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**Subject: The GSMA's response to TRAI Consultation Paper on USE OF STREET FURNITURE FOR SMALL CELL AND AERIAL FIBER DEPLOYMENT**

Dear Sir,

Please find attached the GSMA's responses to the Consultation Paper on "Use of Street Furniture for Small Cell and Aerial Fiber Deployment" issued on March 23, 2022.

Small cells are viewed as a significant driver for the growth of 5G networks and digital revolution. Their ease in deployment and cost-effectiveness gives them a greater advantage over macro cells. The main challenges in deployment of small cells in India are with regards to access to rights of way/street furniture, electrical power and backhaul. This underscores a greater need today for a uniform policy on deployment of small cells which addresses these challenges. The current RoW policy does not address issues pertaining to small cells and we recommend appropriate amendments to the same.

Enabling policies that provide easier access for mobile network operators that permit free and low cost are essential to advance the rollout of mobile broadband networks in India. The GSMA recommends the development and implementation of a framework to access street furniture, sharing of street furniture, expedite the approval process for their use, implement categorical exemptions and keep deployment costs in check. Additionally, ease in power supply and policy changes that facilitate the rollout of backhaul technologies and reduce costs can help significantly.

In our response, we discuss these challenges as well as offer recommendations for the way forward with reference to some global best practices.

The GSMA would like to take this opportunity to thank the Telecom Regulatory Authority of India for giving us the opportunity to discuss several important issues of relevance in this regard. We look forward to similar discussions in the future.

Yours sincerely,

A handwritten signature in black ink that reads "Jeanette Whyte" with a small flourish at the end.

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## TRAI CONSULTATION ON USE OF STREET FURNITURE FOR SMALL CELL AND AERIAL FIBER DEPLOYMENT

### GSMA RESPONSE:

- 1. Is there a requirement for any modification in existing RoW Rules as notified by DoT to accommodate small cell deployment on street furniture? If yes, please provide the changes required.**

Yes. Modifications are required. However, we additionally recommend designing tailored policies on small cell deployment for effective implementation as many countries have done.

The current Central Government RoW policy/ rules deal with establishment of underground and overground telegraph infrastructure. The rules were first established in 2016 and were recently amended in 2021. On October 21, 2021, the Indian government further introduced amendment rules to incorporate the provisions related to nominal one-time compensation and other important changes. Documentation for RoW application for over ground telegraph line has been made simple. Also, moving forward, there would be no fee other than “Administrative fee and Restoration” charges for establishing, maintaining, and working, repairing, transferring or shifting the underground and over ground telegraph infrastructure.<sup>1</sup>

While these are some very welcome steps, the glaring absence of small cell deployment in the RoW regulatory framework continues nonetheless.

In both the versions, there are no specific provisions with regards to applications for installation of small cells and access to street furniture.

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<sup>1</sup><https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1765755>, [Government amends Indian Telegraph Right of Way Rules, 2021 - The Hindu BusinessLine](#)

It is therefore requested that for the purpose of deployment of small cells, appropriate amendments should be introduced containing relevant provisions on deployment of street furniture. For example, in the United States, more than 30 state legislatures have enacted small cell legislation that streamlines regulations to facilitate the deployment of 5G small cells.<sup>2</sup> These laws take into consideration the unique circumstances of their state and local environment, but baseline principles include:

- Streamlined applications to access public rights of way.
- Caps on costs and fees.
- Streamlined timelines for the consideration and processing of cell siting applications.<sup>3</sup>

In this regard, it is recommended that the Indian government design an appropriate legislation to ease the deployment of small cells. Relevant provisions with regards to the following would be useful:

- Availability of street furniture
- Applications by operators and what information it should entail
- Role of appropriate authorities
- Criteria/conditions for approval of permissions
- Approvals from Residential Welfare Associations, wherever applicable
- Timelines for approvals
- Fee (if any)
- Mode of approval
- Applicability of exemption criteria (categorical exemptions based on height, radio characteristics, volume etc.)
- Dispute resolution: attribution of liability in case of damage caused to street furniture, steps to be taken in cases of refusal from RWAs etc.<sup>4</sup>

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<sup>2</sup> [Mobile 5G and Small Cell 2021 Legislation \(ncsl.org\)](https://www.ncsl.org/legislation/mobile-5g-and-small-cell-2021-legislation)

<sup>3</sup> Id.

