

Koan Advisory Group's Response to TRAI Consultation on "Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication Services"

The Telecom Regulatory Authority of India (TRAI) floated a consultation paper (CP) titled "Regulating Converged Digital Technologies and Services – Enabling Convergence of <u>Carriage of Broadcasting and Telecommunication Services</u>" on 30 January 2023. We appreciate and thank TRAI for opening this issue for public discussion. Please see our response below.

Q1. Whether the present laws are adequate to deal with convergence of carriage of broadcasting services and telecommunication services? If yes, please explain how?

Whether the existing laws need to be amended to bring in synergies amongst different acts to deal with convergence of carriage of broadcasting services and telecommunication services? If yes, please explain with reasons and what amendments are required?

Whether there is a need for having a comprehensive/converged legal framework (separate Comprehensive Code) to deal with convergence of carriage of broadcasting services and telecommunication services? If yes, provide details of the suggested comprehensive code.

The present regulatory framework is adequate to address extant challenges. There is no need for a new legal framework or amendments to existing frameworks. The Ministry of Electronics and Information Technology (MeitY) is drafting the Digital India Act, and the Ministry of Information and Broadcasting (MIB) is making changes to the Cable Television Networks (Regulation) Act, 1995. These initiatives are consultative processes, and they aim to adapt present laws to technological changes. There is no specific merit in considering a converged legal framework to subsume all the above under a separate Comprehensive Code.

Several government ministries/departments regulate different aspects of communications to achieve disparate regulatory objectives. The DoT outlines telecom policy and manages spectrum allocation. The MIB administers content regulation for content on television, radio, and digital. MIB refers licenses for activities that require spectrum allocation to the WPC and the NOCC under the DoT for clearance. DPOs and broadcasters have distinct obligations under the Cable Television Networks (Regulation) Act, 1995 and the TRAI regulatory framework based on the activity they perform. To sum up, there are adequate mechanisms and systems of coordination between different line ministries in broadcasting and telecom.

Under the Allocation of Business Rules, 1961, the Ministry of Electronics and Information Technology (MeitY) administers the Information Technology Act, 2000 and other policy matters and laws related to information technology, the internet, and services they enable,



including OTTs.¹ Information Technology Act, 2000 and the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 have separate obligations for intermediaries or conduits that enable information exchange, and additional responsibilities on social media intermediaries and online curated content providers.

MeitY has set a target of unlocking 1 trillion-dollar value from India's digital economy by 2025.² Any disruption in the governance framework for internet services is likely to have an adverse effect on the digital economy. Internet usage in India is still growing. In September 2022, India had 800 million wireless broadband subscriptions³ which is expected to grow beyond 1 billion by 2025.⁴ 90% of active users use the internet for online communications like text, voice, and video chats. Entry barriers and compliance burdens could decelerate this growth because it will disincentivize the entry of new entrants (especially smaller local entrants), new offerings, and innovation.⁵ Moreover, it would hurt telecommunications service providers in the long run because OTTs drive data consumption and subscriptions.

The Modi government has undertaken several initiatives to ease compliance burdens by liberalising several activities that used to require licenses. In 2022, the Department of Telecommunications replaced the requirement for a license to import wireless equipment under the Customs Act with a self-certification mechanism.⁶ The government also introduced a mechanism for industry-led self-regulation of online curated content and broadcasting content in 2021.

Existing frameworks in the digital sector adequately address governance challenges in digital, and there is no need for a regulatory overhaul. A regulatory overhaul could disrupt existing targets set by MeitY.

Further, the TRAI premises the need for a regulatory overhaul on several assumptions without evidence of any market or regulatory failure.

The CP states, "Convergence may be disruptive as the changes in the market structure, competition, mergers and acquisitions are not to be seen much in individual markets but rather in a consolidated market."⁷ The TRAI does not substantiate the above statement with a market

¹ Allocation of Business Rules, 1961.

² MeitY, India's Trillion Dollar Opportunity, (February 2019), available at:

https://www.meity.gov.in/writereaddata/files/india_trillion-dollar_digital_opportunity.pdf

³ TRAI Telecom Subscription Data (December 2022), available at: https://www.trai.gov.in/sites/default/files/PR_No.13of2023.pdf

⁴ Ministry of External Affairs Report, India to have nearly 1 billion Internet users by 2025 (May 2022), available at: <u>https://indbiz.gov.in/india-to-have-nearly-1-billion-internet-users-by-2025-report/</u>

⁵ Global Network Initiative, Closing the Gap: Indian Online Intermediaries and a Liability System Not Yet Fit for Purpose (March 2014), available at: <u>https://copenhageneconomics.com/wp-content/uploads/2021/12/Closing-the-Gap---Copenhagen-Economics_March-2014.pdf</u>

⁶ Ministry of Communications, Compendium of Orders/ Circulars/ Guidelines issued from WPC Wing, DoT in regard to Import licensing requirement from WPC Wing for import of wireless equipment, (July 2022), available at:

https://dot.gov.in/sites/default/files/Compendium%20of%20Orders%20related%20import%20licence%20signed%20copy%20060722.pdf

⁷ TRAI CP on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' (2023), para 1.19, available at: <u>https://www.trai.gov.in/sites/default/files/CP_30012023.pdf#page=14</u>



study or evidence of market failure. The CP refers a publication from 2012⁸ - which is outdated and does not reference any market failure in the Indian context. As a regulatory practice, evidence of market failure must precede regulatory intervention.⁹

Further, the CP states, "From the perspective of a Regulator, convergence may mean integration into a single regulatory framework of formerly separate responsibilities or the creation of explicit means of coordination among regulators concerned with similar sectors, issues, etc."¹⁰ The TRAI does not provide evidence to support this. There is no discernible stakeholder consensus on the need for a consolidated regulatory framework, and other regulatory bodies even go so far as to contradict the TRAI's view. Moreover, the MIB, in its reference letter, states that there is no need to change regulatory processes and rejected the need for bringing content and carriage regulation under a single framework.¹¹

The CP states, "In India, technological convergence is leading to a hazy space where both licensed telecom service providers and other players are operating." Licensed telecom players and the other players operate in different layers of the internet. (Please see our response to Q2 for our detailed explanation). The TRAI CP on Digital Connectivity Infrastructure Providers, recognised four distinct layers - Application, Service, Network and Infrastructure.¹² International practices in countries like Australia, UK, EU and Singapore also adopt a differential regulatory approach for networks and services (Explained in our response to Q2 below).

