



**VIL Comments to the TRAI Consultation Paper on
“Regulation on Rating Framework for Digital Connectivity
in Buildings or Areas” dated 27.09.2023**

At the outset, we are thankful to the Authority for giving us this opportunity to provide our comments to the TRAI Consultation Paper on “Regulation on Rating Framework for Digital Connectivity in Buildings or Areas” dated 27.09.2023.

Preface

1. We appreciate constant efforts being carried out by TRAI and the Government to build robust and constantly evolving infrastructure, to improve the quality of service for the end users. The network connectivity supported by this infrastructure has played a crucial role in combating COVID-19 pandemic by enabling quick and easy accessibility across all the support systems of the country.
2. Through the recommendations on Rating of Buildings or Areas for Digital Connectivity dated 20.02.2023 and this forward looking consultation paper on the Regulation for Rating framework, TRAI has initiated another step to lay down a constructive approach for ensuring “meaningful connectivity” for the end users.
3. Designing Digital Connectivity Infrastructure (DCI) for buildings is an interdisciplinary subject and requires involvement of experts from various entities like telecom wireless and wireline domains, involvement of architects who design buildings, engineers, infrastructure providers, multiple regulatory bodies, etc. Therefore, it’s important that a collaborative and consultative approach is undertaken to onboard all other stakeholders including relevant Government departments, regulators and entities.
4. **Further, it is important that the rating framework should give meaningful connectivity and should enable competitive choices for the consumers. The rating should be calculated based on assessment of network coverage of all the TSPs serving that geographical area and should accordingly be pro-rated and reflect in the final rating.**
5. **Rating of a building where assessment of coverage of all TSPs is done and found good, should always be higher (on a pro-rated basis) than the Rating of a building where assessment of few TSPs (less than available TSPs) is done and found good.**
6. **Therefore, the rating framework should be formed on the pillars of wireless and wireline broadband services from various TSPs/ISPs, with top-rating being assigned only if broadband services from 4 wireless access services providers and 2 wireline access/internet service providers is available.**

With above in backdrop, we would like to submit our comments given hereinafter for Authority’s kind consideration.



Question-wise Comments

Q.1- Do you agree with the broad classification of Buildings or Areas (also referred as Buildings) from Digital Connectivity perspectives provided in Section-3 of this chapter? If not, what could be other yardsticks to classify Buildings for provisions of near uniform Digital Connectivity Infrastructures in similar types of Buildings. Please justify your answer with suitable examples.

VIL Comments to Q.1

1. We agree with the broad classifications of buildings and areas ('Buildings') as specified in section-3 of this chapter.
2. However, there should be additional yardsticks to sub-classify Buildings, which can help narrow down and prioritize the properties for initial phase of uniform Digital Connectivity Infrastructures (DCI) implementation.
3. Some of these yardsticks that can be applied for prioritization of Buildings for uniform DCI are given as follows:
 - a. Average and Maximum footfall in a given Building
 - b. Height of Building or floor rise. (e.g. 10 floors and higher)
 - c. Current Indoor coverage level from Outdoor sites
 - d. Transport corridors take long time for completion. They should be prioritized based on utilization and only post completion.

Q.2- How the Infrastructure Providers (IPs) and Digital Communication Infrastructure Providers (DCIPs) can play an instrumental role in the effective development and deployment of DCI in Buildings or Area? Please provide your answers supporting the best practices followed internationally or national level in this regard.

VIL Comments to Q.2

1. IPs/DCIPs shall play a vital role in bridging the DCI requirement from property manager and coordinating with TSPs on the latest technological advances and service offerings and providing a solution to the property manager which is suitable for providing services from all the TSPs in the area of Interest in order to provide the best user experience to the customers from all the Service providers serving in the region while minimizing the investment requirement. By providing services to more than one TSP, IPs/DCIPs also bring in scale thereby, helping reduce the costs.
2. DCIP/IPs as per the agreement from TSP shall install a common RAN equipment capable of serving the technologies and bands from all the serving service providers in addition to the DCI Passive Infra in the premises provided by the property manager.
3. Backhaul connectivity from the shared RAN infra can be carried by DCIPs/IPs over the fiber network built by them. Interconnects with service providers can be established at the agreed



location as per the agreement between DCIPs/IPs and the service provider. This will in-turn reduce the investment required for providing the fiber connectivity to each covered property by individual service providers and optimize the investments.