<sup>4</sup> Important to note here that telecom being an essential facility/service, approvals should preferably be with the government/regulator.

In addition to this, specific guidelines on infrastructure design would be helpful. For example, City of Virginia Beach, USA has developed a useful draft guideline specifying placement preferences, height of antennas in residential areas, maintenance of infrastructure, rules on co-locating etc.<sup>5</sup>

- 2. Have the amendments issued in 2021 to RoW rules 2016 been able to take care of the needs of aerial fiber deployment? If not, what further amendments can be suggested? Please provide exact text with justification.**

Note: The main focus of the present response is RoW pertaining to “small cells”. We will address issues concerning aerial fiber deployment separately. However broadly we would like to highlight the following:

- Uniform adoption of policy
  - Faster and time-bound permissions
  - Facilitating usage of street poles with the help of electricity boards
  - Preparing a framework and making available a list of street furniture for deployment of aerial fiber
- 3. What are the suggestions of stakeholders for aligning RoW policies issued by various other Central Government Bodies with existing DoT RoW policy?**

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<sup>5</sup> [CVB Small Cell Guidelines PreFinal\\_20200527.pdf \(vbgov.com\)](#)

India aims to become a \$5 trillion economy. For the realization of these goals, the need for a robust broadband infrastructure that facilitates digital connectivity cannot be more critical.

The Telecom industry depends on getting timely and affordable approvals for Rights of Way (RoW) permissions from authorities to accelerate infrastructure rollout. However, industry faces serious challenges in getting the RoW permissions despite efforts by the Union government, hindering infrastructure rollouts at the last mile. This necessitates collaborative role that Union and state governments and industry must play to overcome this challenge.

GSMA studies<sup>6</sup> have found the following core challenges with regards to RoW in India:

- In many states, the policies are not aligned with the central Department of Telecommunications rules and in some cases there are no policies at all. This leads to undue delay in processing and a non-uniform approach.
- In the absence of holistic policy framework within states, these charges vary even within the state from city to city. It is understood that some states take one-time charge, some recurring and some both. Basis of charging is also not explained or unclear. These RoW charges end up becoming a significant input cost towards digital connectivity.
- It has also been observed that many a times, the Residents Welfare Associations (RWAs), owners of commercial properties (buildings/ malls) deny the access to lay fiber or install telecom infrastructure inside the building premises. Sometimes, the denial is indirect in form of exorbitant charges for giving permissions.

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<sup>6</sup> [GSMA Paper on RoW Sep'2020.pdf \(dipa.co.in\)](#)

In this section, we examine some approaches to RoW followed in a few international jurisdictions that shows efforts of policymakers and governments to accelerate telecom infrastructure rollout. Since telecom is an essential service, access to it should be a priority like other utilities. In international markets, policy makers are now moving to make access easier.

- The IMDA in Singapore has required “mobile installation spaces”—typically rooftop spaces reserved for telecommunication equipment—be provided to network operators by building developers and owners free of charge.<sup>7</sup>
- In Japan, operators can install 5G base stations on 208,000 traffic lights across the country.<sup>8</sup> Moreover, the Japanese government has proposed that the costs of using the traffic lights for 5G deployments be shared between operators and local administrations.<sup>9</sup>
- The UK’s Electronic Communications Code facilitates operators’ access to macro and small cell infrastructure on public and private land.<sup>10</sup> Furthermore, in 2018, the Department for Digital Culture Media and Sport (DCMS) established a “Barrier Busting Task Force”, which is a cross-Government group working to address “barriers” to digital infrastructure deployment. DCMS has developed a Digital Connectivity Portal that provides resources and practical advice for local authorities and commercial providers to help build digital infrastructure.<sup>11</sup>
- In Australia, the Telecommunications companies have some powers to enter land and install and maintain some types of telecommunications facilities and some immunities from certain state and territory legislation. These laws are designed to strike the right balance between the community's need to access reliable, affordable telecommunications services and ensuring that property

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<sup>7</sup> [COPIF-2018-Industry-briefing-on-7Dec2018-cleanpptx.pdf \(imda.gov.sg\)](#)

<sup>8</sup> [Japan to install 5G network relay devices on traffic signals | The Japan Times](#)

<sup>9</sup> [Japan to greenlight 5G base stations on 200,000 traffic signals - Nikkei Asia](#)

<sup>10</sup> Supra note, 3.

