Collaborating for Competitiveness

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Ref: **ACTO Response to TRAI's Consultation Paper on Net Neutrality dated 4th January, 2017**

Dear Sir,

We express our sincere thanks to the Hon'ble Authority for bringing this consultation paper on Net Neutrality. ACTO is pleased to provide its responses to the issues posed in the captioned Consultation Paper.

ACTO members fully supports an open Internet and are committed to ensuring that consumers have access to any lawful content, services, and applications, regardless of their source. Net neutrality has wide impact on technology, economics, privacy safety, national security, legal, consumer rights and social impacts. On economic side, applications/services are generating the demands and supply side will be the requirement of network infrastructure. We respectfully suggest adoption of a balanced approach from policy makers to have the right regulatory framework in order to keep the momentum of growth on both demand and supply side.

- There is a need to create an environment in which communication providers in all parts of the Internet ecosystem continue to have the incentives to invest and innovate.

- Policy makers should recommend adoption of a principles-based framework based on industry best practices focused on consumer choice, competition, innovation, sustainable growth and transparency.

- For net neutrality, consider principles rather than prescriptive, detailed regulations, as principles will achieve consumer protection without the risk of incurring unintended harmful consequences for investment and innovation.

- Enterprise Services should be outside the scope of open Internet rules and there should not be any prescriptive regulation of these services as it has been followed in other countries and the recent report on Net Neutrality by Department of Telecom reinforces this point.

- ACTO favors adoption of light handed approach to regulate the internet access if at all a need arises due to failure of the existing regulatory & legal framework. We believe that in such cases, the Government's intervention should be minimalistic and it should be based on the principle of "Minimum Government and Maximum Governance" .We believe that any attempts to over regulate the sector, for example, through firm guidelines or legislations, will have a direct impact on the innovation and investments. Our country certainly would not want to lag behind digital revolution especially with the speed at which internet, internet technologies, innovations and consumers engage and innovate in the internet eco-system.

We hope that our comments attached as Annexure – I will merit the kind consideration of the Hon'ble Authority.

Respectfully submitted,

Yours sincerely,

for Association of Competitive Telecom Operator

Tapan K. Patra
Director

Encl: As above

ANNEXURE-I

ACTO Comments on TRAI Consultation Paper on Net Neutrality

ACTO welcomes TRAI Consultation paper on Net Neutrality taking into a holistic view on this matter. Decision on NN is important as ICT sector has become a critical driver of economic growth in both developed and developing countries. The further deployment of broadband technologies promises to multiply these benefits by leading to the creation of innovative services that are key economic drivers in themselves, and also enhance the benefits of investments in other industries and institutions– such as by carrying the cross-border data flows that fuel India's business-process outsourcing sector, enabling transportation systems to run more smoothly, delivering new efficiencies to electricity grids, expanding access to health care, providing new work options that allow reduced travel and emissions, connecting students to expanded educational resources, and bringing increased effectiveness to government. The Government should continue to promote the investment-friendly policies that have brought the vast expansion of telecommunication 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.

1. The Internet also has become the most powerful & ubiquitous communications medium and engine for economic growth, and has achieved this unprecedented growth without prescriptive regulation of the Internet that would have restricted and stagnated 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**. However a key driver for all the new development to flourish would be ease of doing business and open internet.

2. ACTO endorses the policy and principles of an open Internet, which is generally accepted as the entire Internet ecosystem that enables users to exchange ideas and communicate freely, gives them freedom to access the lawful applications and content they wish to use,

and affords them the ability to choose and assemble packages of services and equipment that meet their needs in a transparent manner.

