with the property manager as a part of commissioning of the in-building solution and will be verified by the DCRA. With regard to minimum number of service providers integrated with the DCI, the maximum weightage is assigned if 3 or more service providers have integration with the DCI in the property. Scoring criteria for 4.7.2 (Number of Mobile Service providers having coverage or integration with Digital Connectivity Infrastructure) has been updated to measure coverage of mobile service providers in the property through integration with DCI or any other mode.

5.8. Section 4.8 Service Performance:

a) Input of Stakeholders:

i. Some service providers suggested to reduce the weightage of the main criteria that is 'Service performance' from 25 to 20 and increase the weightage for mobile network coverage.

ii. Few of the service provider association has suggested to increase the weightage of mobile network coverage and reduce the weightage of secure public Wi-Fi and few service provider and a service provider association has suggested to remove weightage from secure

public Wi-Fi. They have also suggested that widespread availability of affordable 4G and 5G data for subscribed users, the relevance of public Wi-Fi has significantly diminished.

iii. One of the Stakeholder has suggested regarding Secure public Wi-Fi coverage in non-public areas that it is not always feasible to provide a secure public Wi-Fi inside a leased office space suggesting that it is up to tenants as it depends on nature of business where public Wi-Fi can endanger data security compliance. One stakeholder submitted two differing views on public Wi-Fi within private buildings. It was submitted that public Wi-Fi has lost relevance in India due to widespread and affordable mobile data, and hence may be removed as a rating criterion. Alternatively, it was submitted that public Wi-Fi is essential for smart building functions like IoT, public utilities, and security systems, and should remain part of the rating framework.

iv. One of the stakeholders has suggested to use TRAI Myspeed App or other speed testing devices in place of test probes to assess data speed and voice call quality over a day. One of the test app providers have suggested to use standard test apps and test performance trends over 7-14 days for Mobile Network Coverage and Performance Sub-Criteria. It has also been suggested that DCRA should perform tests over different times of day and/or multiple days. A Stakeholder has suggested addition of a dedicated annexure listing standard instruments/app required for testing digital connectivity parameters (e.g. spectrum analysers, network analysers, signal strength meters, latency testers, cable testers, power quality analysers, Wi-Fi analysers, etc.).

v. One service provider has suggested to remove reference to Test Probes. One of the service providers have suggested that RF testing, maps, speed tests etc can be done by 3rd Parties. One of the stakeholders suggested that framework should include the establishment of standardized performance metrics specifically tailored for IBS providers (DCIP). One of the service provider association and service provider has suggested to replace the criteria of "If at least 2 service providers have more than 70% mobile coverage for their latest generation of technology in non-public areas...." to "If at least 3 service providers have more than 60% mobile coverage for their latest generation of technology in non-public areas (including lifts and basements) with average minimum download speed of 10Mbps for 4G or 100 Mbps for 5G technology as applicable" with the justification 'It is imperative that adequate service providers coverage is made available, to ensure universal connectivity.' One of the service provider and association has suggested that the speed metrics should be modified in accordance with a TSPs MRO criteria: For 4G, throughput equal to or better than 2 Mbps, successful file download test cases in percentage. For 5G, 100 MB size is to be downloaded on each selected test location within 5 minutes.

b) Analysis and Conclusion:

The service performance is the one of the most important measures of good digital connectivity. Accordingly, the regulations provide maximum weightage against this assessment criteria. Now the digital connectivity can be extended through wireless medium like mobile network and wireline medium i.e. through fibre to the home (FTTH), Cables etc. For the consumers, the service availability and service performance are more important than the access medium or technology through which the digital connectivity has been extended. The ratings for digital connectivity, under these regulations, shall be provided based on the overall digital connectivity as is evident from the assessment criteria provided in the regulations. Both wireless and wireline access medium are important and plays important role in ensuring service continuity in case of interruption in any one of them. Therefore, both mobile and internet service providers should collaborate with the property managers to extend the connectivity to deliver reliable services to their consumers. The reliable and secure Wi-Fi, especially in the residential and office properties, can be used to offload mobile traffic for providing ubiquitous mobile coverage as is the trend in developed countries. However, considering the comments of the stakeholders, the weightage for against sub-criteria for mobile and Wi-Fi coverage have been rationalised. Updated weightage is visible in 4.8 and 5.6 (Service Performance) of the Rating Manual.