<sup>11</sup> [CBP-9156.pdf \(parliament.uk\)](#)

owners, local governments and communities have a say in the deployment of infrastructure that affects them.<sup>12</sup>

- Since 1998, the Spanish government has required that communications pipelines be constructed for each new building, to provide the communication service. Since 2000, the government has stipulated a legal framework for cooperation between public utility companies and operators in terms of pipelines.<sup>13</sup>
- Austria has a very good approach to RoW, termed as Wayleave Right under the Telecommunications Act 2003. Under the Act, the providers of a communications network can exercise wayleave rights on public property, such as streets, footpaths, public places and the airspace above, free of charge and without special authorization. The specific exercise of this right must be coordinated with the administrator of the public good (eg the municipality). Since the end of 2015, it has also been possible to apply for a decision from the Telekom Control Commission if no agreement can be reached. Importantly, the providers of public communication networks shall have the right to claim wayleave rights to private property subject to certain conditions.<sup>14</sup>
- The German Telecommunications Act entitles operators of public telecom to use (a right of use) Trafficways free of charge. Further, under the Act, the owner of a property cannot prohibit the setting-up, operation and renewal of telecommunications lines on his property subject to certain conditions.<sup>15</sup>

**4. Whether it should be mandated that certain public infrastructure (municipality buildings, post offices, bus, and railway stations, etc.) be earmarked to have dedicated spaces that allow service providers to deploy macro/small cells? If yes, what are the possibilities and under what legal framework this can be done? What should be the**

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<sup>12</sup> Id.

<sup>13</sup> [Gigaband-Network-EN.pdf \(huawei.com\)](#)

<sup>14</sup> Supra note, 3.

<sup>15</sup> [Microsoft PowerPoint - Building Synergies through Co-deployment \(unescap.org\)](#)

**terms and conditions of use of such infrastructure? Please provide detailed inputs with justifications.**

To ease the deployment of small cells and help cut down on the lengthy procurement processes, governments are advised to facilitate access to public infrastructure. As mentioned earlier, many countries have made public infrastructure available for such deployment. For example,

- In Japan, operators are permitted to install 5G base stations on 208,000 traffic lights across the country. Moreover, the Japanese government has proposed that the costs of using the traffic lights for 5G deployments be shared between operators and local administrations.
- As facilitating measures for 5G deployment, Office of the Communications Authority, Hong Kong, issued guidelines on the use of street furniture such as sheltered bus stops, public payphone kiosks and smart lampposts for installation of 5G Radio Base Stations in 2019-2020.<sup>16</sup>
- Recently, in September 2021, the UK government has launched a £4 million competition, the Digital Connectivity Infrastructure Accelerator project, to explore ways to make it simpler and quicker for mobile companies to use publicly owned buildings and curb side infrastructure, such as CCTV poles and traffic signals, to host 5G radio equipment.<sup>17</sup>
- In the United States, several states have taken initiatives in this regard. For example, in Washington State, a bill was introduced in 2017 to authorize the installation of small cell facilities on publicly owned assets and limits charges to USD 500 per annum.<sup>18</sup>

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<sup>16</sup> “Guidelines on the Use of Sheltered Bus Stops for the Installation of Radio Base Stations for Provision of Public Mobile Services”. Available here: <https://www.coms-auth.hk/filemanager/statement/en/upload/552/gn112020.pd>

<sup>17</sup> [£4m UK government project will explore using street furniture to host 5G radio kit | 5Gradar](#)