When supporting an open Internet, ACTO is guided by the following core standards in addressing the needs of our customers in approaching new Internet-related business opportunities, designing new services, and managing our network:

- **Freedom** – Consumers should be able to openly exchange ideas, content, and information across the Internet.
- **Innovation** – Consumers are entitled to a robust and secure network that enables new services, applications, and devices.
- **Competition** – Consumers have the power to choose the best possible services and innovations.
- **Transparency** – Consumers should have clear and concise information about speed, cost, and traffic management
- **Affordability** –Consumer should have an affordable Tariffs

3. The policy-makers/regulators should be guided by principle to optimize not only the policy of Internet openness, but also the need to maintain incentives for telecom service providers to continue investing and innovating in the rapidly evolving advanced networks that must keep pace with the diversity and volume of new services. To the extent that any regulatory intervention is found to be necessary to protect the open Internet, it can be effective if appropriately targeted and limited to the adoption of meaningful transparency requirements, and the prohibition of blocking, degrading or otherwise unreasonably disfavoring some Internet traffic over other Internet traffic. Such open Internet guidelines are precisely tailored to prohibit any practices that could pose a threat to the "virtuous circle" of investment and innovation that has enabled the Internet to thrive.

4. More invasive regulation of commercial and operational practices also would cause significant difficulties if it was applied to mobile broadband access services, which comprise the large majority of Internet access services in many countries, including India. The rapid growth in mobile broadband usage and the fact that mobile subscribers move means that providers must grapple with variable and unpredictable network demand, requiring them to make difficult judgments about how to manage their networks in response to complex and

fast-changing congestion problems. These issues have forced providers to develop innovative approaches to network management that must evolve quickly as new challenges arise. Subjecting those decisions to the full range of open Internet regulations, subject to an exception for "reasonable network management," would result in significant regulatory uncertainty that would slow down network-management decisions and inhibit investment. In light of the massive growth and evolution of the entire mobile Internet ecosystem, and given the absence of credible argument that there is an Open Internet market failure that must be remedied, there is no reason for any intrusive regulation of mobile networks to protect the Open Internet. In addition, just as other jurisdictions have recognized the merit for keeping enterprise service offerings and specialized services/ industrial Internet such as virtual private networks outside the scope of open Internet rules, India also should not prescriptively regulate these services.

5. It is submitted that traffic management has always been an essential component for the Internet to function effectively, efficiently and successfully. Reasonable traffic management practices have been recognized & allowed by the other regulatory authorities worldwide, including in the United States, Canada and the European Union. Furthermore, the need for service providers to have the flexibility to manage network traffic and performance has also been recognized by the report of the DoT Committee on Net Neutrality, which has recommended that reasonable traffic management practices may be allowed but should be "tested" against the core principles of Net Neutrality.

6. **Additionally we would also like to highlight that the DoT's Committee on Net Neutrality has very rightly recommended that the framework/ guidelines of Net Neutrality should not be applicable for Enterprise services provided by the TSPs**.

7. As discussed in more detail below, Enterprise services are properly excluded. Enterprise users necessarily require that their traffic is managed in a specific way according to their business needs. Telecom operators have been offering managed data services to Enterprise customers for years, over their data connections and private IP infrastructure. It may be noted that, in the same way the reasonable network management has been recognized by regulatory authorities in other countries, so too has the exclusion of enterprise services been maintained.

ACTO respectfully submit its responses to the Questions No 1 to 3, 6 & 10 raised in the Consultation as below:

Q.No.1 What could be the principles for ensuring nondiscriminatory access to content on the Internet, in the Indian context?

ACTO's Response:

ACTO firmly supports the policy and principles of an Open Internet, which to us means an entire Internet ecosystem that enables users to exchange ideas and communicate freely, gives them freedom to access the lawful applications and content they wish to use, and affords them the ability to choose and assemble packages of services and equipment that meet their needs.

When supporting an Open Internet, ACTO is guided by the following core standards/ principles in addressing the needs of our customers in approaching new Internet-related business opportunities, designing new services, and managing our network:

- **Freedom** – Consumers should be able to openly exchange ideas, content, and information across the Internet.
- **Innovation** – Consumers are entitled to a robust and highly secure network that enables new services, applications, and devices.
- **Competition** – Consumers have the power to choose the best possible services and innovations.
- **Transparency** – Consumers should have clear and concise information about speed, cost, and traffic management.
- **Affordability** –Consumer should have an affordable Tariffs.

Q.2. How should \Internet traffic" and providers of \Internet services" be understood in the NN context?

(a) Should certain types of specialised services, enterprise solutions, Internet of Things,etc be excluded from its scope? How should such terms be defined?