As far as measurement of service performance is concerned, the measurement methodology has been included in the rating manual. TRAI App is to be used for the measurements of download speed. The 'test probe' in the reference of service performance means the testing tools like TRAI App, call quality measurement tool, RF coverage measurement tool etc. The same has been suitably elaborated in the sections of the rating manual. To measure call quality, assessment for call setup success rate, call drop rate and call setup time has been added. Also, usage of test probe has been replaced with the word 'prescribed methodology' in the manual. Additionally, now the rating manual provides for the conduct of service performance test measurement for at least three days (preferably 10 am to 8 pm) to capture on ground user experienced service performance stating including peak hours (10 am – 12 am & 6 pm – 8 pm)

The suggestion of service providers to use same performance criteria as provided in minimum rollout obligations for download speed of 4G and 5G service stating '*For 4G, throughput equal to or better than 2 Mbps, successful file download test cases in percentage. For 5G, 100 MB size is to be downloaded on each selected test location within 5 minutes'*, looks unreasonable and unjustified as it is very low compared to the download speeds supported by 4G and 5G technology especially when the in-building solutions are deployed. It is also noted that the suggested download speeds are well below the typical download speeds declared by the service providers under revised QoS regulations. Considering that maximum data consumptions happen inside buildings; the higher download speeds also provide opportunities to the service providers to monetise their network investment in 4G and 5G network. It is difficult to understand the reason for the reluctance, on the part of service providers, to exploit the full potential of their network.

Further, under sub-criteria in 4.8.1 (Mobile network coverage and performance in public areas of property) and 4.8.3 (Mobile network coverage and performance in non-public areas) of the Rating Manual, scoring methodology has been updated to not only include coverage and minimum download speed, but also include call drop rate and call setup success rate assessment.

Assessment methodologies for mobile (data and voice services) and Wi-Fi services (data services) has been added in section 4.8 of the Rating Manual for improved understanding for the stakeholders.

5.9. Section 4.9 User Experience:

a) Input of Stakeholders:

i. One of the stakeholders has suggested that User experience is to be included with higher weightage while rating any building.

ii. Another stakeholder has suggested to build a dedicated feedback mechanism should be instituted to capture stakeholder and end-user input specific to the performance and service quality of IP-1 and In-Building Solution (IBS) providers (DCIP)

iii. One service provider has suggested that assessment should ensure appropriate sample selection and to ensure that any biases are reduced or eliminated altogether. It was also submitted that users should be better informed about the services they are rating, as there may be confusion between public Wi-Fi and private broadband connections during the survey process.

iv. A service provider has suggested the surveys for feedback of users may be conducted at a later stage.

b) Analysis and Conclusion:

As already highlighted, the rating manual is intended to provide operational procedure for the implementation of provisions of the regulations. The weightage for criteria 'User Experience' is already provided in the regulation. Further, the rating platform will provide suitable interface to concerned stakeholders for providing feedback on the digital connectivity service performance in the rated properties. The ratings of the properties will be available on rating platform for transparency and verification by general public. The consumer survey is part of

rating process. Therefore, it is to be conducted as a part of digital connectivity assessment. Under 'User Experience' scoring criteria of Rating Manual, benchmark for considering an overall feedback as a positive feedback has been clarified.

Further, in line with the regulation, for a new property where actual end users are yet to use services, the weightage against 'User Experience' are to be merged with 'Service Performance'. Accordingly, the methodology of merging the scores with 'Service Performance' with illustration has been updated in the Note provided under Section 4.9 (User Experience) of the Rating Manual.

