SYMBIOSIS INSTITUTE OF DIGITAL AND TELECOM MANAGEMENT
CONSTITUENT OF SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)
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TRAI Consultation Paper on Standards of Quality of Service of Access (Wireline and Wireless) and Broadband (Wireline and Wireless) Service Regulations, 2024

Contribution by:

Pallab Sarkar
MBA (Digital & Telecom)
Symbiosis Institute of Digital and Telecom Management, Pune
Email ID: pallab.sarkar2527@sidtm.edu.in

Pankaj Goel
MBA (Digital & Telecom)
Symbiosis Institute of Digital and Telecom Management, Pune
Email ID: pankaj.goel2527@sidtm.edu.in

Under the guidance of
Prof. Giri Gundu Hallur
Deputy Director
Symbiosis Institute of Digital and Telecom Management, Pune
Email ID: girihallur@sidtm.edu.in

About the Institute

SIDTM, in its 29th year of existence, is a constituent of Symbiosis International University, is the first institute to offer management training in digital, telecommunications, and information technology. It is a unique curriculum that combines Digital & Telecom Technology with Management, and it was founded in 1996; by the honorable Dr. S.B. Mujumdar sir (Chancellor of SIU), who took a bold stride forward. In the entire SAARC area, SIDTM is the premier institution for MBA in Digital and Telecom programs, with ranks of Best Telecom B-School in the specialty sector. SIDTM is dedicated to training world-class ICT Business Leaders who can successfully manage the dynamic and ever-changing technical and business paradigms with ease and expertise. SIDTM helps attract brighter minds by providing them with opportunities for healthy growth throughout time, resulting in well-disciplined and optimistic Techno managers. Technology affects all business models, so SITDM is becoming more relevant and will become importance in the future.

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SIDTM Clause wise response to the proposed Amendment in the Regulations.

Reg. No.	Regulation	SIDTM Comments	Proposed Modification in Regulations
1	**1. Short title, commencement, and application**		
	(1) These regulations may be called the Standards of Quality of Service of Access (Wireline and Wireless) and Broadband (Wireline and Wireless) Service Regulations, 2024.	No comments	Not Applicable
	(2) These regulations shall come into force with effect from 1st October 2024	No comments	Not Applicable
	(3) These regulations shall apply to all service providers, having – (i) Unified Access Service License; (ii) Unified License with authorization for Access Service; (iii) Internet Service Authorization under any License; and (iv) Authorization under the Telecommunications Act, 2023 for providing Access or Broadband Service: *Provided* that nothing contained in these regulations shall apply to an Internet Service Provider whose total number of subscribers as on last day of the preceding financial year does not exceed ten thousand or as notified by Authority by an order or direction.	No comments	Not Applicable

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Reg. No.	Regulation	SIDTM Comments	Proposed Modification in Regulations
2	**2. Definitions. ----** (1) In these regulations, unless the context otherwise requires, -	No comments	Not Applicable
	(a) **"Act"** means the Telecom Regulatory Authority of India Act, 1997 (24 of 1997);	No comments	Not Applicable
	(b) **"Access Service Authorization"** means authorization in the designated Service Area under the Telecommunications Act, 2023 or authorization thereunder or as defined in Unified License as applicable;	No comments	Not Applicable
	(c) "**Access Service (Wireless)**" means telecommunication service provided through a wireless telecommunication under access service authorization;	No comments	Not Applicable
	(d) "**Access Service (Wireline)**" covers collection, carriage, transmission, and delivery of voice or non-voice messages over the Public Switched Telephone Network in a licensed or authorized service area and includes the provision of all types of services except those requiring a separate license or authorization;	No comments	Not Applicable

	(e) **Authority”** means the Telecom Regulatory Authority of India established under sub-section (1) of section 3 of the Act;	No comments	Not Applicable
	(f) “**Authorization**” means the authorization as defined in the Telecommunications Act, 2023;	No comments	Not Applicable
	(g) **“Broadband”** means a data connection, through wireless or wireline access media, that is able to support interactive services including Internet access and has the capability of delivering the minimum download speed, as specified by licensor from time to time, to an individual subscriber from the point of presence (POP) of the service provider intending to provide broadband service;	No comments	Not Applicable
	(h) “Broadband Service” means a data service provided using broadband data connection by Internet Service Provider under any license or authorization;	No comments	Not Applicable
	(i) “Call Centre” means a department or a section or a facility established by the service provider for redressal of complaints and for addressing service requests of its consumers;	No comments	Not Applicable
	(j) “Cell” means a radio network object that can be uniquely identified by a user equipment from a (cell) identification that is broadcasted over a geographical area from access (wireless) network;	No comments	Not Applicable
	(k) “Cell Bouncing Busy Hour” or “CBBH” means the one-hour period in a day during which a cell in an access service wireless network experiences the maximum traffic and shall be decided as per the methodology specified in	No comments	Not Applicable
	(l) “Cell_Q(t)” or “Cell Quality of Service Performance Measure” means the tth percentile value in the set of performance against a QoS parameter corresponding to a Cell observed during different days of the assessment period;	No comments	Not Applicable

