Information note to Press (Press Release no. 14/2023)

For Immediate Release

Telecom Regulatory Authority of India

New Delhi, 20.02.2023: The Telecom Regulatory Authority of India (TRAI) today released its recommendations on "***Rating of Buildings or Areas for Digital Connectivity***".

2. The exponential growth in digitalization during last decade has revolutionized the world impacting everything, from economy, innovation, science and education, to health, sustainability, governance, and lifestyles. Digital technologies are fundamentally changing business models, institutions and society as a whole. The demand for digital connectivity has increased many folds in recent years and COVID-19 has further given impetus to surge in the demand across all segments of users, irrespective of their locations.

3. In the past, Telecom Regulatory Authority of India (TRAI) and the Government have taken various policy initiatives to fulfil the demands of telecom connectivity. These policy interventions have helped in improving connectivity, resulting in wider coverage and higher data throughput. However, all these efforts have fallen short in achieving the desired level of digital connectivity experience of the users, who now prefer to work from anywhere, at any time. The rollout of 5G network has further stimulated the need of seamless experience of the 5G services, specifically inside the buildings.

4. TRAI has conducted many studies to assess the quality of connectivity, identify challenges in providing connectivity and to suggest the way forward. Based on these studies TRAI published a Monograph on "*Quest for a Good Quality Network inside Multi-Storey Residential Apartments: Reimagining ways to improve quality*".

5. Based on above, TRAI undertook the process of consultation on Suo-moto basis to provide a framework for establishment of an eco-system wherein Digital Connectivity Infrastructure becomes part of all development activities. TRAI issued Consultation Paper (CP) on "*Rating of Buildings or Areas for Digital Connectivity*" on 25th March 2022, to seek inputs from stakeholders on issues raised, by 07th July 2022.

6. Based on the comments received, discussions held with stakeholders during the Open House Discussion and analysis thereof, the recommendations of the TRAI on "***Rating of Buildings or Areas for Digital Connectivity***" have been finalized. The emphasis of these recommendations is on providing a framework for creation of an ecosystem for Digital Connectivity Infrastructure (DCI) to be an intrinsic part of building development plan similar to other building services such as water, electricity or Fire Safety System. DCI is to be co-designed and cocreated along with building development through collaborations among various stakeholders including Property Managers (owner or developer or builder etc.), service

providers, infrastructure providers, DCI Professionals and Authorities at various urban/local bodies. This framework shall also open job opportunities for the young professionals to become DCI Professionals and be part of Design, Deployment and Evaluation of Digital Connectivity Infrastructure.

7. TRAI has also proposed a new chapter on '**Digital Connectivity Infrastructures in Buildings**' to be included in Model Building Bye Laws 2016 by modifying and updating existing provisions added in MBBL as Annexure through an Addendum to Model Building Bye Laws 2016 titled "*Provisions for In- Building Solutions Digital Communication Infrastructure*" issued by Town and Country Planning Organization (TCPO) of Ministry of Housing and Urban Affairs (MoHUA), in March 2022.

8. TRAI further emphasized that Digital Connectivity Infrastructure (DCI) developed in the Buildings by the Property Managers (Developers, Builders etc) should be accessible to all service providers in a fair, transparent, non-discriminatory and non-chargeable basis.

9. The recommendations also include development of framework for Rating of the buildings for digital connectivity, which will add value to the property. TRAI will come up, separately, with appropriate regulatory framework for Rating of Buildings, which will also include the issue of Rating certification.

10. Salient features of the recommendations of TRAI on "*Rating of Buildings or Areas for Digital Connectivity*" are enclosed as 'Annexure-1' to this press release.

11. These recommendations are placed on TRAI's website www.trai.gov.in. For any clarification/information, Shri Tejpal Singh, Advisor (QoS-I), TRAI, may be contacted on email: adv-qos1@trai.gov.in or at Tel. No: +91-11-2323-3602.