The TRAI states, "Further high-speed wireless technologies are creating a substitute for the traditional broadcasting platforms such as of DTH and Cable TV and have become an alternative to the fixed broadband services. Thus, there is a mix of technologies / platforms which are offering similar content/linear channels and experience."¹³ The TRAI did not give any evidence for the assertion. Instead, existing data is contrary to TRAI assertions. A survey by BIF – CUTS¹⁴ indicates that consumers prefer TV as compared to other modes of video consumption.

https://www.trai.gov.in/sites/default/files/CP_30012023.pdf#page=5

https://www.trai.gov.in/sites/default/files/Consultation_Paper_09022023.pdf#page=16

⁸ Olawuyi J.O. & Mgbole, 'Technological Convergence', Science Journal Publication (2012), available at: <u>https://www.sipub.org/sip/sip-221.pdf</u>

⁹ Joseph E. Stiglitz, The Price of Inequality, 46-47 (2012) ("Markets by themselves often fail to produce efficient and desirable outcomes, and there is a role for government in correcting these market failures, that is, designing policies (taxes and regulations) that bring private incentives and social returns into alignment."), available at:

http://resistir.info/livros/stiglitz_the_price_of_inequality.pdf#page=46; Marc Ribaudo, Fred Kuchler, and Lisa Mancino, 'Market Failures: When the Invisible Hand Gets Shaky', 01 November, 2008, available at:

https://www.ers.usda.gov/amber-waves/2008/november/market-failures-when-the-invisible-hand-gets-shaky/ ¹⁰ TRAI CP on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' (2023), para 1.1, available at:

¹¹ TRAI CP on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' (2023), Annexure 3, available at:

https://www.trai.gov.in/sites/default/files/CP_30012023.pdf#page=146

¹² TRAI CP on 'Introduction of Digital Connectivity Infrastructure Provider (DCIP) Authorization under Unified License (UL)', para 2.1, available at:

¹³ TRAI CP on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' (2023), para 3.19, available at: https://www.trai.gov.in/sites/default/files/CP_30012023.pdf#page=93

¹⁴ A pan-India TV consumer survey was commissioned by Consumer Unity and Trust Society (CUTS International) and Broadband India Forum (BIF) in the months of April and May 2022. 10,053 consumer response data was



Q2. Whether the present regime of separate licenses and distinct administrative establishments under different ministries for processing and taking decisions on licensing issues, are able to adequately handle convergence of carriage of broadcasting services and telecommunication services?

If yes, please explain how?

If no, what should be the suggested alternative licensing and administrative framework/architecture/establishment that facilitates the orderly growth of telecom and broadcasting sectors while handling challenges being posed by convergence? Please provide details.

The present mechanism for separate licenses and distinct administrative establishments for different ministries can adequately handle extant challenges in the broadcasting services and telecommunication services sectors. It is imperative to regulate carriage and content distinctly.

TV broadcasting is distinct from video OTTs as it uses satellite and needs distribution platform operators to transmit content. TV broadcasting content is meant for public viewing. In contrast video OTTs use internet to transmit content. Video OTT content is non-linear, on-demand and not intended for public exhibition¹⁵. Similarly, OTT communication and TSP services are different. TSPs offer any-to-any services, i.e. they provide interconnection., operate in network layer, enjoy exclusive rights¹⁶ and use spectrum. In contrast, OTT communication do not provide any-to-any service (no interconnection), operate in application layer, do not enjoy exclusive and do not use spectrum.¹⁷

It is imperative to separate the activity of acquiring spectrum and establishing a physical network (carriage) from using existing networks to provide services (content). These distinctions are acknowledged the current regulatory framework. A carriage service enables information exchange while content services create and package the information that carrier services exchange. The DoT has consistently espoused the need to delink network licensing and service delivery in telecom policies¹⁸ and stressed on the need to delink network licensing from service delivery. The TRAI also expressed the same view in its 2017 Recommendations

analysed, available at: <u>https://broadbandindiaforum.in/wp-content/uploads/2022/08/BIF-CUTS_Indian-TV-Consumers-Study-Report_2-August-2022.pdf#page=11</u>

¹⁵ Tansimul Hassan, 'Digital Divide: Is Big Brother Trying to Control the Booming Internet Space?'The Leaflet, 5 March 2021, available at: <u>https://theleaflet.in/digital-divide-is-big-brother-trying-to-control-the-booming-internet-space/</u>

¹⁶ TSPs enjoy several exclusive rights conferred on them through their licences, such as the right to acquire spectrum, the right to obtain numbering resources, the right to interconnect with the PSTN, and right of way to set up infrastructure. See Noyanika Batta, 'Regulation of OTT Communications Services: Justified Concern or Exaggerated Fear?' January 2023, pg 13,

available at: <u>https://static1.squarespace.com/static/5bcef7b429f2cc38df3862f5/t/63d8b49179bdf80b02924cc6/1675146395190</u> /Esva Centre Report Communications OTT Services.pdf#page=13

¹⁷ Ibid.

¹⁷ Note 8 on pg 42.

¹⁸ 3.3, National Telecom Policy 2012, The Department of Telecommunications, available at: <u>https://dot.gov.in/sites/default/files/NTP-06.06.2012-final_0.pdf#page=11</u>



on Regulatory Framework for Internet Telephony.¹⁹ The Recommendations say that "*The* separation of network and service layers of telecom service offerings is the natural progression of the technological changes in this domain. It is now possible to separate provision of service contents, configuration and modification of service attributes regardless of the network catering to such service."²⁰

Network operators create and operate the network layer (i.e., the web of underlying telecom, broadcasting, or digital infrastructure that connects service providers and to end-users)²¹ and include Distribution Platform Operators (DPOs), Telecom Service Providers (TSPs), and Internet Service Providers (ISPs).

A. <u>MeitY should continue to regulate IT and IT-enabled services including OTTs and</u> <u>DoT should administer spectrum and grant network licenses, without impinging</u> <u>on regulation of services.</u>

Content providers offer services on the application or content layer (i.e., the layer that relies on communication infrastructure networks to provide services to the end-users).²² They include OTT Communication Services, Online Curated Content Providers, and other digital/mobile applications. Data centres and hosting services are infrastructural upgrades on the network layer that enables seamless delivery of vast amounts of services. These do not use spectrum. The network layer uses spectrum, hosting services ensure maximum utility from scarce spectrum, and the application layer offers varied services to communications using the available network. It is only the network layer that uses spectrum and hence they are licensed and regulated by the DoT.