	Explanation: If a Cell was operating for thirty days during an assessment period and computed Drop Call Rate (DCR) values were available for all these thirty days then arranging these thirty DCR values in ascending order and finding 90th percentile DCR value for that Cell would point to 27th DCR value (counted from lowest to highest DCR value);		
	(m) "Consumer" means a consumer of a service provider falling in sub-regulation (3) of regulation 1 of these regulations and includes its customer and subscriber;	No comments	Not Applicable
	(n) "Down Link (DL) Packet Drop Rate" or "DL-PDR" means percentage of voice traffic packets which are dropped by the network or lost in the network while transferring data on the downlink for Quality of Service (QoS) Class Identifier of voice traffic in packet switched (4G or 5G) radio access networks;	No comments	Not Applicable
	(o) "Drop Call Rate" or "DCR" means the percentage of voice calls which once having been established are interrupted prior to their normal completion;	No comments	Not Applicable
	(p) "Evolved-Universal Terrestrial Radio Access Network (E-UTRAN) Radio Access Bearer" or "E-RAB" means a user plane connection between User Equipment (UE) and Serving Gateway (SGW) in the LTE based technology;	No comments	Not Applicable
	(q) "Jitter" means measure of the latency variation above and below the mean latency value;	No comments	Not Applicable
	(r) "Latency" means the time taken by a packet to reach the receiving endpoint after being transmitted from the sending point in broadband service;	No comments	Not Applicable
	(s) "License" means a license granted or having effect as if granted under section 4 of the Indian Telegraph Act, 1885 (13 of 1885) or the provisions of the Indian Wireless Telegraphy Act, 1933 (17 of 1933), as amended	No comments	Not Applicable

	from time to time;		
	(sa) "**Physical Resource Block**" or "**PRB**" is the fundamental unit of radio resource allocation in 4G LTE and 5G New Radio (NR) networks. It represents a defined portion of radio spectrum over a specific time interval and serves as the basic scheduling unit through which a cell allocates radio resources to user equipment (UE) for data transmission and reception.	The definition is the technical basis for the network-slicing compliance benchmark proposed under Regulation 6(1)(xv) ('Cells having daily PRB utilisation > 80% in 5G network'). Neither ACMA nor Ofcom currently prescribes any PRB-utilisation-based compliance benchmark for network slicing, so there is no comparable international measurement standard to align this definition against. In the absence of a precise calculation methodology, the bare definition leaves open several measurement questions — whether utilisation is computed per-cell or per-carrier, over a daily average or peak-hour window, and whether control-channel/guard-band PRBs are excluded from the denominator — which can produce materially different reported values across service providers using different RAN vendors and counters for what is, on paper, the same benchmark.	No change proposed to the definition of 'Physical Resource Block' itself. However, Schedule-I should be amended to cross-reference this definition with a precise PRB-utilisation calculation methodology — specifying the measurement window (daily average vs. peak-hour), the level of aggregation (per-cell/per-carrier), and the treatment of control-channel and guard-band PRBs — so that compliance under Regulation 6(1)(xv) can be measured consistently across service providers. This keeps it consistent with your existing Reg 6 entry (rows 67–75), which already flags the PRB/network-slicing benchmark as premature and recommends a report-only phase — this definitional comment reinforces that same.
	(t) "Point of Interconnection" or "POI" means authorized interconnection point for ingress and egress of traffic among the interconnecting applicable systems of service providers in accordance with TRAI regulations or orders;	No comments	Not Applicable

	(u) **"Public Land Mobile Network"** means an access service wireless network set up and operated under access service license or access service authorization, for the purpose of providing land-based access services (wireless) to the public and which provides communication facilities to subscribers using mobile stations;	No comments	Not Applicable
	(v) "Public Switched Telephone Network" means a fixed line public telephone network providing a two-way switched telecommunication services to the general public;	No comments	Not Applicable
	(w) "QSD(s,t)" or "Quality of Service Spatial Distribution" means the sth percentile value in the set of Cell_Q(t) values, against a QoS parameter, for all cells in a network during the assessment period;	No comments	Not Applicable
	(x) "Quality of Service" or "QoS" means the indicators of the performance of a telecommunication network and the degree to which such network conforms to the standards of quality of service as specified in these regulations for specified parameters and shall be measured as per the methodology provided in Schedule-I;	No comments	Not Applicable
	(y) "Quarter" means a period of three consecutive months ending on the 30th June, the 30th September, the 31st December and the 31st March of the financial year;	No comments	Not Applicable
	(z) "Radio Access Bearer" or "RAB" means a service provided by the Access Stratum to the Non-Access Stratum for the transfer of user data between the User Equipment and the Core Network;	No comments	Not Applicable
	(aa)"Radio Interface" means the interface between User Equipment and the Radio Access Network access point, which encompasses all the functionality required to maintain such interfaces;	No comments	Not Applicable

	(bb) “Radio Resource Control” or “RRC” means a sub layer of radio interface layer 3 existing in the control plane which provides information transfer service to the Non-Access Stratum and is responsible for controlling the configuration of radio interface layers 1 and 2;	No comments	Not Applicable
	(cc) “Regulations” means the Standards of Quality of Service of Access and Broadband (Wireline and Wireless) Service Regulations, 2024;	No comments	Not Applicable
	(dd) “Service Provider” means any service provider to which these regulations apply;	No comments	Not Applicable
	(ee) “Six Sigma” means a data driven statistical analysis-based approach for Quality Management System(QMS);	No comments	Not Applicable
	(ff) “Stand-alone Dedicated Control Channel” or “SDCCH” means, a GSM control channel for signaling purposes where the majority of call setup occurs, which is used for communication between mobile station, i.e. mobile handset and Cell before such mobile station is assigned a Traffic Channel (TCH);	No comments	Not Applicable
	(gg) “Tariff Offerings” means various tariffs offered by service providers to their subscribers including tariff plans, plan vouchers, special tariff vouchers, combo vouchers, top up vouchers and add-on plans;	No comments	Not Applicable
	(hh) “Telecommunication” means telecommunication as defined in the Telecom Regulatory Authority of India Act, 1997 (24 of 1997);	No comments	Not Applicable

