BIF RESPONSE TO TRAI CP ON REGULATORY FRAMEWORK FOR

OTT COMMUNICATION SERVICES

Broadband India Forum (BIF) welcomes the TRAI consultation on Regulatory Framework for OTT Communication Services. TRAI has been a trusted regulator for Indian consumers to rely on to safeguard citizen freedoms on a consistent basis while ensuring fair market competition.

Executive Summary

BIF is of the firm belief that OTT and TSP operators provide quite different services and experience different sets of challenges. This warrants a more in-depth look into how best to preserve fair and healthy competition within our markets for both OTTs and TSPs in their own domains.

The advent of OTT services is an innovative, disruptive force. Indian consumers have embraced OTT technology and services. So much so that India leads the world in the amount of data consumption with over 2,360 PB of data in 2017 [Deloitte]. The overwhelming thirst for more and more OTT-delivered content in India has brought heavy investments in this area. Indeed, OTT players have earmarked a staggering INR 3,300 Crore towards developing OTT services. This boom benefits not just the Indian consumers and OTT providers but the TSPs themselves. After all, all OTT apps are accessed only through TSP networks. Embracing the disruption and innovation that OTTs bring to the industry will help all stakeholders, TSPs included, grow their consumer base and increase revenues. With all our progress, 65% of Indians are still without internet access. When TSPs invest in the critical infrastructure required to bring these millions of people online, they will reap the benefits of the OTT disruption.

As the world's leading authority on Innovation and Growth, Harvard Business School Professor – Clay Christensen states –

"Breaking an old business model is always going to require leaders to follow their instinct. There will always be persuasive reasons not to take a risk. But if you only do what worked in the past, you will wake up one day and find that you've been passed by."

It is quite clear that TSPs have been facing significant financial challenges even before the proliferation of OTT services. Fierce competition between TSPs themselves has driven their pricing down. With brand loyalty on the decline and consumers frequently switching between TSPs based on latest offers, Telcos have been forced to heavily discount and offer competitive pricing for their packages.

Telcos also face a heavy financial burden from the other end due to -

a) high spectrum pricing
b) excessive spectrum usage charges
c) high license fee burdens

In fact, the total burden of all levies and taxes on Indian TSPs is one of the highest in the world.

As part of any growing business in a capital-intensive industry such as Telecom, TSPs have had to invest greatly in necessary infrastructure to grow their reach, customer base and improve quality of service. Relieving pressures induced by high spectrum pricing, taxes and duties will ease the burden on TSPs.

On a different note, OTT services are an innovation that has endeared themselves to the end users around the globe. They are extremely convenient, cost-effective and easy to use. In fact, Telcos in India have also embraced OTT partnerships in order to leverage a competitive edge. Reliance Jio has partnered with Disney, , Airtel partnered with Eros Now, Sony LIV, HOOQ and Amazon Prime. Vodafone offers content from Discovery Communciations and AltBalaji. So, OTT and TSPs are complementary services that when offered together, provide better offerings to the end users.

Indian TSPs have been providing free calling as part of their bundled data packages, post introduction of VoLTE technology in order to appeal to the changing demands from consumers. With the current tariff plans, the TSPs are clearly shifting to a data only model with unlimited voice calls and SMS.

OTT technology has allowed Indian consumers to absorb content at a greater rate – making us one of the top countries in the world as far as data exchange goes. Data is fast-becoming the most valuable currency of the future. If India plans to stand shoulder-to-shoulder or ahead of current world leaders, we will need to enable a free-flow of data and foster innovation.

Revenue opportunities from OTTs have actually helped propagate massive investments in 4G networks. OTT music, and video applications drive growth and accompanying revenue for TSPs due to the large volumes of data being consumed.

OTT networks face their own limitations and restrictions simply because they are dependent on TSPs to provide internet services in order for consumers to avail their services. All broadband access is controlled directly by TSPs alone, and OTTs are a dependent industry and not equal. TSPs are the gatekeepers to broadband internet access and therefore to OTTs themselves. Due to the ease of developing OTT services, there are also very few barriers to entry for new OTT

providers to emerge. Consumers can easily switch between competing OTT app providers and new ones can enter the market every day. Consumers generally access a mix of OTT services through one mobile device on a daily basis – thus restricting their OTT use will hinder user convenience. However, consumers have limited choices in their TSPs and there may be costs associated with switching between one provider to another.

TSPs enjoy many rights that OTT providers do not and will not have access to – namely, the right to acquire spectrum, the right to obtain numbering resources, the right to inter-connect with the PSTN, and the right of way to set up infrastructure – there is no such exclusive privilege granted to OTTs. In fact, TSPs can very easily provide OTT services themselves and capitalize on them, but OTTs will not be able to break into and compete with existing TSPs as they are restricted to the application layer . OTTs cannot enter the network layer.

Increasing the regulatory burden of OTTs is most likely to hinder innovation and growth in this industry. With our large and data-hungry consumer base, India is poised to lead the world in internet use and data flows. Introducing licenses and regulations upon OTTs has a high potential to negatively impact our digital economy and industry growth. In particular, Indian startups that provide OTT services will find it difficult to take on the cost of licenses and will lose the ability to compete with larger corporations that have the legal and regulatory resources required for compliance.

Furthermore, lines are blurred between communication OTTs and non-communication OTTs. For example, the distinction between providers who only provide Voice-over-IP versus entertainment content is getting blurred. Several corporations, particularly in the gaming and e-commerce industries, diversify and offer several of these services under one umbrella – how then does one distinguish between the two? And more importantly, is this distinction even necessary?

It is certainly admirable that the TRAI continues to review and drive India forward in terms of ensuring a fair and level-playing field for the Telecom industry. However, we firmly believe that the solution to this challenge lies in helping Telcos lift themselves out of their financial misery by relaxing the existing licenses and rules on TSPs. This will allow them to innovate, compete and profit in the free market. In fact, Telcos need to invest in quality infrastructure like fibre optic cables network, towers, and much more in order to grow their customer base, reduce internet latency, increase broadband capacity and meet the growing demand from consumers. Easing the financial burdens imposed on TSPs currently will give them the ability to invest in better infrastructure and partner with OTT providers to deliver better services to their customers.

The DOT has already begun taking steps to unshackle TSPs from cumbersome regulatory burdens and we welcome this move to drive innovation forward.