There are several key differences between carriage providers and content providers that negates the need for a one-size-fits-all approach. A network operator can offer services on their network, but application/content service providers cannot offer network connectivity. The Australian Competition and Consumer Commission (ACCC) found that the technical shortfall OTT communication faces in terms of enabling any-to-any connectivity limits the substitutability of traditional communications and OTT communications.²³ OTT communication applications cannot operate without access to networks that TSPs enable, and they have a symbiotic relationship. Rich interactive applications like OTT communications drive demand for network and data use that benefit networks²⁴, and networks facilitate the infrastructure for OTT communications to run.

¹⁹ TRAI 'Recommendations on Regulatory Framework for Internet Telephony' (October 2017), available at: <u>https://www.trai.gov.in/sites/default/files/Recommendations 24 10 2017 0.pdf</u>

²⁰ Ibid pg 27.

²¹ ITU-T recommendation X.200 (07/94) 'Information Technology – Open Systems Interconnection – Basic Reference Model: The Basic Model' (1994), available at: <u>http://www.itu.int/rec/dologin_pub.asp?lang=e&id=T-REC-X.200-199407-I!!PDF-E&type=items</u>; *See* also Microsoft 'Windows Network Architecture and the OSI Model' (2022), available at: <u>https://learn.microsoft.com/en-US/windows-hardware/drivers/network/windows-network-architecture-and-the-osi-model</u>

²² ibid.

²³ Australian Competition and Consumer Commission, Communications Sector Market Study (April 2018), available at: <u>https://apo.org.au/sites/default/files/resource-files/2018-04/apo-nid139446_1.pdf</u>

²⁴ Brian Williamson, Deconstructing the "level playing field" argument – an application to online communications (May 2017), available at: <u>http://static1.1.sqspcdn.com/static/f/1321365/27575015/1495793366237/LPFMay24.pdf</u>



Several jurisdictions acknowledge the distinction between the network layer and the content/application layer and regulates them separately. Singapore distinguishes between Facilities-based Operations (FBO)²⁵ or Services-Based Operations (SBO)²⁶ and prescribes separate licensing and regulatory frameworks for each. The former refers to the activity of installing carriage infrastructure and the latter refers to the activity of providing services on existing infrastructure. Thus, OTT communication apps operate under SBO license. However, for video OTTs there is an automatic permission and content regulation through Content Code for Over-the-Top, Video-on-Demand and Niche Services.²⁷ Similarly, South Africa also prescribes two categories of licenses under the Electronic Communication Act, 2005 for Electronic Communications Network Service (ECNS) and Electronic Communication Service (ECS).²⁸ However, South Africa does not license video OTT services.²⁹

TSPs require a license because they use scarce spectrum to set up a network. The government licenses TSPs as the public trustee of spectrum and TSPs obtain the right to acquire spectrum when they obtain a license. OTT communication applications have no such right. Conversely, TSPs can decide the services that may operate on their network and essentially gatekeep an OTT application's connectivity. The government imposes obligations on TSPs in the form of license conditions which we cannot separate from the right to acquire spectrum. A licensing framework for OTT communication services would impose duties without the concomitant right to acquire, own, or control spectrum. For the same reason, the 2018 ACCC report found that there is "*no basis for requiring equivalent regulatory treatment*".³⁰ The TRAI had also recognized the separation of the network layer and the content/application layer in its 2020 Recommendations on 'Regulatory Framework for Over-the-Top (OTT) Communication Services'.³¹ This is consistent with the telecom regulator's position in its 2015 Consultation Paper on OTT Regulation³² and the DoT's position in 2012 and 2018.

Also, it is important to note that several telcos provide OTT services and have an advantage because barriers to entry in OTT markets are low. Telcos have large subscriber bases that they can leverage to boost subscriptions in OTT markets. The Competition Commission of India in

https://static1.squarespace.com/static/5bcef7b429f2cc38df3862f5/t/63d8b49179bdf80b02924cc6/1675146395190 /Esya_Centre_Report_Communications_OTT_Services.pdf#page=33

²⁵ Singapore Infocomm Media Development Authority, Guidelines for Submission of Application for Facilities-Based Operations License, available at: <u>https://www.imda.gov.sg/-/media/Imda/Files/Regulations-and-</u> <u>Licensing/Telecommunication/Facilities-Based-Operations/FBOGuidelines.pdf</u>

²⁶ Singapore Infocomm Media Development Authority, Guidelines for Submission of Application for Services-Based Operations License, available at: <u>https://www.imda.gov.sg/-/media/Imda/Files/Regulations-and-</u> <u>Licensing/Licensing/Telecommunication/Services-Based-Operations/SBOGuidelines.pdf</u>

²⁷ Content Code, available at: https://www.imda.gov.sg/-/media/imda/files/regulation-licensing-and-

consultations/codes-of-practice-and-guidelines/acts-codes/ott-vod-niche-services-content-code-1mar2018.pdf ²⁸ Section 1, Electronic Communications Act, 2005.

²⁹ Noyanika Batta, 'Regulation of OTT Communications Services: Justified Concern or Exaggerated Fear?' January 2023, pg 33, available at:

³⁰ Note 8 on pg 42.

³¹ TRAI Recommendations on 'Regulatory Framework for Over-the-Top (OTT) Communication Services' (2020), available at: <u>https://trai.gov.in/sites/default/files/Recommendation_14092020.pdf</u>

³² TRAI Consultation Paper on 'Regulatory Framework for OTT Services' (2015), available at: <u>https://www.trai.gov.in/sites/default/files/OTT-CP-27032015.pdf</u>. In para 2.1, the TRAI defines an OTT "*as a service provider offering ICT services, but neither operates a network nor leases network capacity from a network operator. Instead, OTT providers rely on the global internet and access network speeds to reach the user"*.



its market study on the telecom sector observed that telecos can develop their own OTT services, but OTT services did not have the same flexibility to build infrastructure.³³

In 2017, the Competition Commission of India (CCI) noted that instant communication applications like WhatsApp are not in the same relevant market as traditional electronic communications.³⁴ The CCI cited key differences in functionalities OTT communication services and traditional communication networks enable, pricing conditions (OTT communications are free), and device used to access either (any phone for traditional communications vs. smart devices for OTT communications. Further, the CCI also found that consumers have limited choice in switching between the telecommunication networks because of associated switching costs while services on the communication network such as OTTs are highly competitive, often cost-free, and there are no limitations on using multiple services at the same time.³⁵

The ITU³⁶ and jurisdictions like the European Union³⁷ and Australia³⁸ acknowledge that OTT communication applications and traditional telecommunication services are not perfect substitutes and adopt a differential approach. The ITU recommends separate regulatory frameworks for OTT communication services like a collaborative framework for OTTs³⁹, enabling environment for voluntary commercial arrangements between telecommunication network operators and OTT providers⁴⁰, and customer redress and consumer protection mechanisms for OTTs⁴¹.

