



भारतीय दूरसंचार विनियामक प्राधिकरण
Telecom Regulatory Authority of India



Recommendations on

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

*(Response to the back reference dated 19th March 2025 received from DoT
on the TRAI's recommendations dated 12th April 2024)*

New Delhi, India
25th April 2025

Tower F, NBCC World Trade Centre, Nauroji Nagar, New Delhi- 110029

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CHAPTER I: INTRODUCTION AND BACKGROUND

A. DoT's Reference

- 1.1 The Department of Telecommunications (DoT), Ministry of Communications, Government of India, through its letter No. 20-405/2013-AS-I Vol. V dated 10.03.2023, sent a reference to the Telecom Regulatory Authority of India (hereinafter referred to as "TRAI", or "the Authority") under section 11(1)(a) of TRAI Act, 1997 on multiple aspects including *the recommendations on framework for Regulatory Sandbox for emerging technologies, services and business models in telecom sector*.

B. TRAI's Recommendations Dated 12.04.2024

- 1.2 On 19.06.2023, the Authority issued a consultation paper titled "Encouraging Innovative Technologies, Services, Use Cases, and Business Models through a Regulatory Sandbox in the Digital Communication Sector" to solicit comments from stakeholders on the proposed framework for the regulatory sandbox. After a comprehensive consultation process, the Authority sent its recommendations on 'Encouraging Innovative Technologies, Services, Use Cases, and Business Models through a Regulatory Sandbox in the Digital Communication Sector' (hereinafter referred to as "the Recommendations dated 12.04.2024") to the DoT on 12.04.2024.

C. DoT's Back reference dated 19.03.2025

- 1.3 The Department of Telecommunications (DoT), through its letter dated 19.03.2025 (**Annexure I**), has sent a back reference on the TRAI Recommendations dated 12.04.2024, on "Encouraging Innovative Technologies, Services, Use Cases, and Business Models through Regulatory Sandbox in the Digital Communication Sector" (hereinafter referred to as "the Back-reference").

The DoT has reviewed the recommendations, and a prima facie assessment of each recommendation has been given in Annexure A. It raises issues regarding

some of the recommendations that may not be accepted or require modification.

In accordance with Section 11(1) of the TRAI Act, 1997 (as amended), when the Government does not accept or determines that certain recommendations require modifications, they must be referred back to TRAI for reconsideration.

- 1.4 Accordingly, the DoT has requested that TRAI review and submit its reconsidered recommendations within 15 days of receiving this Back-reference.

D. The Present Response

- 1.5 The Authority has carefully examined the views expressed by the DoT in the Back-reference. Based on a thorough analysis, the Authority has formulated the current response to the Back-reference. This chapter provides an introduction and background to the subject. Chapter II provides the issue-wise response of the Authority to the Back-reference.

CHAPTER II: ISSUE-WISE RESPONSE TO THE BACK REFERENCE

2. This chapter presents the Authority's response to the views expressed by the DoT in the back-reference regarding the recommendations on which the Government has reached a prima facie conclusion that these recommendations may not be accepted or may require modification. All the recommendations that the government has marked 'May be accepted' have been omitted from the response.

This document reproduces the text of the TRAI's recommendations, concerning which the Government has reached a prima facie conclusion that they may not be accepted or may require modification. DoT's views regarding such recommendations follow this text, and finally, the Authority's response has been provided.

2.1. **Sr #4 of the Annexure A -Recommendation 3.16/Part I.** **The Regulatory Sandbox:**

Beyond offline/laboratory/WiTe Zone testing, there will be a requirement of testing of the products in actual live network environments. Also, apart from exemptions that are related to spectrum, some products may require other types of regulatory relaxations for testing in live network requirements. For all such live network testing requirements, the Telecom Service Providers (TSPs) and other innovators can apply under this RS framework. This framework is expected to give the Digital Communication industry's start-up ecosystem access to real network environments and other data of telecom networks to help test the reliability of new products before bringing them to market.

2.1.1. **DoT's Views:**

May be accepted. TSPs here may be read as all authorized service/ network providers.

2.1.2. **TRAI's Response:**

Noted, TSPs may be read as Authorised Entities in accordance with Section 3, Telecommunications Act 2023.

2.2. Sr #5 of the Annexure A - Recommendation 3.16 /Part II.

Objectives and Scope:

The sandboxing framework for the Digital Communication (DC) sector in India is aimed at promoting innovation, protecting consumer interests, reduce regulatory burden, and mitigating potential risks associated with new technologies and business models.

2.2.1. DoT's Views:

May be accepted for the telecommunication sector. In the recommendations, the Digital Communication (DC) Sector is mentioned.

2.2.2. TRAI's Response:

The word 'Digital Communication' in Regulatory Sandbox recommendations emanates from the National Digital Communications Policy 2018 (NDCP 2018). Under the Mission 'Propel India', the NDCP 2018 envisages a regulatory sandbox as one of the strategic objectives [Strategy 2.2(e)] in the Digital Communications Sector.

Furthermore, to stress the importance of growing 'digital communications' sector, the name 'Telecommunication' was replaced by 'Digital Communications' in DoT's apex body, Telecom Commission on the similar lines as national telecom policy term was replaced by national 'digital communications' policy.

Besides the above, the word 'digital' has been used throughout the Unified Licensing agreement. For example, Clause 2.2(v) states, "*It is obligatory upon the Licensee to provide the services by establishing a state-of-the-art digital network*", Clause 6.1(ii) states, "*PSTN/PLMN connectivity (outgoing only) shall be limited to one E-1 link(30 circuits) for digital system up to 10,000 customers*"....Definition of National Long Distance Service Provider describes it *as the telecom service provider providing the required digital capacity to carry long distance telecommunication service.*

Hence, Digital Communications, as stated in the recommendations, defines an ecosystem covering the broad landscape envisioned in NDGP 2018.