Another question that arises is - How will restrictions on OTT regulation impact the free internet? Regulations on specific fragments of services offered on the internet distinguished by different providers runs the risk of becoming redundant in the field of digital communications where innovations in technology occur at a very rapid pace. What is new today is old by tomorrow in some instances. India needs to stay at the centre stage of innovation and continue to be an emerging and attractive hub for new services and technologies to help our economic growth.

While a few guidelines may aid in separating the two types of entities at a higher level, delving a little deeper will demonstrate how murky the attempt to segregate providers will soon become. It will be very difficult to clearly define an OTT or an application service.

If OTTs and TSPs continue to grow a successfully symbiotic relationship they will continue to reap their rewards and stay profitable. OTTs have helped place India as a No. 1 country in terms of data usage – and there is still much more to be gained. With a population of 1.3 billion, only about 400 million currently have internet. Working hand-in-hand, TSPs and OTTs can reach the remainder of this population and benefit greatly from providing internet and broadband services, and delivering content to our voracious population. **We, therefore advocate the need for Regulatory neutrality for existing players- whether the communication space, licensed TSPs or in the broadcasting space. Easing the burden of current licensing compliances on TSPs will allow them to pursue greater investments required to grow their customer base and revenues.**

QUESTIONS & BIF RESPONSES

Q.1 Which service(s) when provided by the OTT service provider(s) should be regarded as the same or similar to service(s) being provided by the TSPs. Please list all such OTT services with descriptions comparing it with services being provided by TSPs.

BIF Response

OTT applications that do not interconnect with the public telephone network and provide any-to-any connectivity are not the "same or similar" to services provided by TSPs because:

(1) apps and TSPs have fundamentally different technical and economic characteristics;
(2) apps typically provide a wider set of features than traditional services;
(3) apps are, unlike traditional services, accessible on any Internet-capable device; and
(4) apps operate in different layers than do traditional services.

Regulators and policymakers in other jurisdictions, such as in the EU and Australia, have determined that non-interconnected OTT applications are not equivalent to or are not perfect substitutes for traditional telecom services. We request the Authority to consider that globally, many law and policymakers recommend a cautious approach to extension of existing telecom regulation to OTT applications and consideration of opportunities to deregulate traditional services.

Moreover, the so-called substitutability of OTT communications apps for traditional services is especially misleading since it is not an option for the majority of users who still do not have access to smart devices, and thus do not have access to OTT apps.

Usage and Technological Differences between OTTs and TSPs

In this context, we submit the following points for the consideration of the Authority regarding the important differences between OTT communications applications and traditional services:

1. Implying that OTT communications applications and TSPs provide the same services or operate in the same market ignores critical differences between the two. OTTs are not substitutes of TSPs; they depend on them. A consumer cannot even access OTT applications

without first purchasing internet access service from a network operator. TSPs control the underlying broadband access infrastructure, and are the gatekeepers to broadband internet access and therefore, OTTs themselves. Further, consumers typically have limited choices in their TSP and there may be costs associated with switching (and telecommunications regulations have been structured with those considerations in mind). By contrast, OTT applications cannot be offered without access to the physical networks that *only* TSPs deploy. OTT apps operate in a highly competitive market in which it is easy and often cost-free for consumers to switch between competing apps, and many consumers access multiple OTT communications apps from one device (thus, the rationale underpinning many legacy telecommunications regulations does not apply to OTT communications applications). TSP licenses also confer several exclusive rights that OTT players do not enjoy. These include, for example: (i) the right to acquire spectrum, (ii) the right to obtain numbering resources, (iii) the right to interconnect with the PSTN, and (iv) the right of way to set up infrastructure. Also, OTTs enjoy no exclusive right to deploy their applications. TSPs can and often do provide their own OTT applications. On the other hand, an OTT application provider would need a license to deploy a TSP Network. And as noted above, because entry barriers and switching costs are low for OTT applications, the OTT market, unlike the TSP market, is highly competitive. We elaborate on this further in subsequent questions.

2. Equating OTT communications with traditional services is overly simplistic and ignores that OTTs often offer diverse functionalities, do not easily fall into straitjacketed categories, and may use messaging or calling merely to augment unrelated services and improve the consumer experience. Conceiving "communication services" as a sub-category of OTT applications creates an impractical distinction between communication functionalities and non-communication functionalities among OTT applications. For example, gaming, document editing, photo sharing, social media and many other fundamentally dissimilar functionalities allow users to communicate with each other. It would be incorrect and inappropriate to characterise and regulate them as telecommunications services. Some examples of such communication service features are as follows:

• Messaging/calls in payment apps (such as PayTM)
• Messaging/calls in gaming apps (such as Call of Duty)
• Messaging/calls in rental apps (such as Airbnb)
• Messaging/calls in food ordering apps (such as Zomato)

Clearly, these examples above are vastly different. Since their usage and functionalities are very different from traditional telecom services, there is little comparison between the two. For example, traditional message services can be used between two devices and include basic text and image content. An OTT messaging app may provide additional functionalities such as the ability to have group chats, and share documents and videos, among other features. Thus, OTT services provide expansive experiences to customers that go beyond conventional messaging and

communication options provided by TSPs. OTT communications applications such as WhatsApp, Hike Messenger, and Google Hangouts provide rich messaging features not available through SMS, and they also have broad economic impact. A recent study estimates that for the year 2017, this consumer surplus for India provided by "Rich Interactive Applications" or "RIA" was a substantial Rs 6.3 lakh crore. This means that the benefits provided by RIAs are higher than the price paid by the consumers for the RIAs.

A 2017 report by WIK found that each 10% increase in usage of RIAs led to an average increase of US$5.6 trillion in global GDP (0.33% of GDP) from 2000 to 2015.[1] And according to one study, a five percent increase in WhatsApp penetration in 2015 is associated with a US$22.9 billion increase in global GDP.[2] In this context, viewing OTTs as free riders on TSP networks, not subject to any regulation is incorrect. OTT services deliver massive consumer value and are regulated under the framework of the Information Technology Act (IT Act).

3. The diversity of OTT services can be evidenced by the multiplicity of devices that can use them. Any device (mobile, tablet, laptop, desktop) connected to the Internet (whether WiFi or mobile or fixed line) can use OTT applications, which is not the case for traditional services. Effectively, any proposal for additional regulation by the Authority will cast a very wide net bringing the entire software industry under a new regulatory framework. This level of disruption will raise new uncertainties for the industry.

4. Telecom networks and OTT applications operate in different layers (network layer and application layer respectively) and offer functionalities on different devices and compete for different groups of customers.