	(ii) "Telecommunication service" means telecommunication service as defined in the Telecommunications Act, 2023;	No comments	Not Applicable
	(jj) "Time Consistent Busy Hour" or "TCBH" means the one-hour period starting at the same time each day for which the average traffic of the resource group concerned is greatest over the days under consideration and shall be decided as per the methodology specified in Schedule-I;	No comments	Not Applicable
	(kk) "Traffic Channel" or "TCH" means a logical channel which carries user information;	No comments	Not Applicable
	(ll) "Up Link (UL) Packet Drop Rate" or "UL-PDR" means percentage of voice traffic packets which are dropped by the network or lost in the network while transferring data on the uplink for Quality of Service (QoS) Class Identifier of voice traffic in packet switched (4G or 5G) radio access networks;	No comments	Not Applicable
	(mm) "Voice over LTE" or "VoLTE" means voice call established, maintained and released using Internet Protocol (IP) Multi-Media Sub-System (IMS) in LTE or IMT-Advanced network;	No comments	Not Applicable
	(nn) "Voice over New Radio" or "VoNR" means voice call established, maintained and released using Internet Protocol (IP) Multi-Media Sub-System (IMS) in IMT-2020 network;	No comments	Not Applicable
	(2) Words and expressions used but not defined in these regulations, but defined in the Act or the rules and other regulations made thereunder or in the Telecommunication Act 2023 or the license or the authorization or relevant International Telecommunication Union (ITU) standards or 3rd Generation Partnership Project (3GPP) standards, shall have the same meaning respectively assigned to them in the Act or the rules and the regulations or the Telecommunication Act 2023 or the license or the	No comments	Not Applicable

	authorization under relevant Act or relevant ITU or 3GPP standards, as the case may be, in that order.		
3	**3. Design, implementation and management of Networks.-**	No comments	Not Applicable
	(1) Every service provider shall prepare a quality management plan, within six months of issue of these regulations, to adopt Six Sigma quality management practices for QoS management, which shall include quality of service aspects related to network availability, accessibility, retainability and customer services.	SIDTM submits that mandating a Six Sigma quality management plan within six months is not benchmarked against any comparable international requirement. Neither Ofcom nor ACMA prescribes a specific quality methodology (such as Six Sigma) as a regulatory obligation; both instead regulate to defined outcome benchmarks and leave the internal quality framework to the service provider. A rigid methodology mandate, on a six-month timeline, adds compliance cost without demonstrated consumer benefit over an outcome-based approach, and is consistent with the position taken by other service providers that the regulatory framework should remain outcome-focused rather than prescribing internal process models.	Regulation should specify the required outcomes (network resilience, redundancy, fault management) and allow the service provider to adopt any recognised quality-management methodology (Six Sigma or otherwise) to achieve them, with the implementation period extended to twelve months from notification.
	(2) The quality management plan shall provide for required redundancies including power, transmission links, equipment, geo-redundancies in the core network and access network as per relevant standards to achieve end-to-end QoS as per the benchmarks specified in these regulations.	SIDTM supports the principle of network redundancy but notes that Ofcom's and ACMA's network-resilience obligations (e.g., Ofcom's security and resilience requirements under the Communications Act, and ACMA's reliability rules for Telstra's network) are risk-based and tiered to	Calibrate the redundancy requirement to the scale and criticality of the network element (e.g., a tiered obligation for core/metro versus rural access network elements), consistent with the risk-based resilience frameworks followed by Ofcom and ACMA.

		the criticality of the network element, rather than a blanket redundancy mandate across power, transmission and core network elements for every service provider irrespective of scale or service area.	
	(3) The quality management plan shall cover all technical and non-technical aspects of QoS including designing, implementation and monitoring of networks and customer services to ensure network availability, accessibility, retainability and customer experience.	SIDTM submits that requiring the quality management plan to cover "all technical and non-technical aspects of QoS" is open-ended and difficult to audit against objectively. Ofcom's and ACMA's equivalent obligations are scoped to specific, enumerated risk areas rather than an unbounded all-aspects requirement, which reduces ambiguity for both the regulator and the regulated entity.	Replace the open-ended formulation with an enumerated list of the specific technical and non-technical aspects the quality management plan must address, to be prescribed by the Authority, so that compliance can be objectively assessed.
	(4) Every service provider shall submit to the Authority the performance report of their quality management plan, on yearly basis, covering the implementation of Six Sigma quality management practices and its impact on the Quality-of-Service provided by the service provider in respect of each Quality of Service parameter specified in these regulations.	SIDTM submits that an annual performance-report obligation is reasonable in principle but requests that the Authority prescribe a standard reporting template and format in advance, as Ofcom and ACMA do for their respective annual compliance submissions, so that service providers are not exposed to subjective audit interpretation of an undefined report format.	Prescribe a standard format/template for the yearly performance report at least three months before the first report is due, consistent with the advance-template practice followed by Ofcom and ACMA for annual regulatory submissions.
	(5) The Authority may, from time to time, through audit conducted either by its own officers or employees or through an agency appointed by it, verify and assess the performance of quality management plan.	SIDTM requests only that the regulation build in the same procedural safeguards those regulators typically apply – reasonable advance notice of an audit and confidentiality of	Insert a proviso requiring reasonable advance notice (e.g. 15 working days, except in cases of suspected non-compliance) before an audit is conducted, and confidentiality safeguards for commercially sensitive information gathered during the audit, consistent with standard