Furthermore, Section 27 of the Telecommunications Act 2023 for the Regulatory Sandbox states:

“The Central Government may, for the purposes of encouraging and facilitating innovation and technological development in telecommunication, create one or more regulatory sandboxes, in such manner, and for such duration, as may be prescribed.

Explanation. —For the purposes of this section, the expression "regulatory sandbox" refers to a live testing environment where new products, services, processes and business models, which may be deployed, on a limited set of users, for a specified period of time, with certain relaxations from the provisions of this Act.”

As explained, the products, services, processes, and business models envisioned for development through the Regulatory Sandbox can be broadly categorised under the Digital Communications sector.

Accordingly, the Authority reiterates its recommendations.

2.3. Sr #6 of the Annexure A -Recommendation 3.16 / Part II. Objectives and Scope:

The scope of the sandboxing framework includes any new digital communication service or technology that requires testing in a controlled live network environment where certain regulatory/licensing relaxations for the limited purpose of the testing are required. It is clarified that the products that are not impacted by any restrictions under licensing/regulatory norms and/or do not require any explicit permission/dispensation need not be tested under this RS and can be tested by Telecom Service Providers (TSPs) subject to fulfilment of Licensing conditions and other relevant rules/regulations/guidelines issued by any Government or regulatory agency.

2.3.1. DoT's Views:

May be accepted for telecommunication service/network.

The scope of Regulatory Sandbox is already defined in the section 27 of the Telecommunications Act 2023.

While granting permissions under the Regulatory Sandbox framework, if certain regulatory relaxations under TRAI Act or Rules/ Regulations / Orders made thereunder, are also required then a copy of permission granted under Regulatory Sandbox framework will be sent to TRAI.

2.3.2. TRAI's Response:

As discussed in the TRAI response under section 2.2.2 above, the Act envisions a much broader outlook, mentioning Digital Communications service or technology is more appropriate.

TRAI shall be consulted prior to the grant of relaxation in cases where relaxation is required under the TRAI Act or Rules / Regulations / Orders made thereunder, and the specific relaxation shall be conveyed by TRAI to DoT.

2.4. Sr # 7 & 8 of the Annexure A - Recommendation 3.39 / Part III. Eligibility and Other Essential Conditions:

Sr #7:

Any licensed Telecom Service Provider, called Principal Applicant, shall be eligible for testing in the Regulatory Sandbox subject to fulfilment of laid down conditions. The other entities, called Applicant, willing to utilize the Sandboxing facilities of any licensed service provider may engage with Principal Applicants. In case licensed service providers are applying in their own capacity they need to fulfil conditions meant for Principal Applicant and Applicant both. The Applicant can also apply for testing in the Regulatory Sandbox provided they attach an in-principal approval/consent from the Principal Applicant indicating the latter's consent to test the products on their network.

Sr #8:

In cases where the Applicants are unable to secure consent of a Principal Applicant on reasonable terms for association OR the product does not necessitate associating with a Principal Applicant, the Applicant can apply directly attaching the documents showing efforts made for tying up with a Principal Applicant. After due evaluation of such applications, the deserving innovations that may have widespread impact on society, economy and technology, the licensor will have a right to mandate RS testing on a TSP's network, including important terms and conditions of such testing.

2.4.1. **DoT's Views:**

May be accepted with modifications.

'Applicant' may or may not be willing to utilize the Sand-boxing facilities of any licensed service provider.

In case the product of 'Applicant' does not necessitate associating with a Principal Applicant, the Applicant can apply directly to the licensor.

While, in cases where the Applicant is considering to utilize the Sand-boxing facilities of any licensed service/ network provider but unable to secure consent of a Principal Applicant on reasonable terms for association, the Applicant can apply directly with Licensor attaching the documents showing efforts made for tying up with a Principal Applicant.

2.4.2. **TRAI's Response:**

While Section 27 of the Telecommunications Act 2023 provides for the Regulatory Sandbox, Section 56 of the Act provides for the rules to be made thereunder. Section 56(2) states that " *In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:-*

.... (y) the manner and duration for creating Regulatory sandbox under section 27; ..."

Hence, it is understood that DoT shall notify terms and conditions related to Regulatory Sandbox, as per Section 56(2)(y) read with Section 27 of Telecommunications Act 2023.

Further, in consideration of the views stated by DoT, it may be fair to assume that the Applicant, for various reasons, may not be willing to share product/service details with Principal Applicant or there may be a product/service where Applicant may not require the sandboxing environment of authorised entities for testing of the product/service. Under such scenarios, the Applicant may not be forced to approach Principal Applicant. Therefore, TRAI acknowledges DoT proposal.

Accordingly, the Authority recommends the following:

Sr #7

Any licensed Telecom Service Provider, called Principal Applicant, shall be eligible for testing in the Regulatory Sandbox subject to fulfilment of laid down conditions. The other entities, called Applicant, willing to utilize the Sandboxing facilities of any licensed service provider may engage with Principal Applicants. In case licensed service providers are applying in their own capacity they need to fulfil conditions meant for Principal Applicant and Applicant both. The Applicant can also apply for testing in the Regulatory Sandbox provided they attach an in-principal approval/consent from the Principal Applicant indicating the latter's consent to test the products on their network.

In cases where Applicant does not require to utilise the Sand-boxing facilities of any licensed service provider Or the product of 'Applicant' does not necessitate associating with a Principal Applicant, the Applicant can directly apply to the Licensor.

Sr #8

In cases where the Applicant is considering to utilize the Sand-boxing facilities of any licensed service/ network provider but unable to secure consent of a Principal Applicant on reasonable terms for association, the Applicant can apply directly with Licensor attaching the documents showing efforts made for tying up with a Principal Applicant. After due evaluation of such applications, the deserving innovations that may have widespread impact on society, economy and technology, the licensor will have a right to mandate RS testing on a TSP's network.