MeitY is best placed to make assessments on policy and regulation for OTT services because of years of memory and experience in regulation of IT and IT-enabled services. OTT services operate in the content layer and not the carriage layer that DoT regulates.

B. <u>MIB should continue to regulate broadcasting services and DoT should grant</u> <u>network licenses for activities that require spectrum allocation and other aspects</u> <u>of carriage.</u>

Figure 1 below shows a key distinction in the broadcasting sector. Broadcasters produce and package content that distributors carry to consumer homes using their own networks. The DoT

³³ CCI Market Study on Telecom Sector, para 59, available at: <u>https://www.cci.gov.in/images/marketstudie/en/market-study-on-the-telecom-sector-in-india1652267616.pdf#page=28</u>

³⁴ Vinod Kumar Gupta V.s. Whatsapp Inc [Competition Commission of India, 01-06-2017] para 11. ³⁵ Ibid para 19.

³⁶ ITU-T Technical Paper 'Economic impact of OTTs' (2017), pg 9, available at: <u>https://www.itu.int/dms_pub/itu-t/opb/tut/T-TUT-ECOPO-2017-PDF-E.pdf</u>

³⁷ European Electronic Communications Code, 2018, available at: <u>https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_2018.321.01.0036.01.ENG</u>

³⁸ Telecommunication and Other Legislation Amendment (Assistance and Access) Act 2018, available at: <u>https://www.legislation.gov.au/Details/C2018A00148</u>

³⁹ ITU-T Study Group 3, Recommendation ITU-T D.262 (2019/05): Collaborative framework for OTTs, available at: <u>https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=13595</u>

⁴⁰ ITU-T Study Group 3, Recommendation ITU-T D.1101 (2020/08): Enabling environment for voluntary commercial arrangements between telecommunication network operators and OTT providers, available at: https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=14269

⁴¹ ITU-T Study Group 3, Recommendation ITU-T D.1102 (2021/12): Customer redress and consumer protection mechanisms for OTTs, available at: <u>https://www.itu.int/ITU-T/recommendations/rec.aspx?rec=14730</u>



has a role only in the allocation of spectrum. MIB is the nodal body for licensing the entities mentioned below but permissions from the WPC and NOCC under the DoT are pre-requisites to obtain an MIB license for services that use spectrum. Although both telcos and DPOs perform the same activity – carriage, there are several key nuances that separate the two. For example, telcos enable multidirectional carriage while DPO carriage is unidirectional, i.e., DPOs carry broadcasting content to consumer homes, but a TSP sets up a connection between two nodes. TSPs do not decide the direction and flow of content between two connected nodes but DPOs do. MIB inputs in broadcasting carriage regulation is important because of its years of experience in cable TV digitization and knowledge of the underlying technology involved in broadcasters, MIB refers license applications to the DoT. There is no need to disrupt this regulatory model.

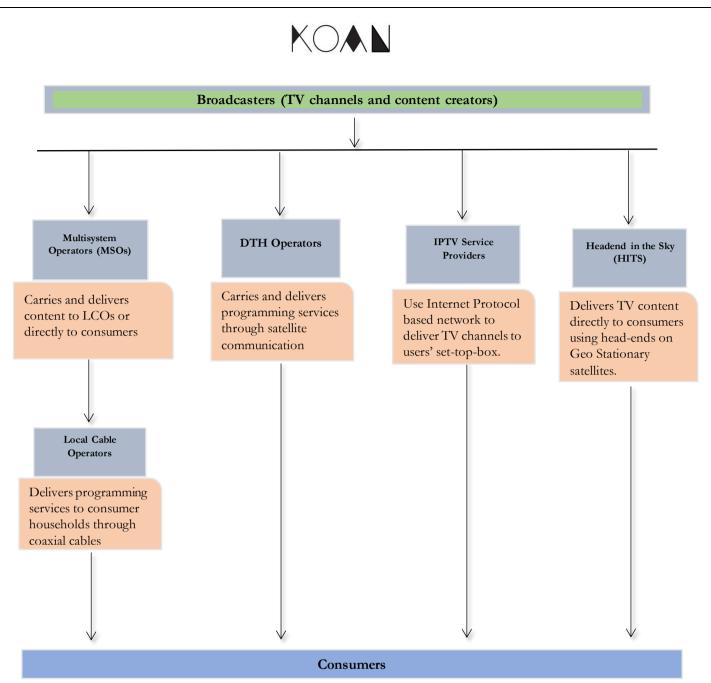


Figure 1: Content and carriage in broadcasting

The 1999 Sub-Group on Convergence (the Nariman Committee) discussed the need to separate content regulation from carriage regulation in broadcasting. Sub-Group I highlighted the TRAI's capacity constraints in broadcasting regulation and noted that the nature of the market and disputes in the broadcasting sector are different from the telecom sector, and the added responsibility over broadcasting would be cumbersome for this reason. Sub-Group III opined that it is imperative to separate broadcast carriage regulation and content regulation. Currently, the separation exists with the TRAI regulating carriage, and the MIB regulating content.

Even in countries that have a converged regulator, there is separation of carriage and content. Germany regulates broadcasting content through collaboration between 16 state media. The state media authorities collaborate on licensing and supervision, and development of private broadcasting. They are also responsible for the compliance of private TV and radio broadcasts



with basic programming principles. TheFederal Network Agency regulates telecommunications⁴²

The distinction is also self-evident in the regulatory approaches followed in other countries. The definition of 'electronic communications' in South African law explicitly excludes 'content services'.⁴³ The definition of an 'electronic communication service' in the European Union⁴⁴ and the United Kingdom⁴⁵ also explicitly exclude content. Singapore regulates content through Codes of Practice issued by the IMDA which are distinct from the licensing framework for SBOs and FBOs.

The MIB should continue to regulate the broadcasting sector and license service providers under the existing 'Broadcast Seva' portal.