6. Comments on Chapter 5 Assessment Methodology for Category 'B' Properties:

6.1. General Comments:

a) Input of Stakeholders:

i. One consumer organisation has commented upon the weightage assigned to different assessment parameters which have been summarised in the draft manual as provided in the regulations. They have also concluded that methodology relies on the self-reported data by the property managers and there should be third party audit and crowdsourcing data should be used. It has also been said that the manual lacks framework for newer technologies like 5G-FWA. It has also been suggested to include Satellite technologies, edge computing, network virtualisation, solar power, Digital Public Infrastructure (DPI) integration etc.

ii. A Stakeholder has requested the addition of provisions similar to 4.2.1 (Provision for expansion of telecom rooms and cable pathways) and 4.2.2 (Expansion of Mobile and Wire Connectivity) for Category 'B' Properties. They also suggested to mandate the allocation of dedicated space within telecom rooms for the installation and operation of IP-1/DCIP equipment. They also mandated the provisioning of In-Building Solutions (IBS) by neutral hosts (DCIP) or IP-1 registered entities within commercial and multi-dwelling premises.

b) Analysis and Conclusion:

The rating manual has proposed the weightage against the sub-criteria provided in the regulations and their measurement methodology. The rating manual is not intended to amend the provisions of the regulation. Further, the rating methodology uses combination of authentic documentation and onsite verifications including the measurement of network performance. Therefore, it is not reasonable to conclude that the ratings are based on self-reporting. Further, the rating criteria, as prescribed in the regulations, are objective and relevant to the digital connectivity. The specific technologies like 5G-FWA are part of Enhance Mobile Broadband (eMBB) and are already covered under mobile connectivity assessment. Further, the edge computing, network virtualisation, solar power, Digital Public Infrastructure (DPI) integration etc. are the applications and not affect digital connectivity. As far as provisioning of telecom spaces is concerned, they are part of National Building Code which is currently under revision by Bureau of Indian Standards (BIS).

6.2. Section 5.1 Provision in Power Infrastructure for Ensuring Reliable Digital Connectivity:

a) Input of Stakeholders:

One of the stakeholders has suggested to include energy efficiency score for DCI infrastructure and requirement for annual energy audits of digital connectivity equipment. Another stakeholder suggested to extend power redundancy protocols to include DCIP/ IP-1 equipment also.

b) Analysis and Conclusion:

The energy efficiency aspects are not part of the original regulation and therefore are not in the scope of this rating manual. Further, power redundancy assessment is for entire digital connectivity infrastructure including those provisioned by infrastructure providers.

6.3. Section 5.2 Digital Connectivity Infrastructure Resilience:

a) Input of Stakeholders:

i. One stakeholder suggested that infrastructure design guidelines must incorporate a mandatory provision for alternate entry paths specifically designated for DCIP / IP-1 infrastructure.

ii. One stakeholder submitted that Climate Change Risk Assessment (CCRA) may be included in the DCI resilience framework. It was suggested that location-specific risks like flooding or heatwaves, along with mitigation measures such as equipment elevation or redundancy, be considered. It was stated that this would strengthen DCI resilience, align with global best practices, and support business continuity.

b) Analysis and Conclusion:

The purpose of alternate entry paths provides route redundancy for digital connectivity. The broad requirements of alternate entry path are covered in NBC. Furthermore, the energy efficiency or Climate Change Risk Assessment (CCRA) aspects are not part of the original regulation and therefore are not in the scope of this rating manual. As far as anti-flooding measures or maintenance of temperature and humidity requirements for DCI and redundancy is concerned, these aspects are covered under Section 5.2 (Digital Connectivity Infrastructure Resilience) of the Rating Manual.