2.5. Sr #9 of Annexure A- Recommendation 3.39/Part III. Eligibility and Other Essential Conditions:

9 (iii). Regulatory compliance and exemptions sought: The Principal Applicant/Applicant should expressly state what exemptions from the existing

regulatory regime pertaining to the product are sought under Sandbox testing, along with the specific testing period for which these exemptions are required. It should also mention the authority that is responsible for permitting the required exemptions. Any other facilitation or resource sought, including spectrum, for the sandbox testing, must also be specified. For exemptions required from other ministries, autonomous bodies, or regulators outside of DoT's jurisdiction, DoT will establish an institutional mechanism to facilitate the acquisition of such permissions. The Principal Applicant / Applicant seeking these exemptions should follow a parallel process with the respective entities and provide them all necessary information as required by such entities.

2.5.1. DoT's Views:

May be accepted with modifications.

9 (iii) may not be accepted. For exemptions required from other ministries, autonomous bodies, or regulators outside the DoT's jurisdiction, the Principal Applicant/Applicant shall obtain the relevant exemptions directly. If required in some instances, the DoT may try to facilitate for such permissions.

2.5.2. TRAI's Response:

Except for recommendation 9(iii), all other recommendations at para 9 of 3.39/Part III. Eligibility and Other Essential Conditions have been accepted by DoT.

Regarding recommendation 9(iii), considering that there may be large number of applications which DoT may not be able to pursue with the external bodies, DoT's suggestion for making Applicant / Principal Applicant responsible for seeking exemptions directly from the external bodies may be accepted. However, all applications for such exemptions from the external bodies should be forwarded to the concerned bodies by DoT by adopting a uniform process.

Accordingly, the Authority recommends as follows:

The Principal Applicant/Applicant should expressly state what exemptions from the existing regulatory regime pertaining to the product are sought under Sandbox testing, along with the specific

testing period for which these exemptions are required. It should also mention the authority that is responsible for permitting the required exemptions. Any other facilitation or resource sought, including spectrum, for the sandbox testing, must also be specified. For exemptions required from other ministries, autonomous bodies, or regulators outside the DoT's jurisdiction, the Principal Applicant/Applicant shall obtain the relevant exemptions directly once the case has been duly forwarded by DoT. If required in certain cases, the DoT may facilitate such permissions.

2.6. Sr #10 of Annexure A- Recommendation 3.39/Part III. Eligibility and Other Essential Conditions:

Generic RS exemptions to TSPs to carry out RS testing for multiple use cases requiring similar exemptions: DoT may permit the Principal Applicant with a list of generic exemptions applicable to RS testing for multiple use cases, contingent on the fulfilment of specified conditions that the licensor or regulator may prescribe. Based on the generic exemptions provided, the Principal Applicant can enroll several Applicants for RS testing of various use cases within the ambit of such generic exemptions and will not be required to approach DoT for seeking permission for each use case of RS testing. However, the Principal Applicant will be required to intimate DoT about the details of each such RS use case, start of each individual RS testing and submit reports for each such RS testing. In case it is required to seek any specific regulatory exemption that extends beyond the generic exemptions for any particular RS testing, the Principal Applicant will be required to submit a separate application in line with the procedure prescribed under this RS Framework.

2.6.1. DoT views:

May be accepted.

The list of generic exemptions applicable to Regulatory Sandbox testing shall be decided on a case-to-case basis based on application from Principal Applicant, which shall be valid for a maximum period of 24 months.

2.6.2. TRAI's Response:

Noted.

2.7. Sr #12 of Annexure A - Recommendation 3.48/ Part V. Application, Evaluation, and Approval Process:

The application and approval process will be as follows:

- i. Principal Applicant and/or Applicant, as the case may be, desiring to test a product under Regulatory Sandbox in India shall make an application to the DoT electronically in the specified form. DoT shall put in place an end-to-end digital process to handle RS applications and all related activities including intimations, approvals, sharing of information, monitoring, reporting requirements etc.*
- ii. The application shall be accompanied by a non-refundable processing fee of ten thousand rupees.*
- iii. The necessary supporting documents and undertaking to substantiate its claim of fulfilment of eligibility and essential conditions as detailed under this RS framework should be provided with the application. The application form shall be signed by the officer duly authorized by the Company Board/Partner of the firm. The complete application must be submitted to: XXXXXX or by email at XXXXXX.*
- iv. At the "Application Stage", DoT shall review the application and inform any shortcomings to the Principal Applicant / Applicant within 7 working days. The Principal Applicant / Applicant will submit necessary documents to eliminate the shortcomings within the next 10 working days. DoT shall review the application and inform of its 'potential suitability for a sandbox to Principal Applicant and/or Applicant, as the case may be, within 30 working days from the submission of the complete application.*

- v. *The application may be evaluated based on the eligibility conditions and the documents submitted in support thereof. At the "Evaluation Stage", DoT shall work with the Principal Applicant / Applicant to determine the specific exemptions required from regulatory requirements and other conditions (including test parameters and control boundaries) to be applied to the proposed product in question. If the Principal Applicant / Applicant is able and willing to meet the proposed regulatory requirements and conditions, permission will be granted to develop and test the proposed innovation(s) in the sandbox. DoT will establish a mechanism to complete the 'Evaluation Stage' within 45 days and communicate the permission or reasons for rejection. In certain cases, exemptions may be required from other ministries or sectoral regulators (including TRAI) or other entities, in such cases DoT shall establish a mechanism to approach such entities and coordinate for grant of exemptions to Principal Applicant / Applicant in a time bound manner preferably within 60 days.*
- vi. *Upon approval, the Principal Applicant / Applicant shall proceed towards the "Testing Stage". DoT will designate one officer who will have primary responsibility of coordinating the sandbox testing. Each Principal Applicant / Applicant shall assign a contact person to coordinate with a designated officer of DoT. If during the testing stage, the Principal Applicant / Applicant is making any material changes to the product which may alter the conditions/ undertakings under which the approval was granted, prior approval from DoT will have to be taken.*

2.7.1. DoT views:

May be accepted. Concerned licensing divisions like AS, DS, CS, Satellite, NT, WPC etc. in DoT HQ shall be nodal division for processing and evaluation of the applications submitted for permission under the Regulatory Sandbox framework.