Global OTT Policies and Regulations

Many regulators and policymakers have already determined that OTT communications applications are not equivalent to traditional network-based services.

We call the Authority's attention in particular to the European Union's acknowledgment in the revised European Electronic Communications Code of the fundamental differences between "number-based interpersonal communications services" (NB-ICS), such as those interconnected with the public telephone network, and "number-independent interpersonal communications services" (NI-ICS), which includes non-interconnected OTT communications apps that ride over the network. The EU created separate regulatory regimes for NB-ICS and NI-ICS, subjecting NI-ICS to lighter touch regulation.

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[1] Dr. Rene Arnold et al. The Economic and Societal Value of Rich Interaction Applications in India. Broadcast India Forum. November 2017. Access here
[2] Rosie Mate and Greg Rafert. The Global and Country-level Economic Impacts of WhatsApp. Analysis Group. Access here

The Australian Competition & Consumer Commission (ACCC) determined in its April 2018 Communications Sector Market Study that there "is no basis for requiring equivalent regulatory treatment" of OTT and traditional voice services. The ACCC reasoned that "the extent of substitution from traditional voice services to OTT voice services is limited by technical shortfalls (such as any-to-any connectivity) and consequently we do not consider OTT services to be full substitutes for voice services at this time." The ACCC went on to state that the "emergence of OTT services has largely been a positive development for consumers," including in how OTT companies "provide[] consumers with new services (such as entertainment, social media, ride-sharing, shopping, etc.) and innovative alternatives to traditional communications services (such as voice and text messaging)," and that the ACCC "consider these developments have a strong pro-competitive impact on a variety of markets."

And as the Authority notes, Ofcom has similarly determined in the context of a review of the market for mobile call termination for the period of 2018 to 2021 that "there are no sufficiently close substitutes for termination of calls to mobile numbers for us to widen the market definition, nor are any likely to emerge over the period covered by this review. This means that, for example, voice calls terminated using Over The Top (OTT) services which do not use mobile number ranges, such as FaceTime, Skype or WhatsApp, are not part of the relevant markets."

Additionally, policymakers around the globe caution against extending telco regulation to online apps and are considering deregulation of traditional services. Globally, many law and policymakers recommend a cautious approach to extension of existing telecom regulation to apps and consideration of opportunities to deregulate traditional services. For example, in a joint letter to the European Commission (EC) regarding reform of the European Union's telecoms framework, the governments of 10 European countries cautioned against "automatically extending" regulation to online apps, urging the EC to "consider deregulation of traditional telecoms services." Similarly, the Nordic National Regulatory Authorities recommended "a cautious approach to regulation" of online apps and that "possibilities to simplify, modernize and lighten existing regulation should be pursued."

Regulators and lawmakers are also actively reconsidering existing telecommunications regulatory frameworks in light of changes in the marketplace. For example, Hong Kong's Commerce and Economic Development Bureau (CEDB) has initiated a review of its broadcasting regulatory framework "with the aim of relaxing obsolete statutory requirements." The CEDB did not propose to extend existing obligations for traditional audiovisual services to online apps in part because "[t]hough OTT and other Internet TV and radio programme services are gaining their prominence, traditional media . . . are still highly pervasive and accessible to all in the family, young   and   old."

In October 2017, the Australian Parliament enacted broadcasting reform legislation that in part eliminated media control and broadcast audience reach restrictions and was intended to "improve the sustainability of Australia's free-to-air broadcasting sector" and "reform[] outdated

media regulation . . . to better reflect the contemporary digital media environment."

In November 2017, the US Federal Communications Commission (FCC) eliminated or revised several of its broadcast ownership rules to "reflect the present, not the past" of the media landscape. The FCC concluded that updating those rules – which principally limit a single entity's ownership of multiple media outlets – would afford broadcasters and local newspapers "a greater opportunity to compete and thrive in the vibrant and fast-changing media marketplace."

Criteria for Comparing OTTs and TSPs

Substitutability is only one of the many criteria that should be considered by the Authority in determining whether comparable regulations should apply on OTTs and TSPs. Other relevant factors include: ubiquity and adoption, consumer welfare, addressable markets, level of competition, maturity of industry, lifecycle of product/services, impact on economy (especially SMEs and startups), level of innovation, nature of the underlying technology and other technical considerations such as whether the service connects to the public telephone network, and switching costs, amongst other factors.

Even if functional comparison were the only criteria, consumers do not view OTT communications applications that do not provide any-to-any connectivity as substitutes for traditional telecom services. And regardless, it would be illogical for all functionally similar services to be regulated the same because then, for example, cars and bicycles or Airlines and Railways would have a common regulatory framework. Further, it must be recognised that substitutability in itself is a complex criteria: it comprises many considerations and factors and shouldn't be simply reduced to one factor. In this context, we submit the following points for the consideration of the Authority:

1. Several considerations are important for determining substitutability in the context of regulation besides functional similarity. For example, the players must: (i) compete in the same layer (e.g., network layer, application layer, etc.) with comparable rights to resources; (ii) offer functionally comparable services; (iii) compete for the same group of customers; (iv) operate in the same service area; and (v) offer services on comparable devices. Given the differences highlighted in our response to Question 1, it is clear that Internet communications applications and TSPs are far from being perfectly substitutable.

2. Invoking substitutability between the services to justify regulation or licensing requirements for OTT services will hurt consumers and industry. It will create a new barrier to entry for both new apps and service providers by raising the cost of service provision. Low barriers to entry, the open nature of the Internet, and rich interactions and experiences that OTT application and content providers enable are key to the continued growth of the digital economy. Ill-conceived regulatory and/or licensing obligations risk throttling Internet-based innovation as well as the nascent start-up ecosystem in India. Further, a poorly justified

domestic regulatory framework can discourage foreign investment in India. It will encourage Indian Internet companies to move their operations to more permissive regulatory jurisdictions abroad, a trend prevalent even today.

3. The criterion of substitutability is contrary to the government's current approach to carriage (TSPs) and internet content (OTTs) which fall under the Department of Telecommunications (DoT) and Ministry of Electronics and Information Technology (MeitY), respectively. OTT services are already regulated under the IT Act framework, as elaborated by the CP. In Chapter 4, the CP has detailed the obligations applicable to TSPs that are not applicable to OTT service providers.

Further, the CP has also delineated jurisdiction related issues, specifically data localisation and CLOUD Act, which come under the ambit of the Ministry of Electronics and Information Technology.

