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TRAI/FY23-24/28
Dated: 31.07.2023

To,
Shri Sanjeev Kumar Sharma,
Advisor (Broadband and Policy Analysis)
Telecom Regulatory Authority of India,
Mahanagar Door Sanchar Bhawan,
JawaharLal Nehru Marg,
New Delhi – 110 002.

Subject: Response to Consultation Paper on "Encouraging Innovative Technologies, Services, Use Cases, and Business Models through Regulatory Sandbox in Digital Communication Sector"

Dear Sir,

This is in reference to TRAI's Consultation Paper on "Encouraging Innovative Technologies, Services, Use Cases, and Business Models through Regulatory Sandbox in Digital Communication Sector"" dated 19.06.2023 (CP No. 9/2023).

In this regard, please find enclosed our response for your kind consideration.

Thanking You,

Yours' Sincerely,
For Bharti Airtel Limited

Rahul Vatts
Chief Regulatory Officer

Encl: a.a

Airtel Comments to the TRAI Consultation Paper (CP) on

Encouraging Innovative Technologies, Services, Use Cases, and Business Models through

Regulatory Sandbox in Digital Communication Sector

Preamble:

Airtel thanks the Authority for allowing it the opportunity to provide inputs to the Consultation Paper (CP) on "*Encouraging Innovative Technologies, Services, Use Cases and Business Models through Regulatory Sandbox in Digital Communication Sector*".

Regulators are increasingly looking to incorporate new and agile regulatory tools to create a dynamic and evidence-based regulatory environment that will allow them to test new products, services and technologies under the existing regulatory framework across varied sectors. Indeed, from the technological and engineering perspective, the use of innovation testbeds is widely prevalent.

The concept of the Regulatory Sandbox ("RS"), however, is recent, both in terms of the formulation and implementation of policies as well as the initiatives taken by regulators in various sectors. **The Sandbox is used more ubiquitously in the financial sector than any other similarly regulated sector, mainly because of the aim of policymakers to increase financial inclusion through innovative solutions.** In fact, globally, the FinTech sector uses such Sandboxes to help understand the emerging trends and risks associated with the launch of new financial products and instruments.

However, the usage of RS in the telecom sector, a sector different from the FinTech sector in terms of scale, technical and regulatory aspects, is not widespread at all. Only a few countries have established the RS framework in their telecom sector for formulating or amending regulations/policies pertaining to spectrum as well as emerging technologies like IoT, AR, VR, Vehicular networks, etc.

One possible reason for this restraint **when it comes to RS adoption in telecom could also be attributed to the fact that telecom connectivity today is widespread and applications, services and technologies (fixed, terrestrial, and now, space) have continued to innovate and evolve on their own. This is quite unlike the financial sector that, for many decades, has remained mired in archaic banking and lending ways until technology and digitalisation have recently pushed the sector into shifting focus and introducing some change.**

In India, too, more than 95% of the population has access to the telecom network and services. And while the RS has generated interest among regulators and policymakers in India, it is just one

tool among a whole plethora available to the regulator. Not only that, but there have also been successful alternatives that have helped enable the deployment of advanced technologies such as the trial and experimental licenses that were issued by DoT. TSPs were able to conduct the testing of several 5G use cases using these licenses and the spectrum that was issued before the commercial launch of 5G services.

Therefore, it is fair to say that the framework of RS in the telecom sector continues to be nascent. This being the case, it is Airtel's submission that RS is not critical considering that we have **other established alternatives such as innovative testbeds in the Centres of Excellence (CoE),** trial environments, experimentation platforms etc. Institutions such as the **Telecom Engineering Centre (TEC) through its working groups, work collaboratively** with various entities in the technology development and standardisation domains. Similarly, the Government's aim of **establishing 100 5G testbeds will also turn out to be a more meaningful approach** to test and trial technological solutions than a RS based one. Importantly, RS should also not be conflated with these entities, and hence before prescribing an RS, all these entities should be holistically mapped, including the funding they receive – and – only after that any other specific reasons and aspects that only a RS approach can fulfil, should be considered and defined.