In the evaluation and approval process for permission under the Regulatory Sandbox framework, the inputs of relevant divisions of the department

including SRI division would require consideration. For this purpose, an SOP can be issued for considering the application for Regulatory Sandbox.

For Sr #12(v): May not be accepted. For exemptions required from other ministries, autonomous bodies or regulators outside of DoT's jurisdiction, the Principal Applicant/ applicant shall obtain the relevant exemptions directly. If required in certain cases, DoT may try to facilitate for such permissions.

For Sr #12 (vi): SRI Division in DoT HQ and DG(T) in field units, will designate officer from concerned (office) for this purpose.

2.7.2. TRAI's Response:

DoT's views, in respect of recommendations 12 (i to iv, and vi) at para 3.48/ Part V. Application, Evaluation, and Approval Process, are noted.

In case of recommendation 12 (v), TRAI's response as stated vide 2.5.2 above is reiterated.

2.8. Sr #17 of Annexure A - Recommendation 3.60 / Part VII. Validity Period:

The permission granted under the regulatory sandbox will have a validity period of up to 12 months for the Principal Applicant / Applicant to test its product. At the end of the validity period, Principal Applicant / Applicant will stop testing of the product. Commercial usage of the product tested by Principal Applicant / Applicant in the RS will not be allowed during the RS validity period.

2.8.1. DoT views:

May be accepted with modifications.

Validity period of 12 months is short. Time frame should be more than 12 months for proper testing of the product. Hence it is proposed that initial validity period may be up to 24 months.

2.8.2. TRAI's Response:

The TRAI recommendations provide for a validity period of 12 months. The DoT suggestion to consider 24 months as a validity period for Regulatory Sandbox testing would facilitate testing by providing an adequate period in deserving cases. Extending validity period, as suggested, may facilitate continuity in testing without requiring successive permissions/ extensions.

Accordingly, TRAI recommendations may be modified as follows:

The permission granted under the regulatory sandbox will have a validity period of up to 24 months for the Principal Applicant / Applicant to test its product. At the end of the validity period, Principal Applicant / Applicant will stop testing of the product. Commercial usage of the product tested by Principal Applicant / Applicant in the RS will not be allowed during the RS validity period.

2.9. Sr #23 to #25 of Annexure A- Recommendation 3.73 / Part X. Oversight and Governance Body:

Sr #23:

The oversight and governance of the RS shall be done by the National Telecommunications Institute for Policy Research, Innovation, and Training (NTIPRIT). NTIPRIT should rope in representative(s) from the Telecom Engineering Centre (TEC) and Academic institutions, as required. This body has been referred to as the overseeing body hereinafter.

Sr #24:

The evaluation of applications submitted for RS testing shall be done by DoT. Post approval of such applications, the Overseeing Body will monitor and evaluate the performance of each sandboxing project. For this purpose the Overseeing Body will meet periodically to examine reports submitted for all ongoing/completed RS testing. The Principal Applicant / Applicant must make necessary arrangements to make the Sandbox product accessible during testing, both physically and online, and provide access to all necessary tools, testers, and software necessary to monitor the product by the Overseeing Body.

This will ensure that the sandboxing process is monitored transparently, and the Overseeing Body has the necessary resources to effectively oversee and evaluate the testing of innovative products.

Sr #25:

Based on the learnings of each RS, the Overseeing Body can make recommendations, if any, to the Government on the changes required in policy/legal/licensing/regulatory framework.

2.9.1. DoT views:

(a) For Sr #23 & 24:

May be accepted with modifications. It is proposed that oversight and governance of the RS shall be done by SRI Division in DoT HQ and DG(T) in field offices.

(b) For Sr #25:

May be accepted with modifications.

In addition to SRI division and DG(T) office, NCA(T) shall have the access to the portal for oversight process, NCA(T) may, from time to time, provide inputs to the concerned divisions for further improvements in the framework for policy research perspective.

2.9.2. TRAI's Response :

The National Telecom Academy was established in 2010 as an apex training institution for the telecommunication sector in India. The mandate of the institute was expanded in 2011 by bringing in the activities related to Policy Research and Innovations. Thus, it earned its name, National Telecommunications Institute for Policy Research, Innovations and Training (NTIPRIT). National Telecom Policy 2012 (NTP) further outlined the role of NTIPRIT as follows:

- To strengthen and develop National Telecom Institute for Policy Research, Innovation and Training (NTIPRIT) as an institute of

international reputé, for capacity building and enabling research in India centric technologies and policies in telecom domain.

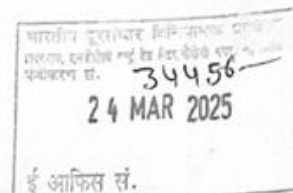
- To set-up a comprehensive repository in NTIPRIT for disseminating telecom field related information, standards, benchmarks, resources, program curriculum, etc.

NTIPRIT, under its own capacity building initiatives, has entered into MoUs with several Institutions of diverse specialisation, and collaborates with the Asia-Pacific Telecommunity (APT), the Association of Southeast Asian Nations (ASEAN) and the ITU Academy. Therefore, in view of the institutional set-up and interdisciplinary capacity available with the National Communications Academy (Telecom) {erstwhile NTIPRIT}, the role of oversight and governance control in the context of regulatory sandbox would be best served by it.