V. Raghunandan

(V. Raghunandan)
Secretary

Annexure-I

Salient features of the recommendations on "*Rating of Buildings or Areas for Digital Connectivity*"

A. Digital Connectivity: An Essential Service

1. Model Building Bye-Laws (MBBL) and National Building Code of India (NBC) should be amended to incorporate necessary provisions on Digital Connectivity Infrastructure (DCI).

2. DCI should be made an essential component of the building development plans, on the line of water supply, electrical services, gas supply, fire protection and fire safety requirements, etc.

3. The Government may work with State Governments/ UTs for incorporation of suitable provisions for DCI development in the respective bye-laws or other relevant laws or other relevant laws of the State Governments/ UTs.

4. Provisions for mandating DCI inside the Buildings, its maintenance, timely upgradation, etc. should be incorporated in the builder-buyer agreement for covering it under the jurisdiction of RERA act and its enforceability by the RERA.

B. Entities for Development of DCI

5. The actors to design, deploy and evaluate the DCI should include the Property Manager and DCI Professionals i.e., DCI Designer, DCI Engineer and DCI Evaluator.

6. Any person who possesses the requisite skills, as may be prescribed, can perform the functions as DCI Designer or DCI Engineer or DCI Evaluator.

C. Procedures and Standards of DCI

7. A separate chapter should be included in MBBL on comprehensive framework for development of DCI.

8. The Bureau of Indian Standards (BIS) should be tasked to review existing standards and procedures of DCI for Buildings.

9. The "*National Building Code Sectional Committee*" constituted under NBC, should include members from the Department of Telecommunication and Telecom Industry.

10. The Panel on '*Information and Communication Enabled Installations*' under NBC should be expanded to include representatives from Telecommunication Engineering Centre (TEC) and Telecommunications Standards Development Society India (TSDSI) and, experts on telecom RF planning and experts on digital modelling of Buildings. The convener of this panel should be the representative nominated by DoT.

D. On standards for products and procedures for DCI:

11 a) the BIS should prescribe and update standard templates which will be used by Property Managers for collecting building-related information and connectivity requirements of users.

b) the standards and procedures framed, and templates prescribed for DCI by BIS should be made part of the National Building Code (NBC).

c) TEC should continue to work as the equipment standardisation and certification agency for standard products and equipment required for DCI.

d) TEC should prescribe necessary specifications in respect of new products required for upgradation of DCI.

e) TEC should also ensure that the certified products for DCI are shareable and interoperable.

f) TEC should enlist and publish such DCI products and equipment which require certification

12. BIS should prescribe different standards for different classes of Buildings for DCI.

13. BIS should also prescribe such provisions of DCI that would be mandatorily required (essential requirements) to be completed for issuance of completion/occupancy certificate for Buildings.

E. Ownership and Access to DCI

14. The Property Manager shall be the owner of the deployed DCI whether created by himself or through his agent and shall be responsible for maintenance, expansion and upgradation of such DCI. The Property Manager shall allow access of DCI to all service providers in fair, non-chargeable, transparent and non-discriminatory manner and shall not have any exclusive arrangements or agreements with any infrastructure/service provider.

Provided that in case active wireless equipment is installed by a licensee, the licensee will be responsible for maintenance, expansion and upgradation of such DCI and to that extent, the ownership lies with that licensee. However, this installation of active wireless equipment will be carried out on behalf of the Property Manager and Property Manager shall be responsible for ensuring that the licensee compulsorily gives access of such active wireless equipment to all service providers on fair, transparent, non-discriminatory, and non-exclusive manner.

15. An amendment to the present Unified License conditions with a proviso for compulsory sharing of active wireless equipment in the Buildings may be carried out by DoT.

16. The revenues earned by sharing of active wireless equipment, as part of DCI, by lessor licensees should not attract License Fee (LF). For the same, such revenues should be reduced from the Gross Revenues (GR) of the lessor licensee to arrive at Applicable Gross Revenue (ApGR) of such lessor licensee.

17. For existing Buildings where DCI is partly created, the Authority recommends a collaborative approach among stakeholders to decide ownership i.e., Property Manager for development, upgradation and expansion of DCI. However, in cases where DCI is developed by a service provider/ IP-I(s), till no suitable arrangement is worked out to transfer the DCI to the Property Manager, such service providers/ IP-Is shall be governed by the mandatory provisions of the license/ registration conditions.