<table>
<tr><td></td><td></td><td>commercially sensitive network information obtained during the audit.</td><td>regulatory audit practice.</td></tr>
<tr><td>4</td><td>4. Quality of Service Parameters in respect of which compliance reports are to be submitted to the Authority.–</td><td>No comments</td><td>Not Applicable</td></tr>
<tr><td></td><td>(1) Every service provider providing access service (wireline) shall meet the benchmarks, to be measured as per the measurement methodology provided in Schedule-I, for each of the following QoS parameters, namely :–
<table>
<tr><th>S. No</th><th>Name of Parameter</th><th>Benchmark</th><th>Assessment Period</th></tr>
<tr><td colspan="4">I. Service Provisioning</td></tr>
<tr><td>(i)</td><td>Provision of a service within 7 working days of payment of demand note by the customer</td><td>≥ 98%</td><td>Quarterly</td></tr>
<tr><td colspan="4">II. Fault Repair</td></tr>
<tr><td>(ii)</td><td>Fault incidences (No. of faults per 100 subscribers/month)</td><td>≤ 5</td><td>Quarterly</td></tr>
<tr><td>(iii)</td><td>Fault repair by next working day</td><td>≥ 85%</td><td>Quarterly</td></tr>
<tr><td>(iv)</td><td>Fault repair within three working days</td><td>≥ 99%</td><td>Quarterly</td></tr>
<tr><td></td><td colspan="2">Rent rebate/ validity extension in case fault</td><td></td></tr>
</table></td><td>We suggest that the Regulation 4 benchmarks for access service (wireline) require recalibration against comparable international practice. Ofcom's fixed-line service standards and its Automatic Compensation Scheme benchmark repair at 2 full working days (materially longer than the proposed ≤10 hours MTTR and 3-working-day fault-repair benchmark here), while CRTC's quality-of-service indicators for Canadian carriers likewise use working-day-based repair benchmarks rather than calendar hours. India's proposed benchmarks are therefore already more consumer-favourable than these comparators; SIDTM's request is limited to precise definition of the measurement clock (from valid fault registration to verified restoration, excluding force-majeure and access-related delays) so that compliance can be fairly and consistently audited.</td><td>Define the fault-repair and MTTR measurement clock precisely (from valid fault registration/objective detection to verified restoration), excluding documented force-majeure and right-of-way/access delays, consistent with the working-day/working-hour basis used by Ofcom and CRTC. Review the POI congestion benchmark (≤0.5%, 90th percentile) against current network-planning norms and provide a reasonable measurement tolerance before it is used as a basis for financial disincentive.</td></tr>
</table>

		is repaired after three(3) working days: **For post-paid subscribers**: Proportional rent rebate for actual number of days, during which fault remains pending shall be credited in next bill. **For pre-paid subscribers**: The validity of subscribed tariff offering shall be increased for actual number of days during which fault remain pending.			On Point of Interconnection congestion, a ≤0.5% 90th-percentile benchmark is materially tighter than the congestion thresholds used in most internationally comparable interconnection regimes and should be reviewed against actual network planning norms, consistent with the position taken by other service providers that benchmarks should be evidence-based rather than aspirational.	
	(v)	Mean Time-To-Repair (MTTR)	≤ 10 hours	Quarterly		
	III. Point of Interconnection					
	(vi)	Point of Interconnection (POI) Congestion (90th percentile value)	≤ 0.5%	Quarterly		
5	**5. Duration of time of alert for the called party. -**				No comments	Not Applicable
	(1) The duration of time of alert for an incoming voice call, which is neither answered nor rejected by the called party, shall be sixty seconds for access service (wireline).				No comments	Not Applicable
	(2) The terminating network shall, on expiry of sixty seconds in case of access service (wireline), release the incoming voice call and transmit the call release message to the originating network: *Provided that* the originating network may release an unanswered call				No comments	Not Applicable

<table>
<tr><td></td><td colspan="5">after ninety seconds in case the call release message is not received from the terminating network.</td><td></td><td></td></tr>
<tr><td>6</td><td colspan="5">6. Quality of Service parameters in respect of which compliance reports are to be submitted to the Author. -</td><td>No comments</td><td>Not Applicable</td></tr>
<tr><td rowspan="5"></td><td colspan="5">(1) Every service provider providing access service (wireless) shall meet the benchmark, to be measured as per the measurement methodology provided in Schedule-I, for each of the following QoS parameters, namely:-</td><td rowspan="5">SIDTM's position on the Regulation 6(1) QoS parameter table, benchmarked against ACMA and Ofcom practice, is as follows. On geospatial coverage maps: ACMA's telco transparency rules (coverage-map and outage-register publication requirements in force since 2026) and Ofcom's 'Map Your Mobile' coverage tool both treat coverage maps as model-based and indicative, published against a defined update cycle and disclosed methodology with a stated confidence level, rather than a rigid accuracy figure with no tolerance for propagation-model variance. On significant network outages: the US FCC's Network Outage Reporting System instead uses a scale-weighted 'user-minutes' threshold (900,000 user-minutes, 30-minute minimum duration) with a tiered reporting timeline (notification within 120 minutes for safety-critical impact, initial report within 72 hours, final report within 30 days) rather than a single flat 24-hour deadline for</td><td rowspan="5">(i) Introduce a reasonable tolerance band (e.g. ±10%) for coverage-map accuracy, with a defined map-refresh cycle, consistent with ACMA's and Ofcom's coverage-tool practice.
(iv) Adopt a tiered outage-reporting framework (initial notification within 24 hours, detailed report within 3-7 days) instead of a single flat 24-hour deadline, aligned with the FCC/ACMA graduated model.
(xiv) Require publication of the median/typical speed (50th percentile) alongside the 80th-percentile compliance figure, assessed on a rolling quarterly average, consistent with Ofcom's typical-speed methodology.
(xv) Introduce the PRB-utilisation parameter on a report-only (non-penal) basis for at least 12 months before it is used as a basis for financial disincentives, consistent with the monitoring-led approach followed internationally for network slicing.</td></tr>
<tr><td>S.No</td><td>Name of Parameter</td><td>Benchmark</td><td>Assessment Period</td><td>Effective Date</td></tr>
<tr><td colspan="5">I. Network Availability</td></tr>
<tr><td>(i)</td><td>~~Availability of service wise geospatial coverage map on service provider's website for percentage of working cells~~
Accuracy of service wise geospatial coverage map published on service provider's website</td><td>~~≥ 99%~~
≥ 98%</td><td>Monthly</td><td>~~01.04.2025~~
01.10.2026</td></tr>
<tr><td>(iv)</td><td>Percentage of significant network outage ~~(services not available in a district for more than 4 hours)~~ reported to the Authority within 24 hrs of start of the outage
Note: Significant Network Outage is defined as an event where access service</td><td></td><td></td><td></td></tr>
</table>