Q3. How various institutional establishment dealing with -

- (a) Standardization, testing and certification.
- (b) Training and Skilling.
- (c) Research & Development; and
- (d) Promotion of industries

under different ministries can be synergized effectively to serve in the converged era. Please provide institution wise details along with justification.

Concerns around multiple domains of supporting institutions under various ministries, highlighted in the CP are implementation and process issues that the government can address through administrative changes. An overhaul of regulation in the sector is disproportionate to the aims of addressing challenges with administrative processes. There is no need to change the functioning of existing institutional establishments. Integrated online portals like the MIB's Broadcast Seva adequately addresses the regulatory objective of 'Ease of Doing Business'. Any new mechanism to subsume the functions performed by all institutional establishments would disrupt government functioning and lead to policy uncertainty.

Ministries/departments have their own in-house expertise and regulate activities to implement policy and regulatory objectives. This functional distinction allows ministries/departments to specialise and develop institutional memory and expertise from years of regulation and administration in their respective domains. Institutional memory plays an important role in policy formulation⁴⁶ because entities understand business and learn to regulate markets without disruption.⁴⁷ Institutional memory is a combination of experience, and assumptions that

⁴² Joachim Grittmann and Alexander Wilhelm, 'The Technology, Media and Telecommunications Review: Germany' The Law Reveiws, 6 January 2023, available at: <u>https://thelawreviews.co.uk/title/the-technology-media-and-telecommunications-review/germany</u>

⁴³ 'electronic communications', Section 1, Electronic Communications Act, 2005.

⁴⁴ Article 2(4), European Electronic Communications Code, Directive (EU) 2018/1972.

⁴⁵ Section 32, Communications Act, 2003.

⁴⁶ Suresh Kumar, *Opinion: Repeal of laws reflects fading institutional memory*, Economic Times, 11 December, 2021, available at: <u>https://government.economictimes.indiatimes.com/news/governance/opinion-repeal-of-laws-reflects-fading-institutional-memory/88225482</u>

⁴⁷ Richar Sack and PTM Marope, 'The Pedagogy of Education Policy Formulation: Working from Policy Assets', Perspectived in Education (2007), pg 19, available at: <u>https://www.researchgate.net/profile/Richard-Sack-</u>



organically develop over time within an organizational culture.⁴⁸ Research suggests that restructuring of an institution affects⁴⁹ and declines⁵⁰ institutional memory. The TRAI's proposed convergence in regulatory structure may disturb the institutional memory. A converged regulator would erase institutional memory gained through years of research and discussions.

MIB highlights the need for activity-based regulation in its letter to the DoT dated 4 October 2022.⁵¹ We agree with the MIB's view that there is no need to reengineer processes or consolidate the licensing framework under one single government entity. The MIB's recommendation in paragraph 6 of the letter to streamline the Broadcast Seva portal and integrate it with other government processes is the best way forward to improve 'Ease of Doing Business'.

The mechanism under the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 is another example of streamlining government processes without disrupting Ease of Doing Business. The Rules provide for an Inter-Departmental Committee (IDC) to address consumer complaints on content. The IDC includes representatives from several entities including the Ministry of Home Affairs, and the Ministry of Women and Child Development.

There are several examples of integrated online portals to create synergies between government departments that regulate distinct functions of the same entity. The Central government has developed National Single Window System⁵² for businesses and start-ups.⁵³ State governments in Rajasthan⁵⁴ and Karnataka⁵⁵ have created similar single window clearance portals⁵⁶ for entrepreneurs and investors, which help them to navigate compliance landscapes. These portals are steps to boost 'Ease of doing Business'. Countries such as Malaysia have developed "one service, one delivery, no wrong door" policy, with all the public service access at a single

2/publication/44837840 The Pedagogy of education policy_formulation_working_from_policy_assets/links/5fa ea415a6fdcc9ae04d2a93/The-Pedagogy-of-education-policy-formulation-working-from-policy-assets.pdf#page=19 ⁴⁸ Sonya Yvette Marsh, 'Retention of Institutional Memory via Knowledge Management: Perceptions regarding the effectiveness of Corporate Approaches applied in Higher Education' LSU Digital Commons (2016), pg 19, available at: <u>https://digitalcommons.lsu.edu/cgi/viewcontent.cgi?article=1971&context=gradschool_dissertations#page=19</u> ⁴⁹ Sonia Exley, 'Open Policy Making in the UK – to whom might policy formulation be 'opening up'?' Journal of Social Policy, LSE (2021), pg 7, available at:

https://eprints.lse.ac.uk/103840/1/SE OPM paper JSP 2020 final pre proof version.pdf#page=7 ⁵⁰ Nick Cosstick, 'Is institutional memory in decline?' (2021), available at:

https://www.csap.cam.ac.uk/news/article-institutional-memory-decline/

https://www.trai.gov.in/sites/default/files/CP_30012023.pdf#page=146

⁵¹ TRAI CP on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' (2023), Annexure 3, available at:

⁵² National Single Window System, available at: <u>https://www.nsws.gov.in/</u>

⁵³ Shreya Nandi, *Single window system launched, to improve ease of doing business*, Business Standard, 23 September, 2021, available at: <u>https://www.business-standard.com/article/economy-policy/govt-launches-national-single-window-system-for-investors-businesses-121092201030_1.html</u>

⁵⁴ Rajasthan Single Window Clearance system, available at: <u>https://swcs.rajasthan.gov.in/</u>

⁵⁵ E-biz Karnataka, available at: <u>https://ebiz.karnataka.gov.in/eBiz/#</u>

⁵⁶ The idea behind such a portal is to ensure that an entrepreneur can apply for necessary licenses, compliance, certificates, at a single portal.



portal.⁵⁷ For approvals from multiple departments, these single window platforms can help the stakeholders and offer better coordination mechanism.

The TRAI premises the need for better synergy on several assumptions without evidence of any market or regulatory failure.

The CP states, "Due to the convergence of technologies, many new-age services like Over-thetop (OTT) Communication Services, online video streaming, etc. are operating at the intersection of these compartmentalized functions of the departments and many times, remain out of the required policy and regulatory oversight of the Government."⁵⁸ This is not true. OTT services in India are regulated under Information Technology Act 2000 and its Rules, the Consumer Protection Act 2019 and the Consumer Protection (E-commerce) Rules 2020, the Cert-In Direction 2022, etc ⁵⁹. Additionally, OTTs are a part of self-regulatory bodies such as Digital Publishers Grievances Council (DPCGC). Second, departments and ministries have effective coordination mechanisms, where necessary. A case in point is the coordination between MIB and MeitY at multiple levels for framing IT Rules 2021 and briefing stakeholders about them.⁶⁰The licensing mechanism for DPOs and broadcasters under the 'Broadcast Seva' portal is another example of a coordination mechanism.