Therefore, TRAI reiterates its recommendation.

Annexure

F. No. 20-1351/2024-LPA
Government of India
Ministry of Communications
Department of Telecommunications
(Licensing Policy Wing)
20-Ashoka Road, New Delhi-110001



Dated: 19.03.2025

Subject: Back Reference on TRAI recommendations dated 12.04.2024 on 'Encouraging Innovative Technologies, Services, Use Cases and Business Models through Regulatory Sandbox in Digital Communication Sector'

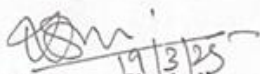
This is in reference to the TRAI recommendations dated 12.04.2024 on 'Encouraging Innovative Technologies, Services, Use Cases and Business Models through Regulatory Sandbox in Digital Communication Sector'.

2. The recommendations of TRAI on "Encouraging Innovative Technologies, Services, Use Cases and Business Models through Regulatory Sandbox in Digital Communication Sector" have been considered in the Government and the prima-facie conclusion in respect of each recommendation are given at **Annexure-A**.

3. As per Section 11(1) of the TRAI Act, 1997 (as amended), such recommendations dated 12.04.2024 on 'Encouraging Innovative Technologies, Services, Use Cases and Business Models through Regulatory Sandbox in Digital Communication Sector', where the Government has reached a prima-facie conclusion that these recommendations may not be accepted or needs modification, are being referred back to TRAI for its reconsideration. TRAI is requested to provide its recommendations within 15 days of receipt of this back reference.

4. This has the approval of the competent authority.

Encl.: As Above


(Sunil Kumar Singh)
Deputy Director General (Licensing Policy)
Phone: 23036836

To,

The Secretary
Telecom Regulatory Authority of India
7th Floor, Tower-F,
World Trade Centre, Nauroji Nagar,
New Delhi: 110029

Annexure-A

S. No.	Framework recommended by TRAI	Views of DoT
	I. THE REGULATORY SANDBOX (RS)	
1.	In view of new technological developments, varieties of competing technologies, number of probable product/service/application (hereinafter called product) providers and constantly evolving requirements, a test environment needs to be established where new technologies, functions and processes can be tested in live networks, or existing functions or processes can be refined. This live testing environment may also provide possibilities to explore new ways and means to meet regulatory requirements or new service offerings. Such test environments in regulatory space are commonly known as "Regulatory Sandboxes".	May be accepted
2.	The Telecommunication Act' 2023 provides that "the expression "regulatory sandbox" refers to a live testing environment where new products, services, processes, and business models which may be deployed, on a limited set of users, for a specified period of time, with certain relaxations from the provisions of this Act." This framework is being issued in line with the definition of Regulatory Sandbox provided in the Telecommunication Act' 2023	NA (Facts)
3.	DoT has also issued guidelines on 11.03.2024 to establish and operate 'Spectrum Regulatory Sandbox' (SRS) or 'WiTe Zones (Wireless Test Zones)' to promote R&D activities, outdoor testing/experimentation in the field of emerging new radio communications technologies. However, these guidelines do not provide for any connectivity with PSTN/Public commercial network/satellite, for the purpose of testing/Research & Development (R&D) i.e. testing in WiTe Zones does not allow exposure of products to live network environments.	NA (Facts)
4.	Beyond offline/laboratory/WiTe Zone testing, there will be a requirement of testing of the products in actual live network environments. Also, apart from exemptions that are related to spectrum, some products may require other types of regulatory relaxations for testing in live network requirements. For all such live network testing requirements, the Telecom Service Providers (TSPs) and other innovators can apply under this RS framework. This framework is expected to give the Digital Communication industry's start-up ecosystem access to real network environments and other data of telecom networks to help test the reliability of new products before bringing them to market.	May be accepted TSPs here may be read as all authorized service/ network providers.

II. OBJECTIVES AND SCOPE		
5.	The sandboxing framework for the Digital Communication (DC) sector in India is aimed at promoting innovation, protecting consumer interests, reduce regulatory burden, and mitigating potential risks associated with new technologies and business models.	May be accepted for telecommunication sector. In the recommendation Digital Communication (DC) Sector is mentioned.
6.	The scope of the sandboxing framework includes any new digital communication <u>service or technology</u> that requires testing in a controlled live network environment where certain <u>regulatory/licensing relaxations for the limited purpose of the testing are required</u> . It is clarified that the products that are not impacted by any restrictions under licensing/regulatory norms and/or do not require any explicit permission/dispensation need not be tested under this RS and can be tested by Telecom Service Providers (TSPs) subject to fulfilment of Licensing conditions and other relevant rules/regulations/guidelines issued by any Government or regulatory agency.	May be accepted for telecommunication service/network. The scope of Regulatory Sandbox is already defined in the section 27 of the Telecommunications Act 2023. Same scope of Regulatory Sandbox should be used. While granting permissions under the Regulatory Sandbox framework, if certain regulatory relaxations under TRAI Act or Rules/Regulations/Orders made thereunder, are also required then a copy of permission granted under Regulatory Sandbox framework will be sent to TRAI.
III. ELIGIBILITY & OTHER ESSENTIAL CONDITIONS		
7.	Any licensed Telecom Service Provider, called Principal Applicant, shall be eligible for testing in the Regulatory Sandbox subject to fulfilment of laid down conditions. The other entities, called Applicant, willing to utilize the Sandboxing facilities of any licensed service provider may engage with Principal Applicants. In case licensed service providers are applying in their own capacity, they need to fulfil conditions meant for Principal Applicant and Applicant both. The Applicant can also apply for testing in the Regulatory Sandbox provided they attach an in-principal approval/consent from the Principal Applicant indicating the latter's consent to test the products on their network	May be accepted with modifications. 'Applicant' may or may not be willing to utilize the Sandboxing facilities of any licensed service provider.
8.	In cases where the Applicants are unable to secure consent of a Principal Applicant on reasonable terms for association OR the product does not necessitate associating with a Principal Applicant, the Applicant can apply directly attaching the documents showing efforts made for tying up with a Principal Applicant. After due evaluation of such applications, the deserving innovations that may have widespread impact on society,	In case the product of 'Applicant' does not necessitate associating with a Principal Applicant, the Applicant can apply directly with licensor.