4. Any finding of substitutability based on the test of "substantial functionality" as iterated in Para 2.2.8 is bound to be flawed, because:

- It is not an objective test, as most OTT applications provide multiple functionalities (such as gaming, payments etc) and identifying whether the communications functionality is 'substantial' or 'ancillary' might depend on vague and varying factors. Such a test will invite uncertainty and litigation.
- It will encourage some OTT service providers to attempt to disguise the communication (messaging and voice) features among non-communication features, in order to escape obligations imposed on communication service providers.
- It will encourage OTT service providers to lower investments in their messaging and voice features in order to prove that they are ancillary, leading to a slowdown in the growth of these functionalities. This will hurt innovation, competition and customer choice.

In view of the above, BIF is of the opinion that OTTs and the TSPs cannot be compared as an apple-to-apple comparison because they are greatly different. OTT technology is a dependent technology for TSPs since Telcos control the internet access and infrastructure over which OTT services can be accessed. TRAI is already a champion of initiatives that benefit the Indian end customer and provide a fair and healthy marketplace. Encouraging a greater symbiotic partnership between OTTs and TSPs by easing the licensing and spectrum financing burden on TSPs will be the best foot forward to meeting the growing consumer demand.

India is one of the leading countries of app downloads with over 12 billion in 2017. In fact, India experienced a 45% growth in smartphone adoption and is only going to grow at a more rapid pace [E&Y report].

It will be extremely difficult to clearly define and segregate OTTs and TSPs. TSPs are moving away from basing their revenues on voice dialing services. In fact, Telcos are providing free unlimited calling as part of their packages. OTTs themselves are expanding services. They are not restricted to Voice over IP anymore or specific phone services. Entertainment, media, music and other content is delivered on a regular basis through both OTT operators and TSPs themselves.

The barriers to entry into offering OTT services are in fact, very low for TSPs. TSPs can easily enter into the OTT space while OTTs cannot enter the TSP space. OTT-alone providers are prohibited by the infrastructure investments that TSPs have the ability to commit to.

Q.2 Should substitutability be treated as the primary criterion for comparison of regulatory or licensing norms applicable to TSPs and OTT service providers? Please suggest factors or aspects, with justification, which should be considered to identify and discover the extent of substitutability.

<u>**BIF Response**</u>

BIF is of the firm opinion that substitutability cannot be applied as a primary criterion for comparing regulatory or licensing norms applicable to TSPs and OTT service providers. The OTTs and TSPs need each other in order to drive their growth and revenues. Telecom operators control all the underlying broadband access infrastructure, and are the gatekeepers to broadband internet access. No consumer can even access an OTT provider's services without availing of a Telco's internet and data package first. Any policy or regulation review will benefit by always looking at the issue through the lens of the end consumer – versus through individual fragments of backend providers. Indians love data. Indian citizens are some of the largest consumers of data and content in the world. Both OTT and TSPs are benefitting from this large and increasing demand for internet-based services- whether communication or otherwise. The market has

spoken. Consumers want their information and communication over the internet for the convenience, flexibility and pricing options that they are offered.

OTT services are usually less expensive and virtually free. OTT voice services are not a natural substitute of traditional voice services, and similarly, instant messaging services are not a natural substitute of SMS. These services cannot connect to a traditional PSTN/switched voice network.

But OTTs do not have the exclusive privileges granted to TSP players. There are virtually no barriers to entry – and even TSPs can enter and offer OTT services without any additional licensing or regulatory challenges. OTTs, however, are at a disadvantage if they want to enter the TSP market. OTTs are restricted to the application layer and cannot enter the network layer.

TSPs enjoy the right to acquire spectrum, the right to obtain numbering resources, the right to inter-connect with the PSTN, and the right of way to set up infrastructure.

With a billion consumers and growing, the country offers innumerable opportunities if both OTTs and TSPs are allowed to flourish and compete in healthy market conditions. Easing regulations and licensing requirement burdens on TSPs can greatly free their resources and business models up and allow them to grow their consumer base and increase their revenues.

Substitutability is only one of the many criteria that should be considered by the Authority in determining whether comparable regulations should apply on OTTs and TSPs. Other relevant factors that include consumer welfare, addressable markets, level of competition, maturity of industry, lifecycle of product/services, impact on economy (especially SMEs and startups), level of innovation, nature of the underlying technology and other technical considerations such as whether the service connects to the public telephone network, and switching costs, amongst other factors.

Even if functional comparison were the only criteria, consumers do not view OTT communications applications that do not provide any-to-any connectivity as substitutes for

traditional telecom services. It would be similar to, for example cars and bicycles, airlines and railways to fall under the same regulatory framework simply because they all engage in transportation. Furthermore, if substitutability is considered a primary criterion, many other considerations will have to be in place.

For example, the players must: (i) compete in the same layer (e.g., network layer, application layer, etc.) with comparable rights to resources; (ii) offer functionally comparable services; (iii) compete for the same group of customers; (iv) operate in the same service area; and (v) offer services on comparable devices.

Given the differences highlighted in our response to Question 1, it is clear that Internet communications applications and TSPs are far from being substitutable.

Focusing on substitutability for regulations and policy will also create a new barrier to entry for both new apps and service providers by raising the cost of service provision. Low barriers to entry, the open nature of the Internet, and rich interactions and experiences that OTT application and content providers enable are key to the continued growth of the digital economy.[3] Ill-conceived regulatory and/or licensing obligations risk throttling Internet-based innovation as well as the nascent start-up ecosystem in India. This can also discourage or reduce foreign investment in India. Indian enterprises that provide network and OTT services will benefit from an environment that invites and encourages global investment.

Thirdly, OTT services are already regulated under the IT Act framework, as elaborated by the CP[4]. In Chapter 4, the CP has detailed the obligations applicable to TSPs that are not applicable to OTT

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[3] In its report "The Economic and Societal Value of Rich Interaction Applications (RIAs) in India", WIK has stated that– "In order to protect and sustain this consumer value, innovation and in particular innovation in the internet economy must remain a top priority for policy makers." P. 5, available at https://www.wik.org/fileadmin/Studien/2017/WIK-BIF_Report_-_The_Economic_and_Societal_Impact_of_RIAs_in_India.pdf.
[4] Chapter 4: Factors relating to the regulatory framework, p. 23.

service providers. However, the areas relevant to OTT services are already regulated by the IT Act and the Rules notified thereunder.