Since RS is a very new concept in the Indian telecom sector, this may bring with it various unforeseen challenges and associated risks including limited technical capacity and expertise for operating the RS as well as the risk of competitive concerns in the market because of the waiver of certain regulations. **The risks could also lead to adverse outcomes for the customer.** Therefore, it is very important that these risks are constantly monitored right from the initial stages of conceptualisation and operationalisation to the final stage of exiting the RS.

It is worthwhile to note that in various previous consultations conducted by TRAI, the comments from the industry also highlighted the disadvantages of RS in the sector. The TRAI itself recognised in its previous recommendations that there was no need for a framework for setting up RS. It is only recently that TRAI has recommended that an RS be set up for the specific testing of AI-based solutions.

It is understood that the discussion of RS is centred around the needs of emerging and advanced technologies which are essential when it comes to bridging the digital divide and promoting socio-economic welfare, as deliberated in this CP.

Airtel Comments to the TRAI Consultation Paper (CP) on

Encouraging Innovative Technologies, Services, Use Cases, and Business Models through

Regulatory Sandbox in Digital Communication Sector

As such, **Airtel believes that although RS in the telecom sector could be useful in some cases, there are opportunities existing in the ecosystem to test such services and products that do not require an RS to be created. However,** if the Authority still believes that an RS is required **in the telecom sector, then** there should be certain guiding principles and guardrails that must be created to ensure that it functions smoothly and efficiently.

For instance, participation in the sandbox should be totally mutual and not mandatory on any party. The sharing of data sets in the RS should be left to the TSP concerned based on its assessment of risks. **The TSP cannot and should not be forced to share such sensitive data sets/APIs. Since setting up an RS means involving a commercial network and live data sets/ resources mean the involvement of costs, the principle of cost compensation should be part of the framework.**

Thus, not only should **the processes pertaining to the RS be fair, transparent and non-discriminatory** but the corresponding framework should also **have provisions for competition-sensitive innovations since the RS will mostly cater to the testing of emerging technologies and business solutions.** Another fundamental objective of the **RS framework should be guided by and embedded into by Hon'ble PM's vision of** *less government more governance*. In other words, the temptation to create multiple administrative oversight mechanisms should be avoided. If two collaborating parties are working on an RS testing / trial, they should be the primary and, to the extent possible, only relevant stakeholders in the sandboxing process.

RS should not become a mechanism to intervene pre or post sandboxing or commercial deployments. TSPs should be duly represented in the RS and the latter should be modelled in a modular way in some defined working groups/committees. It should not be created as a regular government / bureaucratic set-up, rather **everyone from the TSP, Regulator and licensor should be part of it** and come together based on needs, applications, etc.

Needless to state that TSPs doing testing, proof of concept (POC) trials of new technologies, products and services in their own network on their own and/or in partnership with various entities does not come under the RS sandbox framework in any case.

Airtel Comments to the TRAI Consultation Paper (CP) on

Encouraging Innovative Technologies, Services, Use Cases, and Business Models through Regulatory Sandbox in Digital Communication Sector

Summary:

The key submissions of Airtel regarding this CP are summarised below:

- The Regulatory Sandbox (RS) should not be a mandatory obligation for the licensed Service Providers (LSP). The LSPs should be allowed to enter the Regulatory Sandbox depending on their own business use cases and commercial interests.

- There should be provisions for financial assistance from the government in the form of budgetary support / grant for setting up and operating the Regulatory Sandbox for various commercial products and solutions.

- The Regulatory Sandbox (RS) should be operated only by licensed Service Providers (LSPs) or jointly by licensed Service Providers and other entities.

- The operation of the Regulatory Sandbox (RS) should be on a non-protection and non-interference basis. If the RS interferes with or negatively affects the operation of any licensed Service Providers (LSPs), it should be immediately shut down.

- There should be adequate provisions of privacy and security from the perspectives of both the network and information to protect customer interests.

- The framework of RS should be kept simple, modular, and effective and it should not create unnecessary layers for administrative oversights and compliances etc.