(b) How should services provided by content delivery networks and direct interconnection arrangements be treated?

Please provide reasons.

ACTO's Response:

TRAI should continue to exempt enterprise services from any open Internet rules. Enterprise services, however categorized ("specialized services" or "business services"/ "industrial internet") and delivered, are typically offered to larger organizations through customized or individually negotiated arrangements. An example of such a service would be virtual private networks. Various jurisdictions that have reviewed open Internet policies have proposed to exempt such enterprise services from open Internet rules. In the United States, for example, both the FCC's open Internet rules adopted in 2010 and the additional regulation adopted by the FCC in 2015 apply only to mass-market retail broadband Internet access service, with the capability to transmit and receive data from all or substantially all Internet end-points.[1] This definition for the scope of the open Internet rules excludes enterprise service offerings such as virtual private networks.[2] DoT's report on Net-Neutrality had also recommended for exclusion of Enterprise services from the scope of open internet rules.

"The Committee is of the considered view that managed services are a necessary requirement for businesses and enterprises, and suitable exceptions may be made for treatment of such services in the Net Neutrality context."

We note that majority of ACTO members provide services to enterprise business customers. These services include among others enterprise-grade Internet access and Internet Protocol

[1] *See* FCC, *Protecting and Promoting the Open Internet*, GN Docket No. 14-28, Report and Order On Demand, Declaratory Ruling and Order, rel. March 12, 2015 ("*FCC 2015 Internet Order*"), ¶¶ 186-187; FCC, *Preserving the Open Internet*, 25 FCC. Rcd. 17905, ¶ 44 (2010)("*FCC 2010 Internet Order*").

[2] *SeeFCC 2015 Internet Order*, ¶ 190; *FCC 2010 Internet Order*, ¶ 47.

services, with the capability to prioritize packets associated with performance-sensitive applications. This is provided to a wide range of business customers, including healthcare providers, community service organizations, restaurant chains, car dealers, electric utilities, banks, municipalities, security/alarm companies, hotels, labor unions, charities, and video-relay service providers. And the market of services that merit different network performance requirements is expanding with Smart Grid, healthcare, emergency-response, and a variety of other services that may involve or require packet prioritization capabilities. These services are pro-consumer, and indispensable to key social objectives. Just as other jurisdictions have recognized the merit for keeping these services outside the scope of open Internet rules, India also should not prescriptively regulate these services.

1. There are other compelling reasons for considering the differing business needs of such consumers and high end enterprise customers and accordingly there can't be a one size fit approach to deal with the specific issues. We need to consider the fundamental underpinnings of Net Neutrality debate and whether there is the same need for those rules in an enterprise setting. The existing legal provisions and arrangement between enterprise customer and TSP are sufficient enough to keep the internet open and also to address the issue in case TSPs or any providers failed to deliver to customers.

2. **To sum up the needs of enterprise users differ from those of a retail consumer mass market and some of the important considerations are below:**

    - The key difference is contractual in nature. High-end business services present various specificities that differentiate them from mass-market services which are significantly more complex [telecom services provided across multiple locations and across countries, different access technologies, bundle of services, very demanding Service Level Agreements (SLAs), etc.]

    - Further, high-end enterprise users typically have sophisticated knowledge of the technology and economic implications of telecommunications services. From a consumer protection perspective, terms relating to the required quality levels, detailed service transparency, technical characteristics, and penalties for noncompliance, are already addressed in large part under a contract.

Enterprise services should continue to be exempt from any open Internet rules. Enterprise services, are typically offered to larger organizations through customized or individually negotiated arrangements. Various jurisdictions that have reviewed open Internet policies have proposed to exempt such enterprise or specialized services from open Internet rules.

In the United States, for example, both the FCC's open Internet rules adopted in 2010 and the additional regulation adopted by the FCC in 2015 apply only to mass-market retail broadband Internet access service, with the capability to transmit and receive data from all or substantially all Internet end-points. This definition for the scope of the open Internet rules excludes enterprise service offerings and specialized services. Relevant extracts of the FCC's open internet order in 2010 and 2015 are attached as **Annexure –I(a)** for your kind reference and records.