6.4. Section 5.3 Future Readiness of Digital Connectivity Infrastructure:

a) Input of Stakeholders:

i. A stakeholder suggested that backhaul connectivity should not be restricted to fibre in para 5.3.1-ii(a) 1-Assessment Methodology under Sub-Criteria: Availability of the latest generation of mobile connectivity.

ii. One of the stakeholders suggested mandating periodic Digital Readiness checks by accredited third parties to validate compatibility with emerging technologies, scalability, and cybersecurity posture. One of the stakeholders also suggested to introduce a new scoring parameter—'Multi-Operator Tray and Ducting Layout Accessibility'.

b) Analysis and Conclusion:

As far as the backhaul connectivity under 5.3.1-ii(a) 1-Assessment Methodology of the Rating Manual is concerned, the same has been updated which now not limited to fibre connectivity. Further, for the purpose of periodic monitoring of ratings, the provisions of Section IV of the ' Rating of Properties for Digital Connectivity Regulations, 2024 may be referred. With regard to multi-operator tray and ducting, it may be note that the DCI is common for all service providers and is multi-operator by-design to meet the assessment criteria in section 5.5 of the rating manual.

6.5. Section 5.4.1 Provision of Wired Connectivity Infrastructure:

a) Input of Stakeholders:

A stakeholder suggested to mandate that all backhaul fibre connectivity deployments to incorporate dedicated provisions to accommodate the infrastructure requirements of infrastructure providers.

b) Analysis and Conclusion:

Backhaul connectivity is to be provided by the service providers /infrastructure providers to deliver services which is already covered under section 5.4 of the rating manual. Also, Objective in section 4.6.2 and 5.4.2 (Fiber connectivity till user premises) and corresponding scoring criteria in table 4.35 and 5.25 of the rating manual respectively have been updated to indicate that the fiber connectivity referred is from telecom room / transmission room. Under 5.4.1 (Backhaul fiber connectivity (service provider to property) of the rating manual, the

scoring criteria in Table 5.23 of the rating manual has also been updated to provide equal weightage to wireline and wireless service providers having fiber backhaul

6.6. Section 5.5 Availability of Service Providers:

a) Input of Stakeholders:

i. An association and service provider has suggested that the gap in weightage between the presence of two Service Providers and three Service Providers should be sufficiently significant to encourage the provisioning of connectivity by at least three service providers.

ii. One service provider commented that in compliance checklist under 'Network performance test results from multiple operators' [5.5.2 ii)], the line "Network performance test results from multiple operators" should be substituted with Network performance test results of multiple operators to be conducted by the DCRA.

b) Analysis and Conclusion:

The weightage of two sub-criteria have been distributed equally for availability of internet and mobile service providers and availability of three service providers provides optimum choices to the end consumers. As far as the 'Network performance test results from multiple operators' under 5.5.2 (iii) of the Rating Manual is concerned, these results may be available with the property manager as a part of commissioning of the in-building solution and will be verified by the DCRA. With regard to minimum number of service providers integrated with the DCI, the highest weightage is assigned if 3 or more service providers have integration which provide adequate choices to the consumers. Scoring criteria for 5.5.2 (Number of Mobile Service providers having coverage or integration with Digital Connectivity Infrastructure) has been updated to measure coverage of mobile service providers in the property through integration with DCI or any other mode.

6.7. Section 5.6 Service Performance:

a) Input of Stakeholders:

i. One of the service providers has suggested that inclusion of secured public Wi-Fi in the public and non-public areas, in the sub-criteria 'service performance' is not required.

ii. One of the stakeholders suggested that framework should include the establishment of standardized performance metrics specifically tailored for IBS providers (DCIP).

iii. Few of the service provider association has suggested to increase the weightage of mobile network coverage and reduce the weightage of secure public Wi-Fi and few service provider and a service provider association has suggested to remove weightage from secure public Wi-Fi. They have also suggested that widespread availability of affordable 4G and 5G data for subscribed users, the relevance of public Wi-Fi has significantly diminished.

iv. One of the stakeholders has suggested to use TRAI Myspeed App or other speed testing devices in place of test probes to assess data speed and voice call quality over a day.

v. One of the service provider and association has suggested that the speed metrics should be modified in accordance with a TSPs MRO criteria: For 4G, throughput equal to or better than 2 Mbps, successful file download test cases in percentage. For 5G, 100 MB size is to be downloaded on each selected test location within 5 minutes.