- The RS should be set-up as an Advisory Committee and not as a formal government body or department. It should be modular, with equal participation from the Regulator, the Licensor, and the TSPs. It should work based on needs, applications received and assessments of applications. The experts should gather whenever a decision on or review of a proposal needs to be taken.

- TSPs should be part of the assessment / evaluation committees.

In the following sections, Airtel now proceeds to its Section-wise response on the draft framework for RS that TRAI has included as Annexure-I in the CP.

4

Airtel Comments to the TRAI Consultation Paper (CP) on

Encouraging Innovative Technologies, Services, Use Cases, and Business Models through

Regulatory Sandbox in Digital Communication Sector

THE REGULATORY SANDBOX

Our views are provided in the Preamble and Summary section.

OBJECTIVES AND SCOPE

The Regulatory Sandbox (RS) should only be used for the purpose of testing/ R&D/ Regulatory Impact Analysis (RIA). No commercial usage or scaling-up of the service provided by licensed Service Providers (LSPs) in the RS for the purpose of said testing should be allowed during the RS validity period.

ELIGIBILITY

- **Participation:**
  Participation in the RS should not be coercive or mandatory. Rather, awareness and incentives should be provided to the industry stakeholders for taking part in the RS.

  The RS should be set up and operationalised only by Indian LSPs for their business models and use cases. If any other entity wants to participate in RS for testing their products or solutions, they should be mandated to enter an agreement with an Indian LSP and only then should they be allowed to jointly apply for the RS.

- **Commercialisation:**
  Commercialisation of a product or service should be left to mutual commercial negotiations between Principal Applicants (LSPs) and Applicants (other entities). If only an LSP or LSPs are participating in the RS, the commercialisation should be left to the business use-cases of the LSP or LSPs. Commercialisation post successful demonstration in RS should not be linked to the RS.

ESSENTIAL CONDITIONS TO BE FULFILLED BY PRINCIPAL APPLICANT AND APPLICANT;

SUPPORTING DOCUMENTS REQUIRED TO BE SUBMITTED WITH APPLICATION;

APPLICATION EVALUATION CRITERIA; and,

Airtel Comments to the TRAI Consultation Paper (CP) on

Encouraging Innovative Technologies, Services, Use Cases, and Business Models through

Regulatory Sandbox in Digital Communication Sector

REVOCATION OF PERMISSION

- **Equipment:**
The DoT had issued 5G trial licenses to enable telecom players to conduct experiments on a radiating or non-radiating basis before the commercial launch of 5G base stations. As the RS-based testing will be conducted on a technologically limited and restricted basis, the specifications and conditions prescribed therein should inform the thresholds particular to the technical requirements of the Sandbox, **e.g., for one particular project a maximum of up to 30 BTSs/eNodeBs/gNodeBs (cumulative) and 500 UEs should be permitted per LSA.**

    However, the amount of optical fiber cables to be laid, the data center capacity to be employed and the cable landing station to be used, etc. should be decided on a case-by-case basis by DoT/TRAI.

    Imported or indigenous equipment procured by only Indian LSPs should be permitted to be used. The equipment may be procured strictly adhering to parameters as per the application. The entities participating in the RS should not be allowed to access live systems including APIs of any LSPs as that may prove disastrous for business cases of the LSP and compromise the privacy of customers under a relaxed regulatory environment. The decision to allow or deny such APIs should be left to the assessment, wisdom and discretion of the TSP.

- **Spectrum:**
The application should clearly indicate the licensed frequency band/spectrum envisaged to be used at the time of testing. In case any entity intends to use the frequencies already allocated to an LSP, the requirement should be clearly communicated to the LSP and the decision should depend purely on the discretion of that LSP.

    In general, unlicensed spectrum use should not be encouraged under the RS. However, if there is a compelling use case which should get screened at application stage, then unlicensed, unallocated or vacant spectrum bands could be allowed to be used for testing with an undertaking from the entities involved that the eligible spectrum be withdrawn at any point of time in case interference and negative effects are observed or reported by LSPs or if the Government wants to allocate the spectrum for commercial usage. The approval given for such a spectrum should stand terminated if it is allocated via auction or other methodologies for commercial usage. Further, the spectrum allotted for RS testing should automatically stand expired at the end of the pre-approved trial period.