- Lawful interception – governed by IT Act (s. 69) + The IT (Procedure and Safeguards for Interception, Monitoring and Decryption of Information) Rules, 2009 + IT (Intermediaries Guidelines) Rules, 2011

- Privacy and security – governed by IT Act + IT (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011

Further, the CP has also delineated jurisdiction related issues, specifically data localisation and CLOUD Act, which come under the ambit of the Ministry of Electronics and Information Technology.

Additionally, substitutability will fail to encompass the fact that OTT applications provide multiple functionalities – gaming, payments, entertainment, media etc. Greater regulations on OTT providers might just encourage them to incorporate communication features among non-communication features and avoid the extra regulations.

OTTs are currently offering innovative voice and data services, which may be complementary or in direct competition with the traditional service offerings by TSPs. The TSP network is currently leveraged for delivery of OTT services, and TSPs are heavily regulated due to restrictive license terms and conditions, roll-out obligations, security considerations, license fees, and other compliance obligations.

Amending existing license terms and conditions and regulations to bring regulatory parity to the treatment of service offerings of OTTs and TSPs. Licensing of OTT communication services is difficult to implement. Relaxing regulatory and licensing regime of licensed service providers is the best way to provide a level playing field and allow providers of all these services, including future innovations to thrive. Light touch regulatory framework is a recommended positive approach to address the issue of any regulatory imbalance.

Q.3 Whether regulatory or licensing imbalance is impacting infusion of investments in the telecom networks especially required from time to time for network capacity expansions and technology upgradations? If yes, how OTT service providers may participate in infusing investment in the telecom networks? Please justify your answer with reasons.

<u>**BIF Response**</u>

Worldwide, it is a cardinal principle that lesser regulation attracts more investment. By putting additional regulation can hamper infrastructure creation and therefore, investment in this sector. OTT services have increased data consumption exponentially without any doubt. The biggest beneficiaries of this increased data usage are TSPs and then content providers. This has led TSPs to provide voice and SMS services free. So pay for data and voice is free.

Now increased data consumption has increased capacity utilization. Increased capacity utilization led to expansion and further investment. As a consistently progressive regulator and policymaker, the TRAI is naturally focused on increasing investment in the digital communication space and boost economic growth. Investments will pour in from various sources based on the demand. Consumer demand can be met through healthy and active competition in the market.

Governments should continue the investment-friendly policies that have brought the vast expansion of network facilities till date and new services throughout the world, and allowed this critically important global communications medium to flourish and benefit the global community in ways that would have been unimaginable twenty years ago.

<u>Investment in the telecom and digital communications sector has actually improved since OTT services entered the market.</u> The Internet has become the most powerful communications medium and engine for economic growth ever, and has achieved this unprecedented growth without prescriptive regulation of the Internet that would have locked in place certain specific technologies or business models. Dynamic advances in ICT will continue to occur in response to future technological change and consumer demand, spurred on by new developments, including the Internet of Things, Software Defined Networks, and Big Data Analytics.

Recent massive investments in 4G networks are primarily due to revenue opportunities offered by OTT applications. OTT music, video functionalities continue to drive the growth of data and the accompanying revenues for TSPs.

The growth of OTT apps expands the avenues for greater revenues for TSPs. With OTTs offering progressively richer services, incentives for investment in networks will increase further. This will attract and make available greater funds to enable deployment of newer technologies and investment in network capacity and quality.

It is also important to note that OTT apps already participate in infusing investment in the networks, facilities, and equipment of the internet. A study by Analysis Mason in 2014 found such investment to be significant in the US context – between approximately USD28 billion and USD36 billion annually from 2011-2013, with a blended average in the region of USD33 billion per annum.

Another significant way in which OTT providers drive investment in this sector is by building physical facilities such as data centres, fibre networks, servers and routers. There is a wide array of advanced and expensive physical equipment that underpins the operation of the internet, which requires significant investment, and much of it is carried out by OTT players and their network service providers. Whether through OTTs, TSPs or both, the goal is to increase investments in this sector.

Further, OTTs have provided investment and revenue opportunities across the economy, not just for TSPs alone. A recent joint study conducted by WIK-BIF found that that "rich interaction applications" like WhatsApp, Facebook Messenger, Google Hangouts and Hike created a consumer surplus of US$98 billion (INR 6.3 lakh crores) in India. This is equivalent to 4.3% of India's GDP of US$2264 billion (INR 147 lakh crores) in 2016. Another study, by ICRIER in 2017, determined that during the period 2015-16, OTTs contributed a minimum of USD 20.4 billion (Rs. 1357.6 billion) to India's GDP. The study forecasts that by 2020, OTTs could contribute a minimum of USD 270.9 billion (Rs.18275.9 billion) to India's GDP.

As can be seen, focusing only on the impact of OTTs on TSP revenues would present an incomplete picture of the positive impacts of OTTs on consumers and the overall economy. It is easy to see that raising regulatory barriers for OTT players could hamper innovation in digital applications, and raise costs for users and the economy at large, instead of spurring investment.

In view of the above, the Authority should focus more on unshackling TSPs from unnecessary and expensive regulation which severely limits their ability to invest in networks. Indeed, it should also in centivize OTTs too to invest more in their part of ecosystem.

Q.4 Would inter-operability among OTT services and also inter-operability of their services with TSPs services promote competition and benefit the users? What measures may be taken, if any, to promote such competition? Please justify your answer with reasons.

BIF Response

Lack of interoperability, as it refers to users' ability to move or switch between OTT services, has not been seen as a serious barrier to competition. The rationale for requiring TSPs to interconnect and interoperate does not apply to OTT communications services. TSPs offer essential services including access to emergency services. If TSP services did not interoperate or interconnect, potentially large populations would be cut off from communications and life-saving access to emergency services.

- There has been no evidence of consumer harm due to a lack of interoperability of OTT applications. On the contrary, consumers have a vast range of choices at low to zero costs because the OTT market is highly competitive and has low switching costs. Consumers find it extremely easy to acquire knowledge about different apps and switch from one to another. This is corroborated by the Competition Commission of India in its order *in re* Vinod Kumar Gupta and WhatsApp Inc., which has stated as follows:

  "The Commission also observes that there are no significant costs preventing the users to switch from one consumer communication apps to another. It may be due to the following reasons:
  - *all consumer communication apps are offered for free of cost or at a very low price (mostly free),*
  - *all consumer communication apps are easily downloadable on smartphones and can co-exist on the same handset (also called 'multi homing') without taking much capacity along with other apps,*
  - *once consumer communication apps are installed on a device, users can pass on from one app to its competitor apps in no-time,*
  - *consumer communication apps are normally characterised by simple user interfaces so that costs of switching to a new app are minimal for consumers, and*
  - *information about new apps is easily accessible given the ever increasing number of reviews of consumer communication apps on apps store like google play store etc."*

Further, the OTT economy is arguably more competitive than TSP services. Constant new entry is a feature of the online space because the barriers to entry for online services are low. The products offered are typically software-based, which means they can be rolled out, adopted, and built upon much more quickly (and cheaply) than industrial products. A new mobile app requires minimal staff, capital investment and infrastructure. The rise of cloud-computing platforms has dramatically decreased the time and capital necessary to start and scale an online service. Moreover, app stores provide pre-existing distribution platforms for applications to reach users and scale quickly.