18. The Authority reiterates its recommendation in para 2.90 of its

recommendations dated 29th November 2022 on "*Use of Street Furniture for Small Cell and Aerial Fibre Deployment*" wherein it was recommended that "enabling provisions or suitable terms and conditions shall be introduced in all telecom licenses and IP-I registration agreement prohibiting the TSPs/IP-I providers from entering into any exclusive contract or right of ways with infrastructure owners/CAAs or any other authority".

F. Provisions for Expansion and Upgradation of DCI

19. In case of introduction of new spectrum bands, change in technologies, increased users' demands etc.,

a) DoT should take up with BIS and MoHUA for incorporation of amendments in National Building Code and Model Building Bye-Laws, respectively.

b) BIS should also prescribe essential provisions that would be required to be carried out by Property Manager for upgradation and expansion of DCI.

20. The MBBL should have appropriate provisions for the approval of upgradation and expansion of DCI.

21. The Property Manager should ensure upgradation and expansion of DCI in the timeline as will be prescribed in the MBBL.

22. In all existing Buildings owned by the Government, PSUs or autonomous bodies of the Government, commercial buildings and public places such as airports, ports, railway stations, bus stations, metro stations or any other Building as may be decided by MoHUA in consultation with DoT, DCI shall be upgraded or provided to meet the requirements of state-of-the-art digital connectivity. In such cases, the building bye-laws should prescribe a reasonable time frame so as to ensure availability and accessibility of upgraded DCI.

23. For other existing Buildings, the new building bye-laws should be issued by MoHUA within three years after due consultation with the various stakeholders. Till then, the Property Managers of such existing Buildings shall implement the new bye-laws voluntarily.

G. Institutional Mechanism for Capacity Building of the DCI Professionals

24. The Indian Telegraph Act, 1885 should be amended as follows:

a) The Central Government may prescribe through rules for formation of Council of Digital Connectivity Infrastructure (CoDCI).

b) The rules may specify the manner of certification of persons to design, deploy and evaluate DCI.

c) Such rules may specify the qualification of and terms and conditions subject to which, such certification may be granted, including through conduct of examinations for granting such certifications, the fees and charges to be paid thereof, and other connected matters.

25. A Council of DCI (CoDCI) should be established under the Department of Telecommunications (DoT), Ministry of Communication in collaboration with the Ministry of Housing and Urban Affairs (MoHUA), All India Council for Technical Education (AICTE), National Skill Development Council (NSDC),

Telecom Sector Skill Council (TSSC), and Construction Skill Development Council (CSDC) or any other organisation/institution as deemed appropriate. The CoDCI shall be responsible for taking all decisions in respect of certification, registration and capacity building of DCI Professionals.

26. Broad roles and responsibilities of CoDCI are as follows:

a) To prescribe the qualification, roles and responsibilities of DCI Professionals.

b) To study the content of existing similar courses within and outside India and their suitability for DCI Professionals in India.

c) To suggest appropriate Graduate and Diploma courses including elective/ certification courses at various levels for DCI Professionals.

d) To accredit institutes and organisations for offering courses related to DCI. Considering that there are large number of Buildings in each State and UT, there may be a requirement of accreditation of institutions across all States and UTs for offering such courses and development of the workforce.

e) To conduct examination and certify DCI Professionals.

f) To organise training for trainers and skill upgradation of DCI professionals.

g) To register qualified and certified DCI Professionals, on similar lines to the CoA. Such Professionals once engaged by Property Managers for development of DCI and declared on their plan documents shall be Persons on Record.

h) To maintain a register of DCI Professionals and publish the same on online portal for access and use by various stakeholders.

i) To keep a track of various activities related to capacity building and dissemination of the information to all stakeholders, the council needs to develop a digital platform for the cohesive implementation of DCI and linking of the same with various agencies.

j) Any other work related to capacity building as deemed fit by the council.