Airtel Comments to the TRAI Consultation Paper (CP) on

Encouraging Innovative Technologies, Services, Use Cases, and Business Models through Regulatory Sandbox in Digital Communication Sector

- **Fees:**
  Fees should only be charged towards processing the application and granting approval to the participants. **The fees should be kept at INR 50,000/-.** This amount is reasonable and desirable **to encourage and create serious and committed activities** that have potential for commercial deployment/use. In any case, normal trials, testing can always be done under other modes of 5G test labs, TEC, COEs, outside of RS framework.

- **Permissions:**
  All the necessary permissions needed to set up the systems for testing/R&D purposes should be granted automatically for the RS by the Government. If any dispute arises on this front, it should be the responsibility of DoT/TRAI to coordinate with other ministries and local governments so that the test procedures can be completed within the set timelines and within a conducive environment.

- **Import Permission:**
  The imported equipment should not be for commercial use/ sale during the trial period.

  A self-declaration/ undertaking of the importing Indian entity, as permitted in the 5G trial licenses, along with the approval of RS application from DoT/TRAI, may be treated sufficient.

- **Interference & Protection:**
  The systems set up for the purposes of the RS should not affect or interfere with the live operations of licensed TSPs. **If any such event occurs, the project should be immediately shut down by DoT/TRAI.** The RS should be operated solely on a non-interference and non-protection basis, along the lines of the 5G trial licenses.

  During the trials, impact of interference of or on, as applicable, Wirelines, IMT services or Satellite-based services in currently allocated frequency bands should be studied by the participants in coordination with relevant stakeholders.

- **Geographical restrictions:**
  The area in which the project will be located (indoor/a building/a campus, etc.) should be submitted as part of the application and DoT/TRAI should grant approval on a case-by-case basis depending on the location and state of systems of LSPs as well as public and customer interests.

Airtel Comments to the TRAI Consultation Paper (CP) on

Encouraging Innovative Technologies, Services, Use Cases, and Business Models through

Regulatory Sandbox in Digital Communication Sector

- **<u>Privacy and Security of the RS:</u>**
  The **participants should ensure that the Regulatory Sandbox network is isolated, safe and secure from all vulnerabilities and risks in order to protect network and data security as well as customer privacy.** The data generated during such testing should be stored and disposed of in a secure manner.

  Prior consent of customers of LSPs should be taken by the concerned LSP for its product or solution under test if such a need arises for any use case.

  Sharing the data generated during the testing period will be at the sole discretion of the LSP(s), as it will be a proprietary resource of the LSP(s), in compliance with the relevant licensing conditions and regulations. In the relevant cases, the extant rules pertaining to Intellectual Property Rights (IPR) should apply.

  Infrastructure for lawful interception and monitoring of the LEAs during the testing period, if required, should be provided to the LEAs, adhering to the existing guidelines.

APPLICATION AND APPROVAL PROCESS

The applications for RS should only be made jointly with an LSP. An individual LSP or a group of LSPs can apply independently. The telecom resources provided by the TSPs for setting up and operationalising the RS, should be negotiated on commercial basis between the parties.

The RS Advisory Committee (consisting of DoT, TRAI and TSPs) must undertake Regulatory Impact Analysis (RIA), with the view to ensure that the regulations have a positive economic and social impact with the understanding of the telecom sector in terms of economic verticals and address digitisation from a transversal and transformational standpoint.

The applying entity(ies) may need to show that:
- There exists a regulatory barrier which prevents deployment of the service/product to scale up or deployment of a genuinely innovative solution.
- A significantly important solution/ product/ service is proposed for which relevant regulation is required but absent.
- Either a different technology is gainfully applied, or the same technology is being applied in a more effective and efficient manner.
- The test and boundary conditions for the RS can be meaningfully executed while protecting consumers' privacy at the same time.