The above factors all make it easier for new services to compete with established products on the merits, and to do so quickly. This constant competition has led to a high rate of churn among the most popular online services.

- It is notable that technology is organically moving toward even technical interoperability, with Windows apps that can 'talk' to Android and iOS apps and vice versa. Music apps across platforms allow sharing of media, playlists etc. Crucially, these developments are not in pursuance of any regulatory mandates, but in response to market conditions.

- India has a robust antitrust regime that is equipped to deal with issues relating to abuse of dominance. The Competition Commission of India, associated with the Competition Act, 2002 is the competent forum to address such matters. Thus, no regulatory measures based on a notion of perceived consumer harm will be justified.

In terms of Communication & Messaging Services, as already mentioned earlier in response to Q1, the challenge in Communication services is over, now that Voice is being bundled along with data and is being offered as an Integral part of the Data Package of a subscriber, using VoLTE technology.

Lack of interoperability, as it refers to users' ability to move or switch between OTT services, has not been seen as a serious barrier to competition. The rationale for requiring TSPs to interconnect and interoperate does not apply to OTT communications services. TSPs offer essential services including access to emergency services, if TSP services did not inter-operate or inter-connect, potentially large populations would be cut off from communications and life-saving access to emergency services.

Consumers do not face issues when OTT applications lack inter-operability –simply because the OTT market is highly competitive, it has low switching costs, and do not have an obligation to provide connections to emergency services.. Consumers find it extremely easy to acquire knowledge about different apps and switch from one to another. This is corroborated by the Competition Commission of India in its order *in re* Vinod Kumar Gupta and Whatsapp Inc.[5], which has stated as follows:

"The Commission also observes that there are no significant costs preventing the users to switch from one consumer communication apps to another. It may be due to the following reasons:

(i)   all consumer communication apps are offered for free of cost or at a very low price (mostly free),

(ii)   all consumer communication apps are easily downloadable on smartphones and can co-exist on the same handset (also called 'multi homing') without taking much capacity along with other apps,

(iii) once consumer communication apps are installed on a device, users can pass on from one app to its competitor apps in no-time,

(iv)   consumer communication apps are normally characterised by simple user interfaces so that costs of switching to a new app are minimal for consumers, and

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[5]Case no. 99 of 2016, available at
https://www.cci.gov.in/sites/default/files/26%282%29%20Order%20in%20Case%20No.%2099%20of%202016.pdf.

(v)   *information about new apps is easily accessible given the ever increasing number of reviews of consumer communication apps on apps store like google play store etc."*

Interoperability between telecom and OTT services

Firstly, the interoperability between telecom and OTT services has already been examined by the Authority in its Recommendations on Regulatory Framework for Internet Telephony[6] published in 2017. In its recommendations, the Authority has noted that the present regulatory framework permits Unified Access Service Licensee (UASL), Cellular Mobile Telecom Service (CMTS) licensees and Unified Licensee (access service) to provide unrestricted Internet Telephony, which extends to both PC to Phone and Phone to PC calls within India as well as abroad. Additionally, ISPs in India are presently permitted to provide one-way PC-to-Phone Internet Telephony service for International Long Distance outgoing calls only on PSTN/PLMN to such countries where termination of Internet Telephony calls is permitted.

TSPs are in charge of a large level of bottleneck services – they are the gatekeepers for broadband/internet access. TSPs control a large amount of critical infrastructure in our country – and therefore, have a heavy regulatory framework to abide by. If this burden can be lessened, TSPs can also operate nimbly and become more agile – similar to OTTs. **Secondly**, as noted previously, there already exists a regulator to address competition issues arising from lack of interoperability.

The levels of network interoperability are likely to change if SDN and NFV take off. The goal of SDN is to enable cloud and network engineers to respond immediately to changing business requirements and thus network specifications. SDN uses different network technologies, which can make the infrastructure as such more agile. The core network (including data) can be excluded from the infrastructure, making active sharing arrangements more attractive.

Consequently, with the transition towards IP being almost concluded but still regulatory restrictions exist in the license conditions. As a first step, it will be beneficial for policy makers to remove the restrictions on IP-PSTN switching in CUG applications and in other areas.

Q.5 Are there issues related to lawful interception of OTT communication that are required to be resolved in the interest of national security or any other safeguards that need to be instituted? Should the responsibilities of OTT service providers and TSPs be separated? Please provide suggestions with justifications.

<u>**BIF Response**</u>

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[6] Available at https://trai.gov.in/sites/default/files/Recommendations_24_10_2017_0.pdf.

BIF upholds the need to protect national security at all costs. BIF also upholds and respects the need for Consumer Privacy upheld by the Hon'ble SC and for Data Protection and Data Security of the Consumers.

As explained earlier, since Voice Communications is now happening mostly through the Operator's VoLTE networks, the control lies within the TSP's Network which is already governed by lawful access to all calls. (LIS). With regard to messages on an OTT network, enhanced data encryption is the best way to ensure privacy and security.. When required by law, law enforcement should be able to access specific communication through the right channels and security can co-exist with privacy.

The IT Act addresses the issue of lawful interception and takedown through the following provisions: Section 69 which gives the government power to monitor or decrypt any computer resource; Section 69A dealing with takedown obligations; Section 69B empowering the government to monitor and collect traffic data or information through any computer resource for cyber security. There are various rules and regulations which further elaborate on the scope of these powers. Therefore, there is no need for any additional rules in this regard.