It is also significant to mention here that on 6 May, 2015 the European Commission published its Digital Single Market strategy, which includes a recognizes that "***telecoms operators compete with services which are increasingly used by end-users as substitutes for traditional electronic communications services such as voice telephony, but which are not subject to the same regulatory regime. The review of the telecoms rules will look at ways of ensuring a level playing field for players to the extent that they provide competing services and also of meeting the long term connectivity needs of the EU." It goes on to state that "The Commission will present proposals in 2016 for an ambitious overhaul of the telecoms regulatory framework focusing on (i) a consistent single market approach to spectrum policy and management (ii) delivering the conditions for a true single market by tackling regulatory fragmentation to allow economies of scale for efficient network operators and service providers and effective protection of consumers, (iii) ensuring a level playing field for market players and consistent application of the rules, (iv) incentivising investment in high speed broadband networks (including a review of the Universal Service Directive) and (v) a more effective regulatory institutional framework***".

Please find attached a copy of the document of European Commission published its Digital Single Market strategy for your kind reference as **Annexure – I (b).**

The market of enterprise services that merit different network performance requirements is expanding with Smart Grid, healthcare, emergency-response, and a variety of other services that may involve or require packet prioritization capabilities. These services are indispensable to key social objectives. Just as other jurisdictions have recognized the merit for keeping these services outside the scope of open Internet rules, our country should also not prescriptively regulate these services.

There are other compelling reasons for considering the differing business needs of consumers and high end enterprise customers and accordingly there can't be a one size fit approach to deal with the specific issues. We need to consider the fundamental underpinnings of NN debate and whether there is the same need for those rules in an enterprise setting. The existing legal provisions and arrangement between enterprise customer and TSP are sufficient enough to keep the internet open and also to address the issue in case TSPs or any providers failed to deliver to customers.

Additionally, Internet of Things (IoT) services generally, and M2M more specifically, should likewise be outside of NN policy. Internet connectivity is but a piece of any IOT solution provided by one of the many stakeholders involved in the IOT chain that includes Network Operators, System Integrator (Sis), software developers, vendor companies, solution providers, distributor or sellers, etc. Also, IOT applications require a connectivity neutral platform that will work so long as there is underlying connectivity (from any operator). As connectivity is but one element of a larger solution, IOT applications should not be subject to NN policy as done in the United States, EU and several other jurisdictions.

Q.3. In the Indian context, which of the following regulatory approaches would be preferable:

(a) Defining what constitutes reasonable TMPs (the broad approach), or

(b) Identifying a negative list of non reasonable TMPs (the narrow approach).

Please provide reasons.

ACTO's Response:

Reasonable network management to address problems such as congestion must aim for precision and success in terms of the desired technical effect. It must do so by enhancing subscriber quality of experience (QoE) to stay ahead of competitive forces, and also without falling afoul of public perception and official regulation. This is a tough set of bounds to operate within and, although there are voices that will always object to any kind of traffic management, success can be achieved by ensuring solutions adhere to the following best practices:

- **Legitimate and demonstrable technical need**

The operator must have a legitimate and demonstrable technical need for the network management practice. The architectural strengths and weakness of various network access types provide the majority of the technical needs for network management. A network management practice that is unreasonable in one access network may well be reasonable in another. This context is crucial. Solutions fair best when they directly address the problem of a legitimate network problem such as congestion, and do so with proportional precision.

- **Narrow-tailoring in terms of the stated technical goal of a traffic management practice**

All networks have variations in usage patterns, whether by time of day, by geography, by user demographics or other factors. As a consequence, oversubscription and QoE are non-uniform across the network. A properly constructed network management plan takes this into account, and focuses as narrowly as possible on the problem to be solved. It does not try to force a one-size-fits-all solution into all areas at all times. When applied correctly, management of traffic during times of congestion is a win-win as the majority of subscribers continue to have a good

quality QoE and the access network lifetime is extended, allowing network investments to me made in other areas of need.