<sup>18</sup> [Setting the Scene for 5G: Opportunities & Challenges \(itu.int\)](#)

**5. Can some of the street furniture like traffic lights, metro pillars etc be earmarked for mandatory sharing between controlling administrative authority and Telecom Service/Infrastructure providers for deployment of small cells and aerial fiber? Does existing legal framework support such mandating? What should be the terms and conditions of such sharing? Please provide details.**

Yes street furniture like traffic lights, metro pillars etc should be and have been earmarked for mandatory sharing between controlling administrative authority and service/infrastructure providers for deployment of small cells. Some examples:

- As mentioned previously as well, Hong Kong authorities have launched a pilot scheme in March 2019 to make available selected government buildings and premises for installations.
- Japanese government has proposed that these costs be shared between operators and local authorities.
- In the UK, operators have been advocating for an open access model for opening access to street furniture and bringing an end to the exclusive concessions infrastructure deployment models. Additionally, the UK Department for Digital, Culture, Media & Sport recently announced its intentions to “slash red tape” for 5G roll out. Among its plans it proposed<sup>19</sup>:
  - Eight pilots to simplify local authority processes to speed up 4G and 5G deployment
  - Telecoms firms to get easier access to public buildings and street lights, bus shelters and traffic lights in 44 English and Scottish council areas
- In United States, in 2017, a bill was introduced in Florida requiring an authority to process applications for siting small cell equipment on utility poles on a non-discriminatory basis and approving applications within set time-scales. The bill also proposes that authorities may not enter into any exclusive

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<sup>19</sup> [New plans to slash red tape from 5G roll out and improve mobile phone connectivity - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/new-plans-to-slash-red-tape-from-5g-roll-out-and-improve-mobile-phone-connectivity)

arrangements entitling providers to attach equipment to authority utility poles.<sup>20</sup> Similarly, New York City has established Mobile Telecommunications Franchise Agreements that allow companies to ‘install and operate telecom equipment on street light poles, traffic light poles, and utility poles to facilitate wireless communications in the five boroughs’.<sup>21</sup> These agreements feature a relatively low fee structure and streamlined processes for review of small wireless facility siting applications.

In addition to provision of street furniture, as facilitating measures, Singapore authorities have formulated the Code of Practice for Info-communication Facilities in Buildings (COPIF), which is to ensure that developers and/or owners of buildings and developments provide adequate space and facilities for the deployment and operation of installation and plant. The COPIF also specifies the duties to be observed by developers, building/development owners and telecommunication licensees in relation to the provision, maintenance and utilisation of the relevant space and facilities provided.

**6. How can infrastructure mutualization and infrastructure collaboration be ensured to avoid exclusive rights of way? What legal provisions can support mandating these? Provide full det**

Mobile phones are the most widely adopted consumer technology in history. In large part, this success is due to competition in the mobile industry that has driven innovation. To ensure that competition and innovation thrive, it is essential that policymakers create a level playing field across the digital ecosystem and curb monopolization.

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<sup>20</sup> [Setting the Scene for 5G: Opportunities & Challenges \(itu.int\)](http://www.itu.int)

<sup>21</sup> [Mobile Telecom Franchises - DoITT \(nyc.gov\)](http://www.nyc.gov)

At a principle level, we agree that no exclusive Rights of Way should be granted to anyone, to avoid any market distortions and monopoly on street furniture assets. Instead it is recommended that appropriate provisions are implemented to encourage sharing of street furniture as well as non- discriminatory, non- exclusive implementation of RoW. For example, a 9 metre pole can take a weight of almost 50-60 Kgs. The poles / street furniture should not be exclusive with a single operator and sharing must be mandated.

**7& 8 (combined) Should there be permission exemption for deploying certain categories of small cells at all places or all categories of small cells at certain places (Like apartments etc.)? What legal framework will support such exemptions? What should be the criterion/ conditions (like power, height etc.) and administrative procedure for implementing such exemptions? Please provide exact text with detailed justifications**

Yes there should be permission exemption for deploying certain categories of small cells in general and also at certain places.