vi. One of the service provider association and service provider has suggested to replace the criteria of "If at least 2 service providers have more than 70% mobile coverage for their latest generation of technology in non-public areas...." to "If at least 3 service providers have more than 60% mobile coverage for their latest generation of technology in non-public areas (including lifts and basements) with average minimum download speed of 10Mbps for 4G or 100 Mbps for 5G technology as applicable" with the justification 'It is imperative that adequate service providers coverage is made available, to ensure universal connectivity.'

vii. A Stakeholder has suggested addition of a dedicated annexure listing standard instruments/app required for testing digital connectivity parameters (e.g. spectrum analysers, network analysers, signal strength meters, latency testers, cable testers, power quality analysers, Wi-Fi analysers, etc.).

b) Analysis and Conclusion:

The service performance is the one of the most important measures of good digital connectivity. Accordingly, the regulations provide maximum weightage against this assessment criteria. Now the digital connectivity can be extended through wireless medium like mobile network and wireline medium i.e. through fibre to the home (FTTH), Cables etc. For the consumers, the service availability and service performance are more important than the access medium or technology through which the digital connectivity has been extended. The ratings for digital connectivity, under these regulations, shall be provided based on the overall digital connectivity as is evident from the assessment criteria provided in the regulations. Both wireless and wireline access medium are important and plays important role in ensuring service continuity in case of interruption in any one of them. Therefore, both mobile and internet service providers should collaborate with the property managers to extend the connectivity to deliver reliable services to their consumers. The reliable and secure Wi-Fi can be used to offload mobile traffic for providing ubiquitous mobile coverage as is the trend in developed countries. However, considering the comments of the stakeholders, the weightage for against sub-criteria for mobile and Wi-Fi coverage have been rationalised. Updated weightages are provided in 4.8 and 5.6 (Service Performance) of the Rating Manual.

As far as measurement of service performance is concerned, the measurement methodology has been included in the rating manual. TRAI App is to be used for the measurements of download speed. The 'test probe' in the reference of service performance means the testing tools like TRAI App, call quality measurement tool, RF coverage measurement tool etc. The same has been suitably elaborated in the section of the rating manual. To measure call quality, assessment for call setup success rate, call drop rate and call setup time has been added. Also, usage of test probe has been replaced with the word 'prescribed methodology' in the manual.

The suggestion of service providers to use same performance criteria as provided in minimum rollout obligations for download speed of 4G and 5G service stating '*For 4G, throughput equal to or better than 2 Mbps, successful file download test cases in percentage. For 5G, 100 MB size is to be downloaded on each selected test location within 5 minutes'*, looks unreasonable and unjustified as it is very low compared to the download speeds supported by 4G and 5G technology especially when the in-building solutions are deployed. It is also noted that the suggested download speeds are well below the typical download speeds declared by the service providers under revised QoS regulations. It is difficult to understand the reason for the reluctance, on the part of service providers, to exploit the full potential of their network.

Further, under sub-criteria in 5.6.1 (Mobile network coverage and performance in public areas of property) and 5.6.3 (Mobile network coverage and performance in non-public areas) of rating manual, scoring methodology has been updated to not only include coverage and minimum download speed, but also include call drop rate and call setup success rate assessment.

Assessment methodologies for mobile (data and voice services) and Wi-Fi services (data services) has been added in section 5.6 of the Rating Manual for improved understanding for the stakeholders.

6.8. Section 5.7 User Experience:

a) Input of Stakeholders:

i. One stakeholder has suggested to build a dedicated feedback mechanism should be instituted to capture stakeholder and end-user input specific to the performance and service quality of IP-1 and In-Building Solution (IBS) providers (DCIP)

ii. Another service provider has suggested that assessment should ensure appropriate sample selection and to ensure that any biases are reduced or eliminated altogether. It was also submitted that users should be better informed about the services they are rating, as there may be confusion between public Wi-Fi and private broadband connections during the survey process.

iii. A service provider has suggested the surveys for feedback of users may be conducted at a later stage.

b) Analysis and Conclusion:

The rating platform will provide suitable interface to concerned stakeholders for providing feedback on the digital connectivity service performance in the rated properties. The ratings of the properties will be available on rating platform for transparency and verification by general public. The consumer survey is part of rating process. Therefore, it is to be conducted as a part of digital connectivity assessment. Under 'User Experience' scoring criteria of Rating Manual, benchmark for considering an overall feedback as a positive feedback has been clarified.