- **Proportional and reasonable effect in achieving the goal**

The network management policy needs to take into account the concept of proportional effect and response. A 'reasonableness' test helps define the acceptability of network management. This test stems from the common-law concept of 'what would a typical person agree is reasonable', and is therefore somewhat subjective in definition. Some precision of what is reasonable can be achieved through the best practice of seeking proportionality in term so the final outcome of a policy seeking to address a problem such as network congestion.

Reasonableness can be defined through contract, which means it relates directly to the best practice of transparent disclosure described below. If typical users, understanding the disclosed network management policies in use, contract for the service, the policy must be reasonable by definition. Reasonable is defined entirely in the frame of reference of the end-user, the customer of the service provider.

- **Transparent and disclosure**

Transparency is a challenging concept. The subtle technical nuances of networks (latency, loss, jitter, shared-access, etc.) are difficult to describe in simple enough terms for the average layperson. Analogies, although helpful to form a basis, rapidly become inappropriate as they diverge from the original problem. Network management practices evolve over time, and new technologies have seen the emergence of traffic management practices based on deep packet inspection (DPI). Since we are relying on transparency as a means of supporting reasonableness, what's relevant to disclose is any aspect that would affect the actions or perceptions of the typical consumer (as opposed to enterprise users who benefit from detailed bi-laterally negotiated contracts and therefore don't need additional transparency measures).

Disclosure might take many concurrent forms. The most popular include network management FAQs, notices included in billing material, acceptable use policies, terms of service, etc.

Q.6. Should the following be treated as exceptions to any regulation on TMPs?

(a) Emergency situations and services;

(b) Restrictions on unlawful content;

(c) Maintaining security and integrity of the network;

(d) Services that may be notified in public interest by the Government/ Authority, based on certain criteria; or

(e) Any other services.

ACTO's Response:

Enterprise services should be exempt from any open Internet rules. Enterprise services, whether specialized services, business services or other, are typically offered to larger organizations through customized or individually negotiated arrangements. Various jurisdictions that have reviewed open Internet policies have proposed to exempt such enterprise or specialized services from open Internet rules.

The market of enterprise services that merit different network performance requirements is expanding with Smart Grid, healthcare, emergency-response, and a variety of other services that may involve or require packet prioritization capabilities. These services are indispensable to key social objectives. Just as other jurisdictions have recognized the merit for keeping these services outside the scope of open Internet rules, our country should also not prescriptively regulate these services.

There are other compelling reasons for considering the differing business needs of consumers and high end enterprise customers and accordingly there can't be a one size fit approach to deal with the specific issues. We need to consider the fundamental underpinnings of NN debate and whether there is the same need for those rules in an enterprise setting. The existing legal provisions and arrangement between enterprise customer and TSP are sufficient enough to

keep the internet open and also to address the issue in case TSPs or any providers failed to deliver to customers.

Class of Service: Without the class of service prioritizing a customer's traffic on the shared infrastructure, most enterprise customers will not be able to plan their network requirements or ensure how their products/services end up getting consumed by their eventual end users. For example, an enterprise customer may need their voice or video packets to have priority over their web chat packets, ensuring that the quality of their video/voice interaction with their partners or customers will not suffer at the expense of a time insensitive interaction such as a web

Specific Route pinning/planning: Some enterprise customers may like their traffic to move over the most suitable path – sometimes the shortest, sometimes the most reliable, sometimes to avoid certain geographies or choke points, sometimes to avoid duplication of existing paths and sometimes for ensuring complete redundancy. Mostly these options can only be guaranteed if there is a differential pricing mechanism. Not all routes are the cheapest and/or equally available.

Feature access: Some enterprise customers may want to install faster/premium access for their core locations as opposed to their second tier or remote locations. TSPs can usually provide tiered features/access offering on their network services on a site to site basis. For example, fibre or Ethernet access may be required at hub sites (high capacity links) whereas other technologies like copper or micro wave or DSL (usually low speed links) would do just fine at remote/unimportant sites.

Service Level Agreements (SLAs): Enterprise customers usually want TSPs to back their contracts with strict SLAs and penalties and are willing to pay additional to ensure that the service levels are kept high, especially when it comes to the issues of fault repair, service management, equipment replacement, redundancy etc. TSPs usually build additional levels of chargeable support to those enterprise customers that are willing to pay a premium to get the required level of support to augment their own efforts.