		(wireless) in a district remains unavailable for a continuous period exceeding four (4) hours, or where more than ten percent (10%) of subscribers in the Licensed Service Area (LSA) experience complete loss of service for a continuous period exceeding four (4) hours. **~~Compensation~~ Rebate to the subscribers for significant network outages of more than 24 hrs:** **For post-paid subscribers registered in the district or affected post-paid subscribers, as applicable:** Proportional rent rebate, as per plan charges, for affected number of days shall be credited in next bill. **For the pre-paid subscribers registered in the district or affected pre-paid subscribers, as applicable:** The validity of subscribed tariff offering shall be increased by equal number of affected days.				every qualifying outage; Ofcom's Automatic Compensation Scheme similarly triggers compensation only after 2 full working days of continuous loss. On broadband speed: Ofcom publishes 'typical speed' as a median (50th-percentile), peak-time-weighted figure with the measurement basis disclosed, rather than mandating an 80th-percentile compliance floor for every tariff. On network slicing: We were not able to identify any comparable quantitative benchmark prescribed by ACMA or Ofcom at this stage of 5G slicing maturity; both regulators have so far taken a principles-based, monitoring-led approach to this emerging capability. These recalibrations are consistent with the position other service providers have taken that new QoS obligations should be proportionate, evidence-based and phased in for emerging technology.	
	IV. Broadband Service						
	(xiv)	Tariff offerings in which 80th percentile value of measured	~~80$_{th}$ percentile~~		~~01.04.2025~~ 01.10.2026		

		~~test samples for which~~ download and upload speed is ≥ offered typical download and upload speed for 4G/5G technology ~~in tariff offerings~~	100%	Monthly			
	V. Network Slicing						
	(xv)	Cells having daily PRB utilisation > 80% (in 5G network)	≤ 1%	Monthly	01.10.2026		
	(3) Every service provider, planning to create a new network slice in their 5G network, shall submit the details of proposed and existing network slice parameters, at least twenty one (21) days in advance to the Authority, clearly demonstrating the availability of sufficient capacity in the cell(s) which are part of different slices, in such manner and format as may be directed by the Authority, from time to time.					A mandatory 21-day advance-notice requirement for every new network slice is not mirrored under ACMA or Ofcom frameworks, which rely on ex-post monitoring rather than prior notice for new network configurations, and risks slowing the operational agility that network slicing is designed to enable for time-sensitive enterprise/URLLC use cases.	Reduce the prior-notice period to 7 working days for routine slice creation, reserving the 21-day period only for slices that materially reduce capacity available to existing general-purpose traffic, and permit post-facto reporting for slices created to meet emergency or time-critical enterprise requirements.
7	**7. Quality of Service parameter in respect of which compliance is to be monitored by the service provider and reported to the Authority. –**					No comments	Not Applicable
	(1) Every service provider providing access service (wireless) shall meet and monitor the benchmarks, to be measured as per the measurement methodology provided in Schedule-I, for each of the following QoS parameters, namely: –					'Silence Call Rate' (SCR) is an India-specific parameter; ACMA and Ofcom instead report 'call drop/failure rate' using precisely defined, 3GPP/ETSI-aligned, per-call KPI counting rules, and cross-validate operator-reported figures against independent crowdsourced/drive-test data (Ofcom's consumer mobile-experience research; ACMA's network-performance reporting). We support introduction of the SCR	We suggest that TRAI publishes a detailed, 3GPP-aligned measurement methodology for Silence Call Rate in Schedule-I: one established call containing one or more qualifying RTP silence gaps (e.g. 4 seconds) should count as ONE silence-call event, with call-hold/mute/DTX, expected media gaps and RTP-flow identification expressly addressed, consistent with the counting precision Ofcom and ACMA apply to their own call-quality KPIs.
	S.No	**Name of Parameter**	**Benchmark**	**Assessment Period**	**Effective Date**		
	(vii)	Silence Call Rate	≤ 1%	Monthly	01.10.2026		

<table>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td>benchmark in principle but submits that, without an equally precise, per-call numerator definition, the parameter is capable of inconsistent measurement across operators and non-reproducible audit outcomes.</td><td></td></tr>
<tr><td rowspan="2">9</td><td colspan="5">**9. Quality of Service Parameters for which compliance reports are to be submitted
to the Authority. –**</td><td>No comments</td><td>Not Applicable</td></tr>
<tr><td colspan="5">(1) Every Service Provider having Internet Service Authorization and providing broadband (wireline) service shall meet the benchmarks, to be measured as per the measurement methodology provided in **Schedule-I**, for each of the following QoS parameters, namely:–
<table>
<tr><th>S. No</th><th>Name of the Parameter</th><th>Benchmark</th><th>Assessment period</th></tr>
<tr><td colspan="4">**II. Broadband Service Performance**</td></tr>
<tr><td>(iv)</td><td>Tariff offerings in which 90th percentile value of measured ~~test samples for which~~ download and upload speed is ≥ offered typical download and upload speed ~~in tariff offerings~~</td><td>~~90th percentile~~ 100%</td><td>Quarterly</td></tr>
<tr><td>(x)</td><td>Mean Time-To-Repair (MTTR)</td><td>≤ 10 hours</td><td>Quarterly</td></tr>
<tr><td>(xi)</td><td>Percentage of significant network outage reported to the Authority within 24 hrs of start of the outage</td><td>100%</td><td>Quarterly</td></tr>
</table></td><td>SIDTM's proposed refinements to the broadband (wireline) QoS table are grounded in comparable international practice. Ofcom publishes 'typical speed' as a median, peak-time-weighted figure with the measurement basis disclosed, rather than a bare 90th-percentile pass/fail threshold; a defined measurement tolerance is necessary to avoid immaterial statistical variation being treated as non-compliance. On MTTR, Ofcom's Automatic Compensation Scheme benchmarks repair at 2 full working days (materially longer than the proposed ≤10 hours), so India's benchmark is already more consumer-favourable; SIDTM's request is that the MTTR 'clock' be defined precisely and that objectively documented force-majeure/access-related delays be excluded, consistent with how Ofcom's own compensation clock is defined and paused. On significant outage and the</td><td>(iv) Require minimum sample size, common measurement conditions, test-server methodology and transparent tariff grouping for the 90th-percentile speed benchmark, with a defined measurement tolerance, consistent with Ofcom's typical-speed disclosure practice.
(x) Define the MTTR clock from valid fault registration/objective detection to verified restoration, excluding documented force-majeure and access-related delays, consistent with Ofcom's compensation-clock definition.
(xi) Define the 20% material-degradation baseline against the declared typical speed applicable to the subscriber's plan/technology, and clarify treatment of overlapping outage events to prevent duplicate rebates for the same subscriber/event.</td></tr>
</table>