4. Management of such shared RAN Infrastructure can also be carried out by the DCIP who can provide unbiased service to all the service providers. DCIPs/IPs can own and provide the Radio Access Network, Transmission links, RoW and the Dark Fiber.
5. For the purpose of providing Backhaul and Management connectivity to the Active RAN equipment's at the premises of the covered properties, DCIPs/IPs shall also be authorized to own and maintain the active transmission equipment like routers and switches for litting up the dark fiber to provide the data (backhaul) connectivity to site till the point of Interconnect with the service provider or management system.
6. DCIPs/IPs will be compensated for the investment required in the Radio Access Nodes, DCI infra (Active or Passive) deployed at the premises by the property manager which will in-turn be shared by all the users of the premises.

Q.3-What should be the key eligibility conditions including experience requirements for the Digital Connectivity Rating Agency (DCRA) proposed under the rating framework? Should there be any performance security for an agency to be DCRA and what should be criteria to evaluate their performances? Please also indicate broad scope of work covering additional aspects of Rating of Buildings for Digital Connectivity, if any, including area of operations [Nation-wide, State(s)/Union Territories(UTs) or Combination of States/UTs] of a DCRA.

VII Comments to Q.3

1. DCI requires specialized knowledge in the domain of telecom wireline and wireless, which current architects might not be equipped with. Similarly, Digital Connectivity Rating Agency (DCRA) will also require experts with relevant experience in telecom wireline and wireless domain to efficiently deliver the objective, in an unbiased manner.
2. For any new framework based on regulatory mandate to take-off, it requires flexibility and scale in the initial phases, for demand to kick in. Therefore, the DCRA should have pan-India as area of operations.

Q.4-With reference to the rating criteria proposed in table at Section 6.2, kindly provide list of possible sub-criteria and corresponding sub-weightage against each criterion with justification? Please also indicate any other aspect which need to be included or modified in the proposed weightage criteria. Please provide your answer with suitable justifications.

And

Q.13- Draft regulation 25 provides broad rating criteria and distribution of weightage out of total rating score at a scale of 100. Please suggest new criteria or changes in proposed criteria if any, and relevant sub-criteria for each criterion and their subweightage against respective main criteria with suitable justifications in context of rating of buildings for digital connectivity.



VII Comments to Q.4 and Q.13

1. Ultimate objective of building the DCI Connectivity in the Buildings is to provide good data & voice experience to the users of all service providers in the premises.
2. Looking at the Table in Section 6.2, user experience carries the weightage of 10 points out of total 100 and the number of service providers also carries the similar weightage of 10 points adding to 20 points.
3. We would like to submit the **criteria's determining the end user experience for the customers of all service providers w.r.t. to offering and services, should carry major weightage out of the total weightage. This will help align the weightage to the ultimate objective and rest are just the enablers.**
4. Considering above, we would like to suggest following change to the weightage and sub-criteria in User experience and table with revised weightage/sub-criteria is given in table below.

Criteria No.	Main Criteria	Weightage	Sub-Criteria Name: subweightage
1	Compliance to Model Building Bye Laws (MBBL) for digital connectivity	10	
2	Provision in civil infrastructure, over and above MBBL requirements, for ensuring robust digital connectivity	5	Preventive measures for safeguarding the digital communication infrastructures and the occupants/users of the building or area against intrusions and floods.
3	Provision in power infrastructure, over and above MBBL requirements, for ensuring reliable digital connectivity	5	(i) Alternate power source (ii) UPS power availability (iii) Power backup availability (iv) Power backup (in Hrs.)
4	Digital Connectivity Infrastructure Resilience	5	(i) Alternate entry paths (ii) Non-flooding measures for telecom equipment room (iii) Alternate power path
5	Future Readiness of Digital Connectivity Infrastructure	5	Whether Digital Connectivity Infrastructure can accommodate future wireless and wireline technologies
6	Provision of Wired Connectivity infrastructure	10	(i) Fibre connectivity (ii) Ethernet connectivity
7	Provision of Wireless Connectivity infrastructure	10	(i) Mobile network (ii) Wi-Fi network
8	Availability of Service Providers	20	(i) No. of ISPs having integration with Digital Connectivity Infrastructure (ii) No. of TSPs having integration with digital connectivity infrastructure
9	User Experience	30	Objective assessment i.e., network coverage, average latency and average data rates for wireline and wireless network for each service provider serving in the region