The CP quotes section 6A (1) of the IT Act 2000.⁶¹ Then it states, "As it appears from the plain reading of this provision in the Information Technology Act 2000, the service providers using electronic means to deliver services must have the permission of the appropriate Government in accordance with the policy governing such service sector."⁶² According to TRAI's understanding, online services must get government permission to launch, as per India's IT Act. This is incorrect. The provision when read with Information Technology (Electronic

⁵⁷ United Nations E-Government survey, 'Taking a whole-of-government approach' (2012), pg 8, available at: <u>https://publicadministration.un.org/egovkb/Portals/egovkb/Documents/un/2012-Survey/Chapter-3-Taking-a-whole-of-government-approach.pdf#page=8</u>

⁵⁸ TRAI CP on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' (2023), para 1.11, available at:

https://www.trai.gov.in/sites/default/files/CP_30012023.pdf#page=11_

⁵⁹ Noyanika Batta, 'Regulation of OTT Communications Services: Justified Concern or Exaggerated Fear?' January 2023, pg 19, available at:

https://static1.squarespace.com/static/5bcef7b429f2cc38df3862f5/t/63d8b49179bdf80b02924cc6/1675146395190/ /Esya Centre Report Communications OTT Services.pdf#page=19.

⁶⁰ Action Taken by the Government on the Observations/Recommendations of the Committee contained in their Twenty-seventh Report (Seventeenth Lok Sabha) on 'Ethical Standards in Media Coverage', pg 31, available at: <u>https://loksabhadocs.nic.in/lsscommittee/Communications%20and%20Information%20Technology/17_Communications and Information Technology 38.pdf#page=31</u>

⁶¹ Section 6A (1) of the IT Act states, "The appropriate Government may, for the purposes of this Chapter and for efficient delivery of services to the public through electronic means, authorize, by order, any service provider to set up, maintain and upgrade the computerized facilities and perform such other services as it may specify, by notification in the Official Gazette.

[[]Explanation: For the purposes of this section, service providers so authorized includes any individual, private agency, private company, partnership firm, sole proprietor form or any such other body or agency which has been granted permission by the appropriate Government to offer services through electronic means in accordance with the policy governing such service sector.]"

⁶² TRAI CP on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' (2023), para 1.30, available at: https://www.trai.gov.in/sites/default/files/CP_30012023.pdf#page=20



Service Delivery) Rules 2011⁶³ indicates that it regulates government agencies or government authorized service providers that provide public services. Rule 3(1) of the 2011 Rules states that the appropriate Government **may on its own or through an agency authorised by it, deliver public services through electronically- enabled kiosks or any other electronic service delivery mechanism.** The definition of 'authorized agent' and "electronic service delivery" under the 2011 Rules clarify this further. The former means an agent of the appropriate government or service provider authorized under the 2011 Rules to deliver public service, while the latter refers to delivery of public services in the form of filing receipt of forms and applications, issue or grant of any license, permit, certificate, sanction or approval and the receipt or payment of money by electronic means by following the procedure specified under rule 3. Thus, this provision is meant to cover entities that provide e-governance services.

The CP states, "Large economies around the world like the USA, UK, Australia, European Union, etc. have established the converged regulators who are empowered and made responsible for overseeing the complete electronic communication space which includes telecommunication, broadcasting, media, and cyberspace. They have a common body that authorizes or provides licenses for both telecommunications and broadcast services."64 However, the organization of OfCom in the UK is such that there are members on each of the administrative bodies with experience and knowledge in different subject matters. For example, there are members with experience in broadcasting, spectrum management, and emerging technologies on the OfCom Board. There is a Content Board, which is a committee on the main Ofcom board and is responsible for any content-related aspects.⁶⁵ Additionally, British Board of Film Classification (BBFC), an independent, non-governmental body that classifies⁶⁶ film. video and computer and console-based games which are commercially released for the UK market.⁶⁷ Similarly, for Australia, content regulation is separate. ACMA⁶⁸ and eSafety Commissioner (eSafety)⁶⁹ regulate content. It is also pertinent to note that these countries do not have a specialised ministry with institutional memory and expertise on IT and IT-enabled services like the MeitY in India.

https://film.britishcouncil.org/resources/support-organisations/british-board-film-classification https://www.trai.gov.in/sites/default/files/CP_30012023.pdf#page=116

https://www.accc.gov.au/system/files/Australian%20Communications%20and%20Media%20Authority%20%28F ebruary%202019%29.PDF

⁶³ Information Technology (Electronic Service Delivery) Rules 2011, available at: <u>https://upload.indiacode.nic.in/showfile?actid=AC_CEN_45_76_00001_200021_1517807324077&type=rule&file_name=GSR316E_10511(1)_0.pdf</u>

⁶⁴ TRAI CP on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' (2023), para 4.1, available at:

 ⁶⁵ Ofcom Content Board, available at: <u>https://www.ofcom.org.uk/about-ofcom/how-ofcom-is-run/content-board</u>
⁶⁶ Frequently Asked Questions, BBFC, available at: <u>https://www.bbfc.co.uk/about-us/faqs</u>

⁶⁷ British Council, available at: <u>https://film.britishcouncil.org/resources/support-organisations/british-board-film-classification</u>

⁶⁸ Australian Communications and Media Authority response to the Australian Competition and Consumer Commission Digital Platforms Inquiry Preliminary Report, pg 5, available at:

⁶⁹ eSafety Commissioner, available at: https://www.esafety.gov.au/about-us/who-we-are



The CP states, "*in the USA, FCC regulates providers of telecommunication services, broadcasting services, cable services and its content*"⁷⁰. The First Amendment and the Communications Act expressly prohibit the FCC from censoring broadcast content⁷¹, though there are restrictions on the licensees to not distort news and spread hoaxes intentionally. The Courts have held that FCC may regulate content in society's interest to protect children. In general, the FCC does not regulate information provided over the Internet, nor does it intervene in private disputes involving broadcast stations or their licensees.

Q4. What steps are required to be taken for establishing a unified policy framework and spectrum management regime for the carriage of broadcasting services and telecommunication services? Kindly provide details with justification.