### ***RWA related permit challenges***

Due to size of the cells and usage, small cells may be needed to be deployed in apartment buildings and residential areas. In such instances, obtaining permissions by Residential Welfare Associations which are self- regulatory bodies, may be a challenge. As mentioned previously, GSMA studies have revealed that this has often presented a challenge to the successful deployment of small cells. Telecom is an essential facility/service and hence wherever possible, it is recommended that authority to give permissions should be in the hands of the government/regulator. Furthermore, the infrastructure design guidelines should help address any concerns regarding the height of antennas and other issues related to installation in residential areas.

### ***Exemption from building permits***

As a general principle, small cell infrastructure installed within existing buildings should be exempt from specific notification or other permission requirements. Any concerns about a specific installation are likely to be addressed by existing local building and safety regulations. Small cell installations should be exempt from requirements for registration of transmitter positions because these requirements sometimes exist for larger and higher powered radio transmitters however may not be relevant in the case of small cells.

### ***Exemption criteria where permits are required***

Where it is determined that a building permit is required, an effective approach to building permits is to provide umbrella approval for deployment of small cell installation meeting certain specified area or volume, as well as radio characteristics (e.g., equivalent isotropic radiated power – EIRP) and installation requirements on nominated physical infrastructure (e.g., minimum installation height). All small cell installations meeting these requirements would be exempt from further permit requirements.

Many countries have adopted criteria for exemption that can be used for deployment of new antennas. The International Electrotechnical Commission (IEC) has developed detailed classes of small cell products and installations, which are also reflected in ITU recommendations. Where small cell installations comply with the power and installation parameters provided therein they should be deemed to comply with the exposure limits without further requirements. In France, a 2015 report has proposed that existing regulations are amended to provide an exemption from administrative processes for small cells with an EIRP less than 2 W. In addition the report proposed that for small cells with an EIRP between 2 W and 25 W only a light notification process is

required while detailed approval administrative process applies above 25 W EIRP.<sup>22</sup>

The European Electronic Communication Code is recommending facilitating the deployment of low power small-area wireless access points to reduce costs of deployment in very dense areas. The European Commission defines the applicable technical characteristics by reference to the maximum size, power and electromagnetic characteristics, as well as the visual impact.<sup>23</sup> In 2019, the EC created new market definitions for small cell equipment, also recommending the installation of these antenna should exempt from planning permission requirements.

The Small Cell Forum and the GSMA recommend adoption of a harmonized set of installation rules for RF-EMF compliance based on the installation classes defined in IEC 62232 and ITU-T K.100. These documents define the necessary installation requirements based on the equivalent isotropic radiated power (EIRP) of all equipment at the site and are outlined below.<sup>24</sup>

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<sup>22</sup> [GSMA Small Cell Deployment Booklet.pdf](#)

<sup>23</sup> [Small Cell Forum Releases \(scf.io\)](#)

<sup>24</sup> [GSMA EMF Exposure Compliance Policies for Mobile Network Sites Oct21.pdf](#)

SIMPLIFIED INSTALLATION RULES						
<b>From IEC 62232 Ed.2.0</b> Installation must be done according to instructions from the manufacturer or entity putting into service						
	Installation class	E0	E2	E10	E100	E+
	Total EIRP	N/A	< 2W	< 10W	<100W	No limit
	Minimum height above walkway	None	None	2.2 m	2.5 m	H <sub>m</sub> (calculation)
	Exclusion zone	None, touch compliant	Provided in manufacturer's instructions Small D <sub>m</sub> not shown on the picture	Provided in manufacturer's instructions D <sub>m</sub> in main lobe direction		
	Check pre-existing RF sources	N/A	N/A	N/A	5D <sub>m</sub> in main lobe direction D <sub>m</sub> in other directions	

The GSMA recommends Indian government to adopt international EMF guidelines. The same would also contribute to the exemptions based on antenna height.