	economy and technology, the licensor will have a right to mandate RS testing on a TSP's network, including important terms and conditions of such testing.	While, in cases where the Applicant is considering to utilize the Sandboxing facilities of any licensed service/ network provider but unable to secure consent of a Principal Applicant on reasonable terms for association, the Applicant can apply directly with licensor attaching the documents showing efforts made for tying up with a Principal Applicant.
9.	<p>The essential conditions required for testing under Regulatory Sandbox and details to be provided in applications are as follows:</p> <ol style="list-style-type: none"> Only Indian National or entities will be eligible: Principal Applicant / Applicant should be an Indian National or entity incorporated as a company (as defined in Companies Act, 2013) or registered as a partnership firm (registered under section 59 of the Partnership Act, 1932) or a limited liability partnership (under Limited Liability Partnership Act, 2008) or such Research & Development (R&D) Institutions that have been listed in the latest directory of such institutes published by the Department of Science & Technology (DST). Limited prior testing: Before applying for testing in sandbox, limited testing of the product in offline/laboratory/WiTe Zone environment should have been carried out by the Principal Applicant / Applicant. The details of the same should be provided in the application by the Principal Applicant / Applicant. Regulatory compliance & exemptions sought: The Principal Applicant / Applicant should expressly spell out what exemptions from the existing regulatory regime pertaining to the product are sought under Sandbox testing, along with the specific testing period for which these exemptions are required. It should also mention the authority which is responsible for permitting the required exemptions. Any other facilitation or resource sought, including spectrum, for the sandbox testing must also be specified. For exemptions required from other ministries, autonomous bodies, or regulators outside of DoT's jurisdiction, DoT will establish an institutional mechanism to facilitate the acquisition of such permissions. The Principal Applicant / Applicant seeking these exemptions should follow a parallel process with the respective entities and provide them all necessary information as required by such entities. Scope of testing: To prevent any negative impact on the wider telecom networks or the customers, the Sandbox environment should have a finite scope which is appropriate enough for testing the product. The Principal Applicant / Applicant must clearly define the scope of testing 	<p>May be accepted with modifications.</p> <p>9. (iii) May not be accepted.</p> <p>For exemptions required from other ministries, autonomous bodies, or regulators outside of DoT's jurisdiction, the Principal Applicant/ Applicant shall obtain the relevant exemptions directly.</p> <p>If required in certain cases, DoT may try to facilitate for such permissions.</p>

	<p>for the product. Scaling-up of the scope during the RS validity period can be permitted by DoT after due evaluation of the justification furnished along with such request.</p> <p>v. Risk Mitigation: The product should have proper risk management strategy to incorporate appropriate safeguards to mitigate and control potential risks to any market participants/users/customers/government that may arise from the testing of the product in live environment and shall propose appropriate safeguards to manage the risks and contain the consequences of failure.</p> <p>vi. Consumer protection: The Principal Applicant / Applicant should demonstrate in application as to how the Sandbox testing would prioritize the protection of consumer interests and prevent any harm to consumers. Customer onboarding and private/public data processing should align with the provisions of the Digital Personal Data Protection Act, 2023, and any applicable rules, regulations, or orders issued under this Act. If the case warrants, only such customers will be allowed to be on boarded who have given specific consent voluntarily.</p> <p>vii. Monitoring and evaluation: The Principal Applicant / Applicant, should precisely define the test parameters, control boundaries, testing site, significant milestones, and anticipated outcomes for the proposal and include a mechanism for monitoring and evaluating the testing process to ensure that the objectives of the testing are met.</p> <p>viii. Exit strategy: The Principal Applicant / Applicant should submit a clear exit strategy that outlines the process for exiting the testing phase.</p>	
10	<p>Generic RS exemptions to TSPs to carry out RS testing for multiple use cases requiring similar exemptions: DoT may permit the Principal Applicant with a list of generic exemptions applicable to RS testing for multiple use cases, contingent on the fulfilment of specified conditions that the licensor or regulator may prescribe. Based on the generic exemptions provided, the Principal Applicant can enroll several Applicants for RS testing of various use cases within the ambit of such generic exemptions and will not be required to approach DoT for seeking permission for each use case of RS testing. However, the Principal Applicant will be required to intimate DoT about the details of each such RS use case, start of each individual RS testing and submit reports for each such RS testing. In case it is required to seek any specific regulatory exemption that extends beyond the generic exemptions for any particular RS testing, the Principal Applicant will be required to submit a separate application in line with the procedure prescribed under this RS Framework.</p>	<p>May be accepted</p> <p>The list of generic exemptions applicable to Regulatory Sandbox testing, valid for maximum period of 24 months, shall be decided on case-to-case basis based on application from Principal Applicant.</p>
	IV. SUPPORTING DOCUMENTS REQUIRED TO BE SUBMITTED WITH APPLICATION	
11	<p>The supporting documents required to be submitted with applications are as follows:</p> <p>i. Certificate of Incorporation / Registration as a company (as defined in the Companies Act, 2013) or a partnership firm (registered under section 59 of the Partnership Act, 1932) or a limited liability partnership (under the Limited Liability Partnership Act, 2008. Individual Indian</p>	May be accepted