Existing processes for spectrum allocation i.e., administrative assignment for satellite spectrum should continue. Network licensing and use of spectrum for service delivery are distinct functions and the government should adopt a nuanced approach and distinguish the mode of spectrum allocation for satellite spectrum vis-à-vis terrestrial spectrum. Satellite spectrum should be allocated through an administrative process.

Out of the 193 ITU member countries, few countries have conducted auctions for domestic satellite slots. The legislative history of the ORBIT Act (that bans satellite spectrum auction in the US⁷²) includes a Commerce Committee report⁷³ according to which the Committee apprehended that concurrent auctions in other countries could place significant financial burdens on US owned global satellites. Additionally, the Committee pointed out that launch of a global and international satellite system requires substantial resources (before getting licenses) and a spectrum auction would disrupt availability of capital for such satellite projects. The US authorizes domestic and foreign satellites through an administrative process. Brazil abandoned auctions for orbital slots in 2020⁷⁴, and noted that no country in the world follows this approach⁷⁵. Brazil discontinued auctions as because it put domestic satellite operators at a

⁷⁰ TRAI CP on 'Regulating Converged Digital Technologies and Services – Enabling Convergence of Carriage of Broadcasting and Telecommunication services' (2023), para 4.6, available at:

https://www.trai.gov.in/sites/default/files/CP_30012023.pdf#page=118 ⁷¹ FCC, "The Public and Broadcasting", pg 6, available at:

https://www.fcc.gov/sites/default/files/public and broadcasting 0.pdf#page=6

 ⁷² TV Ramchandran, 'Don't auction satellite spectrum', The Hindu Business Line, 27 October 2022, available at: <u>https://www.thehindubusinessline.com/opinion/dont-auction-satellite-spectrum/article66062155.ece</u>
⁷³ Report of Committee on Commerce, Communications Satellite Competition and Privatization Act of 1998, H.R. Rep. No.494, 105 Cong., 2nd Sess. pg 64-65 (1998). , available at

https://www.congress.gov/105/crpt/hrpt494/CRPT-105hrpt494.pdf

⁷⁴ Brazil, Law No. 9,472 of July 16, 1997, § 172, as amended by Law No. 13,879 of October 3, 2019 (replacing satellite auctions with administrative process), at <u>https://informacoes.anatel.gov.br/legislacao/leis/2-lei-9472#livroIIItituloVcapII</u>.

⁷⁵ Brazil, ANATEL, Analysis No. 241/2020/MM, Public Consultation regarding the General Satellite Regulation -Item No. 37 of the Regulatory Agenda for the 2019-2020 biennium (17 Dec. 2020) at para 4.70-4.81, available at https://sei.anatel.gov.br/sei/modulos/pesquisa/md_pesq_documento_consulta_externa.php?eEPwqk1skrd8hSlk5 Z3rN4EVg9uLJqrLYJw_9INcO6WoeHMBfhEpsGdV8m3dD4wT0pjDpcgcaIS61R3UjJd_ZLKrutrh6DuXQLXjN 9HUfMZ9RrUBhEkSkb_KXbDORK.



disadvantage⁷⁶Thailand and Mexico also considered auctions for orbital slots and later abandoned their attempts.⁷⁷ Notably, Thailand scrapped the auction as it got only a single bidder.⁷⁸

Global coordination of satellite spectrum allocation under the aegis of the International Telecommunication Union (ITU) is based on the principles of efficient use and equitable access to spectrum/orbit resources.⁷⁹ In the case of terrestrial spectrum, each frequency band can be used only by a single operator and cannot be shared because of interference. Different networks in adjacent channels may cause significant inter-network interference, even with a guard band.⁸⁰ At any given point of time multiple operators look to exclusively use spectrum, and this leads to scarcity. Under such circumstances, the public interest and efficient utilization of the resource are best served by auctioning the spectrum.

Satellite spectrum is a shared global resource and non-exclusive in nature. Multiple satellite operators can use spectrum within the same geographic area. Multiple operators may use the same satellite frequency using different satellites without interference. The positioning of the satellites ensures that there will be no interference on the receiver end. Because of this characteristic of satellite spectrum, administrative allocation is the best method of allotting this type of spectrum. Exclusive auctioning of satellite spectrum that can be shared between operators would lead to unnecessary segmentation and inefficient use of spectrum, which goes against public interest and principles enshrined under ITU Radio Regulations. Article 4.1 of the ITU Radio Regulations states that "*Member States shall endeavour to limit the number of frequencies and the spectrum used to the minimum essential to provide satisfactorily the necessary services*..."⁸¹.

Satellite spectrum auction would artificially limit the number of satellite operators sharing spectrum and impact services like broadcasting and broadband. Auctioning of the satellite spectrum would create barriers to entry, and limit participation in the Satcom sector to a few prominent players.⁸² It would lead to large players becoming gatekeepers of spectrum with high bargaining power over small service providers. This would this hamper the innovation, research & development ecosystem for the country's space sector⁸³, and discourage foreign investment from international players. It would also increase the costs for end consumers and limit the availability of services. For instance, 350 different broadcasters use shared satellite spectrum to offer more than 900 channels in India currently. Restricting the use of satellite

⁷⁶ TV Ramchandran, 'Prioritise public good over earning revenue', Voice&Data, 24 March, 2023, available at: <u>https://www.voicendata.com/prioritise-public-good-over-earning-revenue/</u>

⁷⁷ note 49.

⁷⁸ TV Ramchandran, 'Prioritise public good over earning revenue', Voice&Data, 24 March, 2023, available at: <u>https://www.voicendata.com/prioritise-public-good-over-earning-revenue/</u>

⁷⁹ Article 44(2) of the ITU Constitution, available at: https://www.itu.int/en/council/Documents/basic-texts/Constitution-E.pdf#page=49.

 ⁸⁰ Jeong Seon Yeom et al., "Performance Analysis of Satellite and Terrestrial Spectrum-Shared Networks with Directional Antenna," ETRI Journal 42, no. 5 (2020): pp. 712-720, https://doi.org/10.4218/etrij.2020-0185.
⁸¹ Article 4.1, ITU Radio Regulations, Edition of 2020.

 ⁸² Satcom Industry Association. Satellite Spectrum Allocation: International Best Practices and Learnings [<u>White</u> Paper] (March 2022), available at: <u>https://www.sia-india.com/wp-content/uploads/2022/03/SIA-India-White-Paper-on-Satellite-Spectrum-Allocation-Intl-Best-Practice-Learnings.pdf#page=10</u>.
⁸³ Ibid.



spectrum through exclusive auctioning would curtail these services. Administrative assignment should continue.