		Note: Significant Network Outage is defined as an event where broadband (wireline) service in a district remains unavailable for a continuous period exceeding four (4) hours, or where more than ten percent (10%) of subscribers in the Service Area experience complete loss of service or material degradation in service quality for a continuous period exceeding four (4) hours. Material degradation in service quality shall mean a reduction of twenty percent (20%) or more in the download or upload speed experienced by a subscriber vis-à-vis the declared typical download or upload speed.			20% material-degradation baseline, ACMA's outage-register rules and Ofcom's compensation rules both use clearly defined baselines and prevent duplicate counting of the same affected subscriber/event.	

		Rebate to the subscribers for significant network outages of more than 24 hrs: • **For post-paid subscribers registered in the district or affected post-paid subscribers, as applicable**: Proportional rent rebate, as per plan charges, for affected number of days shall be credited in next bill. • **For the pre-paid subscribers registered in the district or affected pre-paid subscribers, as applicable**: The validity of subscribed tariff offering shall be increased by equal number of affected days.				

<table>
<tr>
<td></td>
<td colspan="4">(2) Every service provider shall, in all its tariff offerings for broadband (wireline) service, indicate the typical download and upload speed generally available to the consumers.
Explanation: For the purposes of this regulation, broadband (wireline) service shall include all ~~fixed wireless and~~ wireline medium including copper, fibre, cables etc.</td>
<td>Ofcom's Connected Nations reporting and ACMA's fixed-broadband framework both treat Fixed Wireless Access (FWA) as part of the technology-neutral 'fixed broadband' service category for coverage, speed and consumer-protection purposes. We agree with the suggestion that broadband includes both wireline and Fixed wireless . This will ensure that consumers of this increasingly common last-mile technology do not fall into a regulatory gap between the wireless and wireline frameworks.</td>
<td>We suggest that TRAI adds an express clarification that Fixed Wireless Access (FWA) is covered under the broadband QoS framework for the purposes of this Regulation, consistent with the technology-neutral treatment of FWA under Ofcom's and ACMA's fixed-broadband frameworks.</td>
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<td rowspan="5">**10**</td>
<td colspan="4">**10. Quality of Service Parameters in respect of which compliance reports are to be submitted to the Authority.–**</td>
<td>No comments</td>
<td>Not Applicable</td>
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<td colspan="4">(1) Every service provider providing access service (wireline) or access service (wireless) or broadband (wireline) service, as applicable, shall meet the benchmarks, to be measured as per the measurement methodology provided in **Schedule-I**, for each of the following QoS parameters, namely:–</td>
<td rowspan="4">ACMA's Telecommunications (Consumer Complaints Handling) Industry Standard requires immediate acknowledgement for complaints made in person/by phone, 2 working days' acknowledgement for written complaints, resolution within 2 working days for urgent complaints, and, for non-urgent complaints, a proposed fix within 15 working days followed by implementation within a further 10 working days – a graduated urgent/non-urgent model, not a single flat period for every complaint. A blanket 2-week resolution benchmark for all</td>
<td rowspan="4">Introduction of 2-week benchmark for ordinary billing/charging complaints, but introduce a defined category of complex complaints (e.g. third-party reconciliation, fraud investigation, roaming/usage disputes) with a longer, specified resolution period and mandatory interim updates, mirroring the urgent/non-urgent distinction used in ACMA's complaint-handling standard, so the 100% benchmark does not force premature closure of genuinely complex disputes.</td>
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<tr>
<td>**S. No.**</td>
<td>**Name of Parameter**</td>
<td>**Benchmark**</td>
<td>**Assessment period**</td>
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<tr>
<td colspan="4">**II. Customer Service**</td>
</tr>
<tr>
<td>(ii)</td>
<td>Resolution of billing/ charging complaints within ~~four weeks~~ one week</td>
<td>100%</td>
<td>• Access service (wireline) and broadband (wireline) service – Quarterly
• Access service (wireless) -</td>
</tr>
</table>

	○ Quarterly w.e.f. 01.10.2024 ○ Monthly w.e.f. 01.04.2025 ~~*Provided that* the service provider providing both access service (wireline) and broadband (wireline) service shall meet the benchmarks for both the services on aggregated basis.~~ **Explanation:** For the purposes of this regulation, broadband (wireline) service shall include all ~~fixed wireless and~~ wireline medium including copper, fibre, cables etc.	billing/charging complaints, without differentiating complexity, is materially stricter than this comparator and does not allow for cases genuinely requiring third-party reconciliation, fraud investigation or roaming/usage disputes. This concern mirrors the position taken by other service providers that complaint-resolution timelines must distinguish routine from complex cases to avoid forcing premature closures.	
15	**15. Publication.**– (1) The Authority may publish, in such manner and in such format, as may be decided by the Authority from time to time– (e) Service wise Quality of Experience Score (QoES) of service providers based on various parameters of network performance, consumer service, and consumer perception collected through multiple sources;	Ofcom's comparative service-quality publications explicitly scope which services and technologies are covered (fixed broadband, mobile, and separately fixed wireless/FWA data are each identified), so that consumers are not misled by a coverage gap. Regulation 15(1)(e) as drafted does not clarify whether FWA subscribers are captured within the QoES framework. We suggest that sub-regulation (1)(e) be re-drafted for this reason.	Amend sub-regulation (1)(e) to expressly state the services covered by the Quality of Experience Score, including FWA, consistent with the explicit technology-scoping followed by Ofcom in its comparative service-quality publications.
	(2) Every service provider providing access service (wireless) shall publish on its website the service wise geospatial coverage maps in such a manner and format, as broadly specified under Schedule III and as may be directed by the Authority from	ACMA's 2026 telco transparency rules (coverage-map and outage-register publication obligations) and Ofcom's coverage-checker tools both require	We suggest that Schedule III publications, and any published QoES, be accompanied by disclosure of the prediction/scoring methodology, data sources, sampling approach