Among additional criteria for exemptions, the Federal Communications Commission in the USA has adopted rules exempting small cells from environmental assessments where they are mounted on existing telecommunications towers, buildings and other structures as well as inside buildings and meet certain limitations on size and visibility.<sup>25</sup>

**9. For Small Cells that do not fall under the exemption category, should there be a simplified administrative approval process (like bulk approvals etc.) for deployment? If yes, what should be the suggested process? If not, what should be the alternative approach?**

<sup>25</sup> Federal Communications Commission (FCC) 47 CFR Parts 1 and 17, Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, Federal Register, Vol. 80, No. 5, 8 January 2015.

Yes. There should be a simplified approval process for small cells to avoid administrative delays even for those that do not fall under the exemption category. In many countries, small cells do not require approvals from local authorities. For example, in Australia small cells are installed using the Commonwealth Telecommunications (Low impact Facilities) Determination and therefore local council/government approval is generally not required. Mobile phone carriers are however required to consult with Councils and consider their feedback when they plan to install small cells.<sup>26</sup> In Egypt, no building permits are required for small cell deployments and the only regulatory approval that is required after installation is the measurement of RF exposure.<sup>27</sup>

In the alternative to exempting small cells from approvals as seen above, some ways of simplifying approvals for small cells in general can be :

- Bulk approvals on group/batch basis. In order to cover an area many small cells of similar characteristics (radio parameters, size) will often be deployed at the same time.
- Exemption from building permits as mentioned before should also be generally followed. As noted earlier, small cell installations especially within buildings, should be exempt from requirements for registration of transmitter positions.
- Deployment of digital tools for faster processing
- Reduction of approval timelines for all to 15-30 days with automatic deemed approval after 30 days through online portals

**10. & 11.(combined) What power related problems are envisaged in deploying small cells on street furniture? Please provide full details. What viable solutions are suggested to address these problems? Please provide full details.**

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<sup>26</sup> [Small Cell Report \(gsma.com\)](http://www.gsma.com)

<sup>27</sup> [tw\\_gsma\\_15\\_small\\_cell\\_deployment\\_booklet\\_Final.pdf](#)

Small cell antenna installations need access to reliable electrical power to operate. In general, this will involve grid connections though renewable energy sources such as solar may be suitable for isolated installations operating in remote areas. Venezuela has proposed that small cells using renewable energy be tax exempt. Authorities should support small cell deployments by facilitating siting on or near existing sources. A GSMA survey conducted for stakeholders suggests that availability of adequate power is a major hurdle in deployment of small cells.<sup>28</sup> Authorities should support small cell deployments by :

- Making smart poles available by local bodies and at no/nominal costs for small cells.
- Subsidizing rates by electricity boards for small cells
- Exploring cost-effective ways such as DC supply through battery banks or through solar panels which states can subsidize and providing priority EB connection at Industrial/Favorable rates
- For areas where electricity supply is disrupted or a challenge, installation of Solar Panels with battery backup should be an option.
- Open Access (OA) policy for using Solar/renewable energy sources, should do away with any restrictions of minimum *connected load* per site so that these small cells can make use of affordable green energy.
- Providing financial incentives for the deployment of environmentally friendly networks-- this would impact green initiatives while boosting small cells, which operate at low power.
- Adopting a collaborative approach between the various government departments given the multiple bodies that are involved in the permit process for small cells.

**12. Is there a need for standardizing the equipment or installation practices for next generation small cell deployment on street furniture? If yes, what are the suggested standards and what should be the institutional mechanisms for defining, and complying to them?**

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<sup>28</sup> Supra note, 22.

While standardization of equipment may not be a desirable solution, standardization of installation procedures can have costs and benefits and depending on the trade-offs be an area that policy makers could further explore. We would look to industry experiences in this regard and recommend an approach that advances the interests of all players.

However, from a technical standpoint, the TEC in consultation with TSPs can come out with broad guidelines in this regard, and no other local agency/body/authority should prescribe any requirements in this regard. Only the DoT/TEC should have overseeing authority over such matters related to equipment/technical specifications of small cells.