27. The CoDCI, within one year of its establishment or three years from the date of these recommendations, whichever is earlier, should establish a mechanism for certification, registration and capacity building of DCI Professionals including setting up of digital platform for the cohesive implementation of DCI.

28. Till the time CoDCI is established, the provisions in new building bye-laws for DCI as recommended herein must be implemented by utilizing the services of the existing professionals already working in the field of design and development of Buildings and DCI.

H. Digital Platforms and Tools for Development of DCI

29. A digital platform should be developed and maintained by CoDCI. The broad objectives of the digital platform include but not limited to the following:

a) Activities related to capacity building of DCI Professionals:

i. Publish details of the courses, accredited institutions and the process for admissions, and applicable fee structures if any.

ii. Facility for conducting examinations for certification of DCI Professionals.

iii. Registration facility for certified DCI Professionals.

b) Publish the list of registered DCI Professionals and certified products and tools.

c) Provide a marketplace for buying and selling of certified products. Such e-marketplace should be linked with Open Network for Digital Commerce (ONDC).

d) Enable Property Managers to hire services of registered DCI Professionals.

e) Enable interaction and collaboration among various stakeholders through various technologies and tools.

f) To provide a feedback mechanism for the services delivered by registered DCI Professionals and certified products used.

g) To maintain details with regard to development projects/ Buildings approved – ongoing, completed and put to use by the local bodies and other competent authorities.

h) To create a repository in respect of the service providers along with technologies and spectrum bands, who are offering services in the area and update the same from time to time.

i) To create a repository of knowledge based on past learning of implementation of DCI projects to support in standardisation of the processes.

j) To make available on a regular basis the information on standards, technology and best practices within India and at global level related to DCI.

k) To publish analytical reports/articles on DCI development and related issues.

l) To make available acts/ laws/ bye-laws/ rules/ regulations related to DCI.

m) To facilitate online application, clearance and approval process for service providers seeking access to DCI created in Buildings

30. Till the time CoDCI is established, the digital platform should be created by DoT to meet immediate objectives, which can later be handed over to the CoDCI.

I. Rating Framework for Digital Connectivity

31. Appropriate provisions for Rating of Buildings for Digital Connectivity should be included in the MBBL, on the lines of the provisions made in the MBBL for rating of green buildings.

32. To start with, the Rating of Buildings for digital connectivity should be made mandatory for all existing as well as new Buildings of public importance

within two years of issue of the regulatory framework by TRAI or two years from obtaining occupancy certificate, whichever is later. The Authority further recommends that Rating of the following Buildings of public importance should be made mandatory:

a) Airports,

b) Ports,

c) Railway/ metro stations,

d) Bus stations,

e) Buildings of Central/ State/ UT Governments/ Local authorities/ Government agencies/ PSUs,

f) Government residential colonies,

g) Industrial estates including industrial parks, SEZs, multi-modal logistic parks,

h) Large commercial office complexes,

i) Large commercial shopping complexes,

j) All institutes of higher education including research institutes,

k) All multi-specialty hospitals, and

l) Any other Buildings as Government may decide.

33. The Rating of Buildings for digital connectivity should be made mandatory for all new Buildings, excluding the class of Buildings as may be decided by MoHUA in consultation with the States/ UTs and other stakeholders.

34. The Property Manager should get Buildings rated for digital connectivity within two years of obtaining the occupancy certificate once TRAI has issued the regulatory framework.

35. For Buildings other than those mandated, the Property Manager may get their Buildings rated for digital connectivity on voluntary basis.

J. Proposed amendment in the MBBL and NBC

36. Approval of DCI design, implementation and use of Buildings should remain with the existing institutions as per statute of State/UT Governments for the purpose.

37. The Authorities of the States/UTs responsible for approval of development plans should hire the services of a suitable expert/agency on DCI design and evaluation duly registered and certified by the Council of DCI (CoDCI).

38. A new draft chapter on DCI for the Buildings, as suggested, should be included in the Model Building Bye Laws in line with the recommendations.

39. The BIS Panel on '*Information and Communication Enabled Installations*' should develop standards in respect of DCI for the Buildings, to be included in the National Building Code.

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