We are of the opinion that the encryption methods and other security related measures instituted by OTT players are critical for safeguarding the privacy of users. Research suggests that it is in the national interest to encourage the use of strong encryption policies by OTT service providers, and that its social benefits must be weighed against the perceived costs to law enforcement access.[7]

Encryption policies in India need to be evaluated in light of the following:

(i)   The Supreme Court has recently declared the right to privacy to be a fundamental right in India, of which informational privacy is a critical facet. OTT service providers seek to safeguard informational privacy through the usage of several security measures, including a variety of encryption methods.

(ii)   The use of secure pathways for communication serves to reduce the risk of cyber-crimes. It protects financial assets and proprietary data, enhances national security and thwarts cyber-enabled crime. Strong encryption prevents enormous losses that could otherwise take place when unauthorized access is attempted through increasingly sophisticated tools by cyber criminals.

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[7]*See* CSIS Technology Policy Paper (2017): https://csis-prod.s3.amazonaws.com/s3fs-public/publication/170221_Lewis_EncryptionsEffect_Web.pdf?HQT76OwM4itFrLEIok6kZajkd5a.r.rE,

If communication is already covered extensively by the long arm of our law, the question we need to ask is what additional benefit can be achieved through more layers of regulation surrounding these issues.

It may be further clarified that the above point does not apply to those OTTs which are solely engaged in providing pure play services viz. content streaming , etc with no voice or text communication and hence subjecting them to interception/encryption obligations are neither required nor applicable.

Q.6 Should there be provisions for emergency services to be made accessible via OTT platforms at par with the requirements prescribed for telecom service providers? Please provide suggestions with justification.

BIF Response

OTT services are provisioned in Close User Groups. In order to provide emergency services, it is required to route the call/message to the nearest authority like fire department, police, hospitals etc. Towards this, the first bottleneck in India is full fledge IP-PSTN connectivity is not permitted. CUG users are prohibited to terminate IP call/message in the PSTN. Removing this restriction can create an environment more conducive for OTTs to work on providing emergency service connections. Most other countries do not have this restriction.From a consumer standpoint, all consumers have to avail OTT services only through first accessing TSP networks – this means, all consumers will have the ability to access the emergency services that TSPs continue to provide.

Secondly, OTT services are not provided from one fixed location. Emergency calls require improved hyper-local and centralized infrastructure to rely on in order to deliver immediate and quality service to consumers. With the current available infrastructure, it is not possible to maintain the same positioning and routing information for emergency calls. The device operating system ("OS") serves as a layer between OTT communications apps and these location inputs, meaning that an app's access to geolocation information is subject to the framework of the device OS and to user permissions for location data access. And even if geolocation information based on Wi-Fi is available, Wi-Fi is still not a consistently reliable substitute for the persistent, unlimited access to comprehensive caller geolocation information available to the network operator. For example, power outages, which are common causes of emergencies in the first instance, can affect Wi-Fi availability and positioning accuracy. And, depending on the type of device used by the caller, Wi-Fi may only capture the location of the last place where the user is logged in. As such, requiring OTT communications apps to provide access to emergency services could in fact compromise, rather than expand, access to emergency services.

Also, most public-safety answering points (PSAP) are currently not equipped to handle incoming emergency communications from OTTs that are not interconnected with the PSTN. They will have to upgrade their IT systems and invest in new technologies.

At present, it will not be feasible for OTTs to be mandated to have a provision for emergency calls/services due to the issues listed above. However, as we evolve, we must certainly bring this discussion to the forefront once we make inroads into providing the infrastructure required to permit these services.

Emergency services are an important part of the digital ecosystem. However, with respect to OTT applications, it is important to consider the following:

• OTTs, which require consumer permission for location functionality, do not always have the persistent and granular geolocation information that is required for emergency services to locate emergency callers. The device operating system (OS) serves as a layer between OTT communications apps and these location inputs, meaning that an app's access to geolocation information is subject to the framework of the device OS and to user permissions for location data access. And even if geolocation information based on Wi-Fi is available, Wi-Fi is still not a consistently reliable substitute for the persistent, unlimited access to comprehensive caller geolocation information available to the network operator. For example, power outages, which are common causes of emergencies in the first instance, can affect Wi-Fi availability and positioning accuracy. And, depending on the type of device used by the caller, Wi-Fi may only capture the location of the last place where the user is logged in. As such, requiring OTT communications apps to provide access to emergency services could in fact compromise, rather than expand, access to emergency services.

• Most public-safety answering points (PSAP) are currently not equipped to handle incoming emergency communications from OTTs that are not interconnected with the PSTN. They will have to upgrade their IT systems and invest in new technologies.

• The reason telco operators have emergency services requirements is because they own the network and they know where consumers are located – automatically. Location is based on GPS information and tower location information. Operators have both and can therefore route calls properly.

Keeping the above in mind, one way forward may be for OTTs to have a transparency requirement to clearly inform users on their websites that emergency services are not available on their platform.

TRAI may consider reiterating its recommendation in its Consultation on Regulatory Framework for Internet Telephony, in which it recognised the limitations of Internet Based Services and recommended the following *"In view of the above, the Authority recommends that the access service providers providing Internet Telephony service may be encouraged to facilitate access to emergency number calls using location services; however they may not be mandated to provide such services at present. The subscribers may be informed about the limitations of providing access to emergency services to Internet Telephony subscribers in unambiguous terms."*

Q.7 Is there an issue of non-level playing field between OTT providers and TSPs providing same or similar services? In case the answer is yes, should any regulatory or licensing norms be made applicable to OTT service providers to make it a level playing field? List all such regulation(s) and license(s), with justifications.

BIF Response

OTT providers offer an array of different services that are accessed by users through the data services provided by TSPs. Thus, the services provided by TSPs, while they enable access to OTT services, are fundamentally different – as explained in our responses above.

The regulatory impetus for TSPs is closely linked to the nature of the service and its indispensability to the general public. The National Digital Communications Policy (NDCP) 2018 refers to "*recognizing communication systems and services as essential connectivity infrastructure at par with other connectivity infrastructure like Roadways, Railways, Waterways, Airlines etc.*" In fact, telecom has been seen has an essential commodity from the time of National Telecom Policy 2012, which had sought to "*recognise telecom, including broadband connectivity as a basic necessity like education and health and work towards Right to Broadband.*"

The regulation of an essential resource is fundamentally different from the regulation of any other service. OTT services are supplementary services that ride on the backs of TSP infrastructure. OTT applications operate in an extremely competitive market, and OTT providers do not control critical infrastructure that holds value to the public. Thus, heavy regulatory frameworks on OTTs will not be viable or necessary. TSPs govern several critical infrastructure areas and are essentially, the gatekeepers that OTTs and consumers alike need to access.