	<p>nationals will be required to submit any government issued identity document that is valid as KYC document for taking a telephone/mobile connection.</p> <p>ii. Details of what licensing/regulatory relaxations are sought for testing purposes.</p> <p>iii. Report on prior lab/field testing carried out on the product.</p> <p>iv. Details of the potential risks to market participants/users/customers/government due to any exemption granted or otherwise and risk management strategy and proposed safeguards to mitigate such potential risks.</p> <p>v. Testing plan, test parameters, control boundaries, testing site, significant milestones, anticipated outcomes, and monitoring and evaluation mechanism for the proposal.</p> <p>vi. Exit strategy outlining the process for exiting the RS testing phase.</p>	
	V. APPLICATION, EVALUATION, AND APPROVAL PROCESS	
12	<p>The application and approval process will be as follows:</p> <p>i. Principal Applicant and/or Applicant, as the case may be, desiring to test a product under Regulatory Sandbox in India shall make an application to the DoT electronically in the specified form. DoT shall put in place an end-to-end digital process to handle RS applications and all related activities including intimations, approvals, sharing of information, monitoring, reporting requirements etc.</p> <p>ii. The application shall be accompanied by a non-refundable processing fee of ten thousand rupees.</p> <p>iii. The necessary supporting documents and undertaking to substantiate its claim of fulfilment of eligibility and essential conditions as detailed under this RS framework should be provided with the application. The application form shall be signed by the officer duly authorized by the Company Board/Partner of the firm. The complete application must be submitted to: XXXXXX or by email at XXXXXX.</p> <p>iv. At the "Application Stage", DoT shall review the application and inform any shortcomings to the Principal Applicant / Applicant within 7 working days. The Principal Applicant / Applicant will submit necessary documents to eliminate the shortcomings within the next 10 working days. DoT shall review the application and inform of its 'potential suitability for a sandbox to Principal Applicant and/or Applicant, as the case may be, within 30 working days from the submission of the complete application.</p> <p>v. The application may be evaluated based on the eligibility conditions and the documents submitted in support thereof. At the "Evaluation Stage", DoT shall work with the Principal Applicant / Applicant to determine the specific exemptions required from regulatory requirements and other conditions (including test parameters and control boundaries) to be applied to the proposed product in question. If the Principal Applicant / Applicant is able and</p>	<p>May be accepted.</p> <p>Concerned licensing divisions like AS, DS, CS, Satellite, NT, WPC etc. in DoT HQ shall be nodal division for processing and evaluation of the applications submitted for permission under the Regulatory Sandbox framework.</p> <p>In the evaluation and approval process for permission under the Regulatory Sandbox framework, the inputs of relevant divisions of the department including SRI division would require consideration. For this purpose, an SOP can be issued for considering the applications for Regulatory Sandbox.</p> <p>12. (v) May not be accepted.</p> <p>For exemptions required from other ministries, autonomous bodies, or regulators outside of DoT's jurisdiction, the Principal</p>

	<p>willing to meet the proposed regulatory requirements and conditions, permission will be granted to develop and test the proposed innovation(s) in the sandbox. DoT will establish a mechanism to complete the 'Evaluation Stage' within 45 days and communicate the permission or reasons for rejection. In certain cases, exemptions may be required from other ministries or sectoral regulators (including TRAI) or other entities, in such cases DoT shall establish a mechanism to approach such entities and coordinate for grant of exemptions to Principal Applicant / Applicant in a time bound manner preferably within 60 days.</p> <p>vi. Upon approval, the Principal Applicant / Applicant shall proceed towards the "Testing Stage". DoT will designate one officer who will have primary responsibility of coordinating the sandbox testing. Each Principal Applicant / Applicant shall assign a contact person to coordinate with a designated officer of DoT. If during the testing stage, the Principal Applicant / Applicant is making any material changes to the product which may alter the conditions/undertakings under which the approval was granted, prior approval from DoT will have to be taken.</p>	<p>Applicant/ Applicant shall obtain the relevant exemptions directly.</p> <p>If required in certain cases, DoT may try to facilitate for such permissions.</p> <p>12. (vi) SRI Division in DoT HQ and DG (T) in field units, will designate officer from concerned for this purpose.</p>
	VI. OTHER CONDITIONS	
13	Testing data: The Principal Applicant / Applicant shall be required to keep record of all testing steps/data/consent records for the period not less than one year after exit from Sandbox environment. Data generated during RS testing should be stored and disposed of in a secure manner.	May be accepted
14	Publication of information: The DoT shall reserve the right to publish any relevant and generic information about the Regulatory Sandbox applicants on its website, for the purposes it deems fit, without revealing any proprietary/intellectual property rights related information.	May be accepted
15	Statutory and Legal Issues: DoT shall not be liable for any acts of omissions, commissions, breaches, or any kind of culpability arising out of or in relation to the sandbox process and any liability arising as such will be borne by the Principal Applicant and/or Applicant, as the case may be.	May be accepted
16	Waivers or modifications to rules: DoT shall have the right to waive or modify the conditions of this framework.	May be accepted
	VII. VALIDITY PERIOD	
17	The permission granted under the regulatory sandbox will have a validity period of up to 12 months for the Principal Applicant / Applicant to test its product. At the end of the validity period, Principal Applicant / Applicant will stop testing of the product. Commercial usage of the product tested by Principal Applicant / Applicant in the RS will not be allowed during the RS validity period.	<p>May be accepted with modifications</p> <p>Validity period of 12 months is short. Time frame should be more than 12 months for proper testing of product. Hence it is</p>