	time to time, for the geographical areas where wireless voice or wireless broadband service is available for subscription ~~by consumers~~.	the underlying prediction methodology, update cycle and confidence level to be disclosed alongside published coverage/quality data. SIDTM supports publication of the geospatial coverage maps under Schedule III, and of the QoES referred to at Regulation 15(1)(e) above, conditional on a comparable level of methodology disclosure being mandated so that published data is independently verifiable and comparable across service providers.	and update cycle, consistent with the methodology-disclosure practice followed by ACMA and Ofcom.
16	**16. Consequences for the failure of service providers to meet the benchmark of Quality of Service parameters.-**	No comments	Not Applicable
	(1) If a service provider fails to meet the benchmark of QoS parameters specified under sub regulation (1) of regulation 4 or sub-regulation (1) of regulation 6 or sub-regulation (1) of regulation 9 or sub-regulation (1) of regulation 10, it shall, without prejudice to the terms and conditions of its license, or the Act or rules or regulations or orders made, or directions issued, thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees one lakh per benchmark per compliance report for the first contravention as the Authority may, by order, direct: *Provided that* if the service provider fails to meet the benchmark of the same parameter consecutively in two or more subsequent months or quarters, as applicable, he shall be liable to pay, by way of financial disincentives, an amount not exceeding rupees two lakhs for the second consecutive contravention and not exceeding rupees three lakhs for each consecutive contravention occurring thereafter:	The 'reasonable opportunity to represent' safeguard already built into Regulation 16 (and mirrored in 17A) is consistent with ACMA's practice of issuing a formal notice and allowing representations before an infringement notice is confirmed, and with Ofcom's provisional-decision-then-final-decision process under its Enforcement Guidelines. SIDTM submits, however, that the provision does not expressly prevent the same underlying event from attracting multiple, overlapping disincentives merely because it is capable of being characterised under more than one QoS parameter or regulation – a stacking of penalties that both ACMA	Insert an express anti-duplication safeguard: the same underlying event shall not attract multiple financial disincentives merely because it affects related reports/parameters, unless the contraventions are independently established, and the order shall identify the specific benchmark, period, evidence and causal basis relied upon.

		and Ofcom generally avoid for a single underlying contravention, and which other service providers have also flagged as a proportionality concern with the financial-disincentive framework more broadly.	
	~~(2) If the compliance report furnished by the service provider under regulation 13 is found to be false, it shall, without prejudice to the terms and conditions of its license or authorization, or the Act or rules or regulations or orders made, or, directions issued thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees two lakhs per benchmark per compliance report, for which such false report has been furnished, for the first contravention as the Authority may, by order, direct:~~ ~~*Provided that* if the compliance report furnished by the service provider under regulation 13 is found to be false for the same parameter consecutively in two or more subsequent months or quarters, as applicable, the service provider shall be liable to pay, by way of financial disincentives, an amount not exceeding rupees five lakhs for the second consecutive false reporting and not exceeding rupees ten lakhs for each consecutive false reporting occurring thereafter.~~	Consolidating the false-reporting regime into a single provision (Regulation 16A) with one clearly defined materiality threshold, rather than a bare 'false reporting' standard duplicated across provisions, mirrors the general regulatory practice of ACMA and Ofcom, both of which apply defined materiality or statistical-tolerance thresholds reflecting genuine measurement, sampling or reconciliation variance before treating a reporting discrepancy as a compliance breach.	Consolidate the false-reporting provisions into Regulation 16A only, with the materiality threshold defined therein applying uniformly, and delete the overlapping false-reporting language from Regulation 16 to avoid duplication.
	~~(3) No order for payment of any amount by way of financial disincentive shall be made by the Authority unless the service provider has been given a reasonable opportunity of representing against the contravention of the regulation observed by the Authority.~~	No comments	Not Applicable
	~~(4) The amount payable by way of financial disincentive under these regulations shall be remitted to such head of account as may be specified by the Authority.~~	No comments	Not Applicable
	16A. Consequences for the failure of service providers to submit correct compliance	No comments	Not Applicable

	reports. -		
	(1) If the compliance report furnished by the service provider under regulation 13 is found to be false, it shall, without prejudice to the terms and conditions of its license or authorization, or the Act or rules or regulations or orders made, or, directions issued thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees two lakhs per benchmark per compliance report, for which such false report has been furnished, for the first contravention as the Authority may, by order, direct: *Provided that* if the compliance report furnished by the service provider under regulation 13 is found to be false for the same parameter consecutively in two or more months or quarters, as applicable, the service provider shall be liable to pay, by way of financial disincentives, an amount not exceeding rupees five lakhs for the second consecutive false reporting and not exceeding rupees ten lakhs for each consecutive false reporting occurring thereafter. **Explanation:** If, upon examination of the information in the compliance report or in any other report pertaining to the performance of QoS parameters furnished by the service provider, the Authority finds that there is a mismatch in the data or value of any parameter reported by the service provider and the performance calculated by the Authority from value or the data given by the service provider in its report or observed during the audit, to the extent that absolute value of difference exceeds 1% of the prescribed benchmark, then such events shall also be considered as false reporting.	SIDTM welcomes the defined materiality threshold (mismatch exceeding 1% of the prescribed benchmark) to distinguish genuine false reporting from measurement variance, which is sound practice consistent with the tolerance/confidence-interval approach Ofcom applies to its own measurement publications. A flat 1% tolerance, however, may be too narrow for parameters that are inherently more volatile to measure (e.g. crowdsourced speed or coverage data) as compared to more deterministic parameters (e.g. billing/call-centre metrics), where international regulators typically apply wider statistical confidence bands.	Prescribe a parameter-specific materiality/tolerance band, calibrated to the inherent measurement variability of each QoS parameter (as reflected in Schedule-I's methodology), rather than a single flat 1% threshold applied uniformly to all parameters.
	16B. Consequences for the failure of service providers to comply with any other provisions of the regulations.-	No comments	Not Applicable
	(1) If a service provider fails to comply with any of the provisions of the regulations excluding provision mentioned in sub-regulation (1) of regulation (7), it shall,	A uniform financial disincentive of up to Rs. 8 lakhs (escalating to Rs. 10 lakhs) per instance of non-compliance	We suggest that this clause should clarify that the quantum of financial disincentive under this residual provision shall be proportionate to