**13 & 14. (combined) Is there a need for a specific mechanism for collaboration among local bodies /agencies for deployment of small cells and arial fiber using street furniture? If yes, what mechanisms should be put in place for collaboration among various local bodies/agencies involved in the process of permissions with TSPs/IP1s and to deal with other aspects of Small Cell deployment? Kindly suggest an enabling Framework that shall include suggestions about the role of various authorities, rules of coordination among them, compliance rules and responsibilities, approval process, levies of fees/penalties, access rules etc.**

Yes as mentioned earlier, the approvals for small cells involves multiple government bodies. If they are not exempt from approvals, the process should be considerably simplified and streamlined in order to avoid unnecessary delays. We recommend a Whole of Government Approach<sup>29</sup> for these permits wherever applicable. Furthermore, stronger collaborations between industry and governments should be the way

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<sup>29</sup> For more on WGA please see: [201031-DigiSoc.pdf \(gsma.com\)](https://www.gsma.com/201031-DigiSoc.pdf)

forward for approvals as well as information sharing. For example, setting up a nationwide small cell information exchange (SCIX), a digital platform that would hold real time information about availability, backhaul connectivity, monthly rent and permit status for infrastructure capable of hosting small cells.<sup>30</sup> The UK government, for example, has acknowledged that network operators often find it difficult to get the required information to verify a structure is suitable, like its location or physical dimensions, proximity to the street, or access to a power source. To deal with this, the government said it will invest in piloting the latest innovations in digital asset management platforms, to help local councils share data more easily with network operators.<sup>31</sup>

**15. How can sharing street furniture for small cell deployment be mandated or incentivized? What operational, regulatory, and licensing related issues are expected to be involved in sharing of small cells through various techniques in the Indian context and what are the suggested measures to deal with the same?**

In order to reduce costs of deployment, sharing of street furniture for small cells deployment should be mandated/incentivized. As seen earlier, many governments globally have taken steps towards this. In the previous section we have underscored the importance of promoting competition in the market and ensuring a level playing field. We would like to bring attention to the importance of competition in the growth of the telecom sector. Additionally, sharing of small cells among telecom licensees should be left to mutual negotiations, and no regulatory intervention is required in this regard. Excessive regulation stifles innovation, raises costs, limits investment and harms consumer welfare through the inefficient allocation of resources.

**16. Whether there should be any specific regulatory and legal framework to enable Small Cell and Aerial Cable deployment on i.**

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<sup>30</sup> [servlet.FileDownload \(force.com\)](#)

<sup>31</sup> [UK street lamps and bus shelters to boost 5G rollout in £4 million trial | IT PRO](#)

**Bus Shelters ii. Billboards iii. Electric/Smart Poles iv. Traffic lights  
v. Any other street furniture**

It is recommended that governments take active steps to make street furniture available for industry players to ease the deployment of small cells wherever possible. As seen earlier, many countries are piloting projects and have some frameworks on sharing of street of furniture and other premises. Policy makers are advised to explore ways to harness the socio-economic benefits of existing public infrastructure. A targeted policy setting forth rules on small cell deployment which is currently absent would be helpful in this regard as well.

**17. What should be the commercial arrangements between the TSP's/Infrastructure Providers and street furniture owners for the same?**

Many operators/infrastructure providers may enter into arrangements with street furniture owners in the interest of greater accessibility, time and cost savings. On the whole, we recommend such arrangements and suggest that they are made on a voluntary basis.

The RoW permissions and access to street furniture are enablers to the local economy. Improved and enhanced connectivity enhances local opportunities; hence local authorities, agencies, and owners of street furniture should look to facilitate such access at reasonable costs in the larger public interest.

Therefore, we recommend the following:

- The commercial arrangement should be no-profit no-loss basis, through a national rate card for all types of street furniture.
- The rate card should be designed on the line of classification of circles i.e. A/B/C circles.

- The categories of street furniture should also be broad and limited to accommodate variety within them.
- The rental charges/rates should be nominal, and on annual basis.
- Since street furniture will fall under various authorities, the nominal fees be publically disclosed by all based on certain principles like transparency, non-discrimination

The above approach is also appropriate since currently the street furniture available in the country does not generate any passive income for owners of such furniture, and this furniture cannot be used for any purpose otherwise. Thus, creating a rate card will help partial recovery of this infrastructure.