		proposed that initial validity period may be up to 24 months.
18	An extension of validity period can be granted by competent authority based on prevalent conditions of tests, potential benefits, cost involved, complexity of test etc.	May be accepted
19	The Principal Applicant / Applicant can file for early completion of the testing before expiry of the validity period if the testing is completed successfully. The Principal Applicant / Applicant may also file for early termination of the proposal in DoT if it is felt that the proposal shall not be able to meet the desired objective. DoT shall consider the request on merits and advise the Principal Applicant / Applicant accordingly, subject to such conditions, as deemed fit.	May be accepted
VIII. REVOCATION OF PERMISSION		
20	DoT may revoke the permission so granted for RS testing at any time if it is of the view that – <ul style="list-style-type: none"> i. The permitted Principal Applicant / Applicant is failing, or is likely to fail, to satisfy the conditions/undertakings established under this RS framework; that qualified it to the Regulatory Sandbox testing permission. ii. The permitted Principal Applicant / Applicant has committed a contravention of the regulations, or any rules, guidelines, or standards beyond the exemptions allowed, if any. iii. The conducted test conflicts with the public interest. iv. The Principal Applicant / Applicant has submitted forged undertakings/records/documents. Provided that before revoking the permission, the Principal Applicant / Applicant shall be given an opportunity of being heard. In all cases of revocation of permission, appropriate reasons will be provided and the same will be communicated to the Principal Applicant / Applicant.	May be accepted
IX. COMPLETION OF THE RS TESTING AND REPORTING		
21	To ensure effective oversight and assessment of the sandbox, the entity who has made the application and who has been granted permission to carry out RS testing must establish a monitoring and reporting mechanism as mentioned below: <ul style="list-style-type: none"> a. Periodic Reports: An oversight and governance body will decide whether periodic reports are required to be submitted for a particular RS testing. If required, it will also decide the frequency and format of such periodic reports. b. Comprehensive report post RS testing completion: On successful completion of testing or at the end of the validity period, the Principal Applicant / Applicant shall submit a comprehensive report to the DoT within 30 days. The final report submitted by the Principal Applicant / Applicant must explicitly state the results/outcomes of the RS testing performed, findings related to the tested product, Customer feedback, complaints, concerns, and challenges during the testing period; Measures taken to overcome the challenges; consumer protection and risk management frameworks. The final report should also mention the details of wrapping up of all activities that 	May be accepted

	were done in the RS testing phase along with the settlement of all obligations (contractual, financial, and other commitments) related to all stakeholders including customers	
22	All reports should preferably be signed jointly by the Principal Applicant and Applicant. In case of difference of viewpoint, separate reports may be submitted by Principal Applicant or Applicant.	May be accepted, as applicable.
X. OVERSIGHT AND GOVERNANCE BODY		
23	The oversight and governance of the RS shall be done by the National Telecommunications Institute for Policy Research, Innovation, and Training (NTIPRIT). NTIPRIT should rope in representative(s) from the Telecom Engineering Centre (TEC) and Academic institutions, as required. This body has been referred to as the overseeing body hereinafter.	May be accepted with modifications.
24	The evaluation of applications submitted for RS testing shall be done by DoT. Post approval of such applications, the Overseeing Body will monitor and evaluate the performance of each sandboxing project. For this purpose the Overseeing Body will meet periodically to examine reports submitted for all ongoing/completed RS testing. The Principal Applicant / Applicant must make necessary arrangements to make the Sandbox product accessible during testing, both physically and online, and provide access to all necessary tools, testers, and software necessary to monitor the product by the Overseeing Body. This will ensure that the sandboxing process is monitored transparently, and the Overseeing Body has the necessary resources to effectively oversee and evaluate the testing of innovative products.	It is proposed that oversight and governance of the RS shall be done by SRI division in DoT HQ and DG (T) in field offices.
25	Based on the learnings of each RS, the Overseeing Body can make recommendations, if any, to the Government on the changes required in policy/legal/licensing/regulatory framework.	May be accepted with modifications. In addition to SRI Division and DG(T) office, NCA(T) shall have access to the portal for oversight process. NCA(T) may, from time to time, provide inputs to the concerned divisions for further improvements in the framework from policy research perspective.
XI. FUNDING OF INNOVATION FOR INCLUSIVE SOCIETAL ADVANCEMENT AND GROWTH OF ECONOMY		
26	Government has already expanded the scope of Universal Service Obligation Fund created under the Indian Telegraph Act, 1885, by incorporating suitable provisions in the new Telecommunication Act' 2023 and calling it the "Digital Bharat Nidhi". Clause 25 of this Act states that "the sums of money received towards the Digital Bharat Nidhi under section 24, shall first be credited to the Consolidated Fund of India, and the Central Government may, if Parliament by appropriation made by law in this behalf so provides, credit such proceeds to the Digital Bharat Nidhi from time to time for being utilised exclusively to meet any or all of the following objectives, namely:—	NA (Facts)

	<ul style="list-style-type: none"> a. Support universal service through promoting access to and delivery of telecommunication services in underserved rural, remote and urban areas; b. Support research and development of telecommunication services, technologies, and products; c. Support pilot projects, consultancy assistance and advisory support towards provision of service under clause (a) of this section; d. Support introduction of telecommunication services, technologies, and products." 	
27	Hence Clause 25(b), (c) and (d) of the new Telecommunication Act extend the scope of Digital Bharat Nidhi to facilitate innovation and experimentation in the telecom sector by extending suitable financial support. Some innovative products that may have significant potential to bridge digital divide and bring socio-economic advancement to underprivileged sections may not be able to get sufficient funding from market sources. DoT may consider eligibility of such products to get funding support for testing under RS Framework under Clause 25(b), (c) and (d) of the new Telecommunication Act. The decision to provide such a funding support will rest with the authority governing the Digital Bharat Nidhi	May be accepted
28	The Principal Applicant / Applicant who desires to avail such funding may indicate so in the application along with the details of funding sought. However, the Principal Applicant / Applicant may note that proposals that do not seek Government funding will have higher chances of acceptance and therefore Principal Applicant / Applicant should preferably make their own arrangements for funding the proposal.	May be accepted