	without prejudice to the terms and conditions of its license, or the Act or rules or regulations or orders made, or directions issued, thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees five lakh per instance of such non-compliance as the Authority may, by order, direct: *Provided that* if the service provider fails to comply the same provision of the regulations consecutively in two or more subsequent months or quarters, as applicable, he shall be liable to pay, by way of financial disincentives, an amount not exceeding rupees eight lakhs for the second consecutive contravention and not exceeding rupees ten lakhs for each consecutive contravention occurring thereafter: *Provided that* this regulation shall not be applicable if any non-compliance attracts the provision of regulation 16 or regulation 16A or regulation 17 or regulation 18.	with 'any other provision' is a very broadly defined clause. Ofcom's tiered penalty guidelines under the Communications Act, and ACMA's use of infringement notices calibrated to the nature/scale of the contravention, both tie penalty quantum to the seriousness and consumer impact of the specific breach rather than applying a uniform residual ceiling to every other obligation regardless of materiality a proportionality concern also raised by other service providers in respect of financial-disincentive frameworks generally.	the nature, scale and consumer impact of the specific non-compliance, with illustrative guidelines to be issued by the Authority, consistent with the proportionality principle followed by ACMA and Ofcom.
17	**17. Consequences for failure of the service providers to submit compliance reports.-**	No comments	Not Applicable
	(1) If a service provider contravenes the provisions of regulation 13, it shall, without prejudice to the terms and conditions of its license or authorization, or the provisions of the Act or rules or regulations or orders made, or, directions issued, thereunder, be liable to pay an amount, by way of financial disincentive, not exceeding rupees five thousand per report for every day during which the default continues, ~~subject to the maximum amount of rupees ten lakhs~~, as the Authority may, by order, direct: ~~*Provided that* no order for payment of any amount by way of financial disincentive shall be made by the Authority unless the service provider has been given a reasonable opportunity of representing against the contravention of the regulation observed by the Authority.~~ *Provided* that if service provider fails to submit the compliance report within a period of three (3) months from due date then be liable to pay an amount,	The proposed penalty of Rs. 5,000 per day of delay in submitting a compliance report (up to Rs. 10 lakhs, with a further flat Rs. 10 lakh penalty if the delay exceeds 3 months) is materially more severe than comparable regimes: the FCC's NORS framework relies primarily on tiered notification deadlines (120 minutes/72 hours/30 days) backed by enforcement action only for persistent or wilful non-filing, rather than an automatic escalating daily fine for every reporting delay irrespective of cause (e.g. a genuine	We suggest that the clause should provide a short cure/grace period (e.g. 3-5 working days) before the daily financial disincentive begins to accrue, to allow for genuine technical or connectivity failures in report submission, consistent with the tiered-deadline approach followed under the FCC's outage reporting framework.

	by way of financial disincentive, not exceeding rupees ten lakhs per report.	IT/systems failure).	
	~~(2) The amount payable by way of financial disincentive under these regulations shall be remitted to such head of account as may be specified by the Authority.~~	No comments	Not Applicable
	17A. Common provisions for financial disincentives.-	No comments	Not Applicable
	(1) No order for payment of any amount by way of financial disincentive, under regulation 16 or regulation 16A or regulation 16B or regulation 17, shall be made by the Authority unless the service provider has been given a reasonable opportunity of representing against the contravention of the regulation observed by the Authority.	No comments	Not Applicable
	(2) The amount payable by way of financial disincentive under regulation 16 or regulation 16A or regulation 16B or regulation 17 shall be remitted to such head of account as may be specified by the Authority.	No comments	Not Applicable
18	**18. Consequences for the failure of the service providers to pay financial disincentive within the stipulated time.-**	No comments	Not Applicable
	(1) If a service provider fails to make payment of financial disincentive under regulation 16 or regulation 16A or regulation 16B or regulation 17 within a period of twenty one days from the date of issue of order for payment of financial disincentive or as stipulated in the order for payment of financial disincentive, it shall be liable to pay interest at a rate which will be 2% above the one year Marginal Cost of Lending Rate (MCLR) of State Bank of India existing as on the beginning of the Financial Year (namely 1st April) in which last day of the stipulated period falls and such interest shall be compounded annually. **Explanation:** For the purposes of this regulation, a part of the month shall be reckoned as a full month for the purpose of calculation of interest and a month shall be reckoned as an English calendar month.	SIDTM welcomes the fact that consequences for delayed payment of financial disincentive are structured as compounded interest (MCLR + 2%) rather than a further escalating monetary penalty, which is broadly consistent with international practice for delayed regulatory payments (interest-based surcharge regimes used by several utility and telecom regulators for overdue statutory dues, as opposed to additional flat penalties). SIDTM notes, however, that a 21-day payment window coupled with annual compounding from the first	Extend the payment window from 21 days to 30 days (aligned with the remittance timelines proposed elsewhere in these regulations) and compute interest on a per-day (rather than part-month-as-full-month) basis for the first month of default, so that the effective cost of a short delay remains proportionate.

		day of default, and the treatment of 'a part of the month as a full month', can produce a disproportionately steep effective interest cost for short delays.	