Q5. Beyond restructuring of legal, licensing, and regulatory frameworks of carriage of broadcasting services and telecommunication services, whether other issues also need to be addressed for reaping the benefits of convergence holistically? What other issues would need addressing? Please provide full details with suggested changes, if any.

Please see our responses to the Questions above. There is no need to restructure legal, licensing, and regulatory frameworks for broadcasting services or telecommunication services. Existing regulation and processes should continue.

Please see our additional comment below.

Any new regulation framework would reverse India's policy of progressive liberalization in the sector.

Regulating frameworks in telecommunications stem from the rationale that spectrum is a scarce natural public resource that countries must regulate in public interest. Judgements by the Supreme Court of India recognise the government's trusteeship over natural resources.⁸⁴ The Indian government has progressively liberalized regulatory frameworks since 1994.

Since the 2012 Telecom Policy, the government has held that view that network licensing is separate from service delivery to end-users, and that licensing frameworks must not extend to content regulation. In the National Digital Communications Policy 2018 the DoT committed to "*remove regulatory barriers and reduce regulatory burden that hampers investments, innovation and consumer interest*...".⁸⁵ The TRAI had also recommended forbearance on OTT regulation in 2020. The TRAI's 2020 Recommendations on a Regulatory Framework for OTT Communication Services noted that "*any regulatory intervention may have an adverse impact on the industry as a whole*" and market forces should be allowed to operate.⁸⁶ The CP does not demonstrate reason or evidence to track back on this approach which has led to organic sectoral growth, and protected consumer interest.

Table I below captures the GOIs liberal outlook on the telecom and the digital sectors from 1992 - 2020.

⁸⁵ 8, Preamble to the National Digital Communications Policy 2018, available at: <u>https://dot.gov.in/sites/default/files/2018_10_29%20NDCP%202018_0.pdf</u>

⁸⁴ M.C. Mehta v. Kamal Nath and Ors. (1997) 1 SCC 388 para 116; Reliance Natural Resources Ltd vs Reliance Industries Ltd. (2010) 7 SCC 1 para 114.

⁸⁶ TRAI Recommendations on Regulatory Framework for Over-The-Top (OTT) Communication Services (2020), , para 2.4., available at: <u>https://trai.gov.in/sites/default/files/Recommendation_14092020.pdf</u>



Policy	Telecom regulation	Value-add and other	Rationale
intervention		service providers	
1992 ⁸⁷		Value-added	To achieve
		services like e-mail	standards
		and data services	comparable to
		opened to private	international
		investment.	facilities. ⁸⁸
1994 Telecom	Private sector allowed to	Operate under	Make use of private
Policy	provide basic telecom	license on a non-	resources to expand
	services.	exclusive basis	connectivity and
			achieve universal
			coverage. ⁸⁹
1999 Telecom	Migration from Fixed	Other Service	Creation of modern
Policy	Fee regime to a Revenue	Providers may	efficient
	Share Agreement regime	operate on access	communication
	to collect license fees	provider	infrastructure ⁹⁰
	from TSPs.	infrastructure	
200291		without a license.	
200391	Unified Access Service		
	License to provide both		
	fixed and/or mobile		
	services under the same		
	license. Spectrum delinked from licenses.		
2012 National	Simplify the licensing	Explicitly states that	Extend converged
Telecom Policy	framework.	Explicitly states that licensing	Extend converged high-quality
		frameworks will not	services across the
		cover content	nation including
		regulation.	rural and remote
		regulation.	areas. ⁹²
			arcas.

⁹² 2012 National Telecom Policy, Objective no. 11, pg 6, available at: <u>https://dot.gov.in/sites/default/files/NTP-06.06.2012-final_0.pdf#page=6</u>

⁸⁷ Telecom Sector Profile, Report No. 5 of 2005, pg 2, available at:

https://cag.gov.in/uploads/old_reports/union/union_compliance/2004_2005/Commercial_Audit/Report_No_5/ Telcom_sector_profile.pdf#page=2

⁸⁸ National Telecom Policy,1994,'Value Added Services', para 8: available at: <u>https://dot.gov.in/national-telecom-policy-1994</u>

⁸⁹ National Telecom Policy, 1994, 'Resources for the Revised targets', para 6: available at: <u>https://dot.gov.in/national-telecom-policy-1994</u>

⁹⁰ New Telecom Policy, 1999, '2.0 Objectives and targets of the New Telecom Policy 1999', available at: <u>https://dot.gov.in/new-telecom-policy-1999</u>

⁹¹ A Repository on Internet & Society, The Centre for Internet & Society, pg 233, available at: <u>https://cis-india.org/internet-governance/files/internet-institute-repository#page=233</u>



2016	Unified	UL licensees may offer	OTT services not	Facilitate delinking
License	(VNO)	services throughout the	brought within any	of the licensing of
introduced	1. ⁹³	country and choose the	licensing	networks from the
		services they want to	framework.	delivery of services
		offer.		to the end users. ⁹⁴
2020	TRAI		No need for OTT	Any regulatory
Recomme	ndations		regulation at this	intervention may
on	OTT		stage. Market forces	have an adverse
regulation	l .		should be allowed to	impact on the
			operate.	industry as a whole95

Table I: Progressive Liberalization of the Telecommunications Sector

In short, the government has removed licensing and regulatory constraints from several areas including telecom since liberalization. The government has consistently held the view that competition facilitates innovation in the sector and leads to benefits like better coverage and access to high-quality services. Since 1992, the government has relaxed licensing conditions for networks and the DoT has not regulated services. This policy approach has enabled access to a wide variety of online services on top of robust connectivity infrastructure. India's policy stance on content-carriage separation, and separation of regulatory frameworks that apply to network licenses from service delivery to end-users should continue.

⁹³ Guidelines for grant of UL (VNO), pg 1,5, available at:

https://dot.gov.in/sites/default/files/2018_08_31%20UL%20VNO%20G.pdf?download=1#page=1 : ⁹⁴ Guidelines for grant of UL (VNO), para 1, pg 1, available at: https://dot.gov.in/sites/default/files/2018_08_31%20UL%20VNO%20G.pdf?download=1#page=1

⁹⁵ TRAI Recommendations on Regulatory Framework for Over-The-Top (OTT) Communication Services (2020), pg 9, available at: <u>https://trai.gov.in/sites/default/files/Recommendation_14092020.pdf#page=9</u>