It should be noted that, as explained in Q1, competition laws, consumer protection laws and information technology laws already govern the relevant facets of internet services – therefore, this market is already regulated.

Moreover, licensing or regulatory requirements could create barriers to entry and expansion for app providers, particularly Indian start-ups that lack the resources to obtain a license or establish locally in every country where their applications are provided. This could result in Indian

consumers not being able to access the full benefit of global online applications, and stifle innovation.

Licensing requirements could also impair the ability of Indian businesses to use online applications to grow and reach more people. The global reach of online applications makes them useful to business, including small businesses, because it enables companies to reach a larger potential customer base that extends beyond India's borders. This increases their business and collectively expands the Indian economy. Keeping the Internet open, decentralized, and free of barriers is critical to helping Indian businesses remain competitive in today's increasingly digital economy.

And as TRAI notes in the CP at Para 2.2.8, the multiplicity of functionality offered by such platforms may make it difficult to practically segregate communication from non-communication related OTTs. Thus, we may find ourselves in a position where OTT applications that provide the same basic functionality, are treated differently under law simply on account of the different ancillary functionalities they offer, which may be seen as competing with TSPs. With increased innovation in the development of OTTs, such distinctions will become more and more complicated, and would soon give rise to entirely new" considerations across OTT applications that did not exist before. In this field of digital communications, innovative technologies are emerging every day. Regulations that take a broader and longer-term perspective will be the most beneficial and not become obsolete as soon as the latest technology is around the corner.

At the outset, we believe there is no "non-level playing field" issue between OTT service providers and TSPs, as OTTs and TSPs provide different services, do not operate in the same network layer, and because – as discussed above – there are fundamental technical and business differences between traditional services and apps.

OTT providers offer an array of different services that are accessed by users through the data services provided by TSPs. Thus, the services provided by TSPs, while they enable access to OTT services, are fundamentally different – as explained earlier. Whether the app provides communications or any other function or service over the Internet, the nature of such a service and the regulatory regime applicable to it cannot be compared to the provision of internet access services *per se*.

The regulatory impetus for TSPs is closely linked to the nature of the service and its indispensability to the general public. The National Digital Communications Policy (NDCP) 2018 refers to "*recognizing communication systems and services as essential connectivity infrastructure at par with other connectivity infrastructure like Roadways, Railways, Waterways, Airlines etc.*" In fact, telecom has been seen as an essential commodity from the time of National Telecom Policy 2012, which had sought to "*recognise telecom, including broadband connectivity as a basic necessity like education and health and work towards Right to Broadband.*"

The regulation of an essential resource is fundamentally different from the regulation of any other service. OTT applications operate in an extremely competitive market, and OTT providers do not control critical infrastructure that holds value to the public. Thus, the regulatory framework for the two cannot be the same.

It should be noted that, as explained above, competition laws, consumer protection laws and information technology laws already govern the relevant facets of internet services, so it would be incorrect to characterize this market as unregulated. On the contrary, a far broader range of laws and regulations are applicable to an OTT service provider depending on the nature of services sought to be provided by it. Therefore, it would result in incoherent regulatory governance if additional regulations applicable to a different industry are imported for a specific sub-section of OTT players.

The impact of a potential license raj for OTT players would also have an enormous spillover effect on consumer welfare, which cannot even be predicted at this stage. Not only would individuals, companies and entire industries that rely on various OTT services find their costs increasing disproportionately, it would also result in much confusion as regards to who comes under the purview of such "leveling" regulation.

Moreover, licensing requirements or other heavy-handed regulatory obligations could create barriers to entry and expansion for app providers, particularly start-ups that lack the resources to obtain a license or establish locally in every country where their applications are provided. This could result in Indian consumers not being able to access the full benefit of global online applications, depriving the Indian public of innovative and useful technology.

Licensing requirements could also impair the ability of Indian businesses to use online applications to grow and reach more people. The global reach of online applications makes them useful to business, including small businesses, because it enables companies to reach a larger potential customer base that extends beyond India's borders. This increases their business and collectively expands the Indian economy. Licensing requirements could fragment applications and services provided over the Internet and therefore erode the utility and usefulness of a global outlet for Indian businesses. Keeping the Internet open, decentralised, and free of barriers is critical to helping Indian businesses remain competitive in today's increasingly digital economy.

Further, enacting licensing or other prescriptive regulatory requirements might set precedent for other countries to follow suit with reciprocal regulations for online applications, one effect of which would be to build walls for Indian digital entrepreneurs trying to expand beyond India's borders.

And as TRAI notes in the CP at Para 2.2.8, the multiplicity of functionality offered by such platforms may make it difficult to practically segregate communication from non-communication related OTTs. Thus, we may find ourselves in a position where OTT applications that provide the same basic functionality, are treated differently under law simply on account of the different ancillary functionalities they offer, which may be seen as competing with TSPs. With increased innovation in the development of OTTs, such distinctions will become more and more

complicated, and would soon give rise to entirely new "non-level playing field" considerations across OTT applications. As a matter of policy, regulators should prioritise clarity and predictability. Otherwise, regulation risks becoming obsolete with development of new technology and services.

The lack of regulatory justification for imposing TSP restrictions for OTT players, coupled with difficulty of enforcement, and the extremely negative impact it may have on consumers, would make any regulatory intervention highly cumbersome and potentially undermine the authority of the regulator who seeks to impose them.

Q.8 In case, any regulation or licensing condition is suggested to made applicable to OTT service providers in response to Q.7 then whether such regulations or licensing conditions are required to be reviewed or redefined in context of OTT services or these may be applicable in the present form itself? If review or redefinition is suggested then propose or suggest the changes needed with justifications.

BIF Response

BIF Response to Q7 above is to not further regulate or add licensing burdens on OTT providers.

We instead strongly urge the Authority to consider reducing the legacy regulatory barriers on TSPs, especially licence fees, spectrum usage charges, other levies and taxes, to improve the business case for TSPs. The Indian Telecom industry has progressed by leaps and bounds in just a few decades primarily due to the progressive and market-friendly policies by the related regulators. As we continue to embrace innovation and technological advances to ensure India continues to experience economic growth and world standing, this is the perfect time for the TRAI to take a long-term approach and develop a less regulation-heavy environment to foster growth and healthy competition. Indian consumers and industry will be the main beneficiaries of such an outlook.

Q.9 Are there any other issues that you would like to bring to the attention of the Authority?

BIF Response

None.