5. Further, it is important that the rating framework should give meaningful connectivity and should enable competitive choices for the consumers. The rating should be calculated based on assessment of network coverage of all the TSPs serving that geographical area and should accordingly be pro-rated and reflect in the final rating.
6. Rating of a building where assessment of coverage of all TSPs is done and found good, should always be higher (on a pro-rated basis) than the Rating of a building where assessment of few TSPs (less than available TSPs) is done and found good.
- 7. Therefore, the rating framework should be formed on the pillars of wireless and wireline broadband services from various TSPs/ISPs, with top-rating being assigned only if broadband services from 4 wireless access services providers and 2 wireline access/internet service providers is available.**
8. Considering the same, the criteria's should ensure that the Building ensuring integration with all 4 TSPs get the highest weightage for better ranking. As such, the criteria no. 8 i.e. 'Availability of Service Providers' and criteria no. 9 'User Experience' should be measured w.r.t. number of Wireless and Wireline broadband service providers.
9. For criteria no. 8, the above-said revised weightage of 20, should be further divided into '5' for Number of Wireline Broadband service provider (SP) and '15' for Number of Wireless broadband service provider. There should be atleast two Wireline broadband SP present in the Buildings, for the DCRA to give it full '4' weightage. Similarly in case of Wireless Broadband SP having integration with digital connectivity infrastructure, the DCRA should give '4' weightage per SP.
10. Similarly for criteria no. 9, the above-said revised weightage of 30 should be divided basis atleast two Wireline Broadband SPs and 4 Wireless Broadband SPs. Also, there should not be any weightage linked to user feedback. The framework should be agile enough to cover both existing building as well as new building. It would become impossible to have user feedbacks in case of building which is in final stages of construction or even within some time period after construction. Also, subjective assessment may not adequately reflect gap in creation of infrastructure or connectivity but, may at times reflect subjective expectation. Therefore, subjective assessment should not be part of weightage.

Q.5- What should be the template and minimum score for award of ratings i.e., star-based ratings or any other template like Platinum, Gold, Silver, and Bronze? Please justify your suggestions.

VIL Comments to Q.5

1. Type of rating score to be given to any Building, should be examined from two perspectives as given below:
 - a. Easy to understand by common public.
 - b. Limited categories, with distinctive expected experience in each such category.



2. There are already certain examples of ratings prevalent in India. As mentioned in the consultation paper also, certain sectors like Hotel industry, entities registered with SEBI like Crisil etc., Environmental performance of Habitable Spaces (Green building) follow a rating framework.
3. A star based rating will be easy to understand as it can be indicated with symbols as well, and can be understood without any language literacy barriers. However, other ratings like Platinum, Bronze etc. will be complicated to understand and would also invite language literacy challenges.
4. **Therefore, we would like to recommend that:**
 - a. **Star based rating will generally be perceived as easy to understand by common public.**
 - b. **The rating should be divided into 5 categories, ranging from Single Star to Five Stars.**

Q.6- The proposed workflow and process of Rating of Buildings for digital connectivity is given in Section-8 of this Chapter. Kindly provide your comments or suggestion for improvement of the proposed workflow and process of rating with justification, if any.

And

Q.14- The score threshold for ratings is provided in draft regulation 26. Do you agree with the proposed thresholds? If no, please suggest changes with justification and global references, if any.

VIL Comments to Q.6 and Q.14

1. The rating framework has to be tightly designed so that it leads to increased deployments of DCI by the property managers and adds value to the experience of consumers.
2. The experience of consumers is also linked to presence of choice of ISPs and TSPs in the Buildings, so that they can opt for competitive services from TSPs and not coerced into services from limited TSPs present in the Building as decided by Property manager.
3. It is important that the rating framework should give meaningful connectivity and should enable competitive choices for the consumers. The rating should be calculated based on assessment of network coverage of all the TSPs serving that geographical area and should accordingly be pro-rated and reflect in the final rating. Rating of a building where assessment of coverage of all TSPs is done and found good, should always be higher (on a pro-rated basis) than the Rating of a building where assessment of few TSPs (less than available TSPs) is done and found good.
4. Therefore, the rating framework should be formed on the pillars of wireless and wireline broadband services from various TSPs/ISPs, with top-rating being assigned only if broadband services from 4 wireless access services providers and 2 wireline access/internet service providers is available.
5. Therefore the table given in 4.8 and Regulation 26 should be revised and Star rating should also have linkage to minimum number of Wireless Broadband SPs and Wireline broadband SPs providing connectivity in the Buildings. The revised table is given as follows:



S. No.	Score range	Digital Connectivity Rating
1	25-40	★
2	41-55	★ ★
3	(a) 56-70 and (b) Minimum 2 Wireless broadband service provider and 1 Wireline broadband service provider	★ ★ ★
4	(a) 71-85 and (b) Minimum 3 Wireless broadband service provider and 1 Wireline broadband service provider	★ ★ ★ ★
5	(a) More than 85 and (b) Minimum 4 Wireless broadband service provider and 2 Wireline broadband service provider	★ ★ ★ ★ ★

Q.7- Do you agree with the eligibility conditions for registration of DCRA, proposed in regulation 4? If no, what additional eligibility conditions for registration of DCRA may be incorporated, considering the present rating ecosystem in other domains in the country, with suitable justifications?

VIL Comments to Q.7

1. Broadly, we are in agreement with the eligibility condition of the DCRA. There are certain suggestions which can be considered e.g. the professional experience requirements can be stated clearly and upfront.
2. We request TRAI to explicitly create a schedule of Requirement for eligibility conditions of the DCRA including the professional experience requirements for the senior people employed with the DCRA.
3. Other than overseeing the meeting of requirements of compliance, DCRA officials are required to assess the user experience which requires electrical or electronics (or equivalent) engineering qualification and good RF experience (atleast > 5 years) requirement in the related field from the person responsible to meet the required obligation.
4. This will enable the DCRA to understand and objectively assess the quality of the user experience and interpret the subjective assessment shared by the users.

Q.8- Do you agree with the process of registrations of DCRA proposed under regulation 7? If not, kindly suggest proposed changes with justifications.

And



Q.9- Please suggest code of conduct for DCRA's proposed to be included under regulation 8 including the criteria for fees to be charged by DCRA's from Property Managers for different types of Buildings.

And

Q.10- Do you agree with the general obligations of DCRA provided in Section III of the draft regulations? If not, please provide suggested changes with justifications.

VIL Comments to Q.8, Q9 and Q 10

1. Yes, we agree with the broad framework of registration, conditions and general obligations of DCRA.
2. In addition, we would like to recommend that:
 - a. There should be detailed registration process and code of conduct prescribed under a Regulation after consulting on its draft.
 - b. In addition to the obligations mentioned in the section III, DCRA shall also have obligation of meeting a prescribed TAT (turn-around-time), for carrying out the evaluation of the property offered. This will be critical since once mandated property manager will be investing in the DCI Infrastructure and will be banking on the suitable ratings from the DCRA to get the returns from the investment done. This TAT would depend upon size and nature of property.
 - c. Most importantly, for this framework to succeed, active involvement of property managers owning the said buildings or areas classified in the consultation paper and entities working in the field of assessing user experience and network quality, is required during the consultation process itself and before formulating a regulation.

Q.11- What should be the terms & conditions for the Property Managers to ensure use of ratings awarded to their buildings, in legalised manner?

VIL Comments to Q.11

1. Property Manager should be obligated to display the rating on their website and other digital publications/advertisements, wherever available. In case of any false display of rating, the rating certificate should be cancelled.
2. Further, the DCRA and competent authority registering the DCRA, should also publish the rating on their respective website through an easy to access link.

Q.12- Please suggest changes, if any, in the general obligations of Property Managers, provided under Section IV of draft regulations, with justifications.



VIL Comments to Q.12

In addition to mentioned obligations, following point is also important:

1. Property manager should continue to maintain and upgrade the DCI Infra till the time they have interest in preserving the value of the property is valid (till the sales objectives of the property are met)
2. Post above, property manager shall do a proper handover of the DCI Infra and contracts to the appropriate authority who will be responsible for maintenance and upgrade of the equipment installed to ensure that the users who have indirectly invested in the DCI Infrastructure continue to enjoy the benefits post transfer of property ownership (e.g. handover to society or RWA).
3. The DCI infra should be maintained for a period of 5 years from the grant of rating to the building or area.

xx----- *End of Document* -----xx