WAIVERS OR MODIFICATIONS TO RULES

There should be no relaxation of the licensing conditions, regulations, guidelines, etc. pertaining to security conditions including data protection, privacy, network and Information security as well as KYC requirements.

VALIDITY PERIOD

As the RS will be operated on a restricted basis for trials involving the current regulatory frameworks, we are of the opinion that **a maximum validity period of 6 months should be sufficient.**

COMPLETION OF THE RS TESTING AND REPORTING

An acceptable exit and transition strategy should be properly defined in case the proposed telecom product/solution has completed all requisite tests required for the planned RS and has to be discontinued. **Any continuation of deployment on a bigger scale should only be allowed after exiting the RS.**

This should be an automatic process once the maximum duration within the RS lifecycle is achieved and is probably the ideal scenario for most participants. Further criteria can be attributed to the fulfilment of any outstanding requirement to customers/ regulator.

At this stage, **the participant should be required to submit the final report to the Advisory Committee consisting of the Regulator, TSPs and licensor.** The Committee having reviewed the reports and insights gathered, should consider if any amendments are required in the existing regulatory regime or the requirement of new regulatory regimes based on evidence accumulated through the testing phases in the complete RS lifecycle, as the regulator needs to ensure that post-RS, an enabling regulatory environment is present for that particular product/solution before commercial launch of the same.

However, **launching the product or solution commercially should be left to the discretion of the LSP or group of LSPs and this should have no linkage with the RS or its process/approval success/failure of a product/service.**

Presence of an agreed upon exit plan (between the participants and the Advisory Committee consisting of TSPs, DoT and TRAI) test will produce:

- Main outcomes of the test, KPIs, comparative outcome analysis.
- Customer feedback, complaints, concerns, and challenges during the testing period.
- Measures taken to overcome the challenges.
- A detailed description of the technology and network limitations, consumer protection and risk management frameworks.
- A summary of recommendations and findings for the regulator about the testing experience.

OVERSIGHT AND GOVERNANCE BODY

Airtel is of the opinion that **there is no need for separate authority and/or body** for the supervision and coordination of the activities related to RS.

The **structure of RS should be simple, modular, non-bureaucratic and non-governmental in nature. There should be a governing Advisory Committee that should have a limited and equal number of representatives from the TSPs, Regulator and Licensor.** The advisory committee should be aligned to clear, concise objectives of the RS.

The **mode of working of the RS Advisory Committee should be modular,** i.e., based on the need, applications received and strength of applications and assessment thereof. A minimum of one meeting per quarter should be held, and more than that can be decided upon by the number of applications.

RS should not become a tool for any intervention, compliance or reporting purpose, rather it should be strictly limited to the purpose of trialing a unique concept. It should close as soon as it is tested, and the report submitted. Any subsequent follow-ups on reports, learnings, queries, etc. should be on a voluntary and non-compliance basis.

As the RS will be set up and operationalised by an LSP, who has sufficient expertise and experience in the area, there is no need for periodic independent monitoring by DoT/TRAI. Moreover, at various stages of the RS lifecycle for a particular product or solution, an intimation to the Advisory Committee by the entities should be deemed sufficient, rather than a rigorous approval process being held at each and every stage of the sandbox.

The RS must work within a guideline-based governance approach.

However, it should proceed with caution. **Risk assessment, monitoring and evaluation will be key in early or first-to-market innovations since the potential risks can be difficult to predict irrespective of extensive safeguards to manage it better in the market.**

FUNDING OF INNOVATION FOR INCLUSIVE SOCIETAL ADVANCEMENT AND GROWTH OF ECONOMY

Since Airtel proposes creating it as a non-government Advisory Committee, there is no need for any compensation to any Committee member of the RS.

However, since there will be costs involved in resources or trials on the RS applicants / participating entities, Airtel wholeheartedly agrees with the suggestion of the Authority to support innovative products or solutions which have the potential to bridge the digital divide and bring socio-economic development.

For various commercial products and solutions yet to be launched in market, **there should be a provision of financial assistance through Government grants / budgetary support** in order to facilitate the setting up and operationalisation of the RS, based on its market viability, customer interests and potential to improve the digital landscape of India.

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