7. Comments on Chapter 6,7,8,9,10,11:

7.1. Chapter 6, Section 6.2 Validity Period of Ratings:

a) Input of Stakeholders:

Few Stakeholders submitted that connectivity quality may change over time, and they suggested making the rating validity time-bound (e.g., one year) and renewable, especially in fast-developing urban areas.

b) Analysis and Conclusion:

The regulation 30 provides for validity of ratings which shall be specified by the Authority accordingly.

7.2. Chapter 6, Section 6.4 Renewal Process:

a) Input of Stakeholders:

Few stakeholders submitted that Property Managers should be formally empanelled to ensure accountability. It was also submitted that they should disclose any post-rating exclusivity agreements with TSPs to the DCRA authority.

b) Analysis and Conclusion:

As per the regulation 13, the property manager shall be required to formally register on the rating platform with relevant details. Further, the regulation 20 prohibits the property manager to have any exclusive arrangements with the service providers.

7.3. Chapter 7, Section 7.2 Mechanism for Stakeholder Feedback:

a) Input of Stakeholders:

Few stakeholders submitted that a dedicated grievance submission portal for IP-1 providers may be implemented and integrated within the designated section pertaining to feedback mechanisms.

b) Analysis and Conclusion:

The rating platform will provide suitable interface to concerned stakeholders for providing feedback on the digital connectivity service performance in the rated properties.

7.4. Chapter 8, Section 8.1 Filing of Appeal by Property Manager:

a) Input of Stakeholders:

One stakeholder submitted that the process for grievance redressal, appeals, or re-rating lacks clarity. It was suggested that the manual may include a defined procedure for challenging a

rating, seeking re-assessment due to upgrades or deterioration in service, and ensuring time-bound resolution of such complaints.

b) Analysis and Conclusion:

The process and timelines for appeal, by the property manager, against the rating awarded to their property is covered under regulation 27. Further, the process of review of ratings will be as provided in the regulation 28. These processes will be implemented through the rating platform.

7.5. Chapter 10, Section 10.3 Collaboration with Stakeholders:

a) Input of Stakeholders:

One stakeholder submitted that the choice of TSP/ISP rests with the consumer and obtaining Right of Way (RoW) permission falls under the consumer's scope. It was stated that the Property Manager may provide necessary support in this process, as individual offices typically opt for their own secured service arrangements.

b) Analysis and Conclusion:

The consumers have the right to choose their service providers. The property manager is expected to facilitate the right of way to provision the services to the consumers.

7.6. Chapter 11, Section 11.3 Documents Checklist:

a) Input of Stakeholders:

A stakeholder mentioned that the certain documents of master checklist of supporting documents from property manager to be recorded and uploaded by DCRA namely (Updated network diagrams, Future expansion plans, Photographs of installed latest generation mobile connectivity equipment, Network integration certificates/test reports, RF coverage map in the property or walk/drive test results, RF coverage map of public areas, Speed test logs and call quality reports, Wi-Fi coverage maps and speed test results, Wi-Fi security audit reports, Wi-Fi security certifications, Speed test results with timestamps) should be covered under "General Obligations for Property Manager" and the property manager should be responsible for obtaining these documents, either directly or through a third party. The obligation should not be transferred to TSPs.

b) Analysis and Conclusion:

The requirements for documentation against each criteria and sub-criteria have been provided in the rating manual. The overall documentation requirements may be divided in two broad categories i.e. (i) the documents to be provided/submitted by the property manager and to be verified by the DCRA and (ii) the documents to be created by the DCRA during the process of assessment of digital connectivity including onsite visits. The property manager will co-ordinate with its vendors/ service providers or agencies associated with design, development and implementation of digital connectivity infrastructure and services.

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