Q.10. What would be the most effective legal/policy instrument for implementing a NN frame-work in India?

(a) Which body should be responsible for monitoring and supervision?

(b) What actions should such body be empowered to take in case of any detected violation?

(c) If the Authority opts for QoS regulation on this subject, what should be the scope of such regulations?

ACTO's Response:

Net neutrality is a complex issue and needs a much larger and detailed discussion. In the US, it took over 10 years and even after that the matter has not been finalized and expected to reach the court's. Net neutrality has wide impact on technology, economics, privacy safety, national security, legal, consumer rights and social impacts.

On the economic side, applications/services are generating the demands and supply side will be the requirement of infrastructure. We strongly suggest (call for?) for a balanced approach from policy makers to have a right regulatory framework in order to keep the momentum of growth on both demand and supply side

In considering any Internet regulation to be adopted in the future, policy-makers should optimize not only the policy of Internet openness, but also the need to maintain incentives for Internet service providers to continue investing and innovating in the rapidly evolving advanced networks that must keep pace with the diversity and volume of new services. This will help in creating the necessary additional framework to meet the stated objectives

- Policy makers should recommend adoption of a principles-based framework based on industry best practices focused on consumer choice, competition, innovation and transparency.
- ACTO favors adoption of **light handed non-prescriptive** approach if at all a need arises due to failure of the existing regulatory & legal framework. We believe that in such

cases, the Government's intervention should be minimalistic. Any attempts to over regulate the sector, for example, through firm guidelines or legislations, will have a direct impact on the innovation and investments. Our country certainly would not want to lag behind digital revolution especially with the speed at which internet, internet technologies, innovations and consumers engage and innovate in the internet eco-system.

A. Need for Innovation and Investment - Broadband and Internet Penetration

TRAI's recently issued recommendations on actions required to be taken both by the Government and the service providers to accelerate the proliferation and use of broadband in the country[3] underscores the critical need for policies that enable investment and expansion of operators into new business models in the Indian ICT market. According to these recommendations, "India has a 15 per cent Internet user penetration and is ranked 142nd, way below some of its neighboring countries like Bhutan and Sri Lanka."[4] TRAI notes that "against a target of achieving 175 million BB connections by 2017, only 85.74 million have been achieved and that too with the current download speed definition of 512 kbps. At present, the country is nowhere near meeting the target for a service which is considered almost a basic necessity in many developed countries. There is, therefore, an urgent need to review present policies, the current state of implementation of building infrastructure required for penetration of Broad Band (the means) and the supporting software/applications that will provide the content."[5]

TRAI had noted in its earlier consultation Paper no. 12/2014 dated 24th September 2014 that the primary elements of a proposed broadband ecosystem could be amongst other factors, a**n** **enabling regulatory framework, a simplified licensing regime** and the development of locally relevant content and applications.[6]

Thus, there is huge potential and opportunity for further investment in increasing India's broadband infrastructure and penetration for delivery of a host of innovative services. TRAI

[3] See, TRAI Recommendations entitled "Delivering Broadband Quickly: What do we need to do?" (17th April 2015) at http://www.trai.gov.in/WriteReadData/Recommendation/Documents/Broadband=17.04.2015.pdf.
[4] Id. at ¶1.9, p. 4.
[5] Id. at ¶1.8, p. 4.
[6] [http://www.trai.gov.in/WriteReaddata/ConsultationPaper/Document/Consultation%20Paper%20on%20Broadband%2024Sep2014.pdf]

should recommend policies that foster further investment and innovation in this sector. Any attempt to review the regulatory framework by bringing more services under licensing regime would dampen the investor sentiment which is not conducive to the growth of the sector. One of way doing this is to further reform in the regulations on the licensed services to address the low internet penetration rate in the country and allow the masses to access high speed broadband networks in the country.

B. **Light Touch Regulatory Approach for the benefit of consumers**

This policy approach should embody high-level principles: in general policies should be:

- Pro-investment and pro-innovation,
- Future-proof and flexible,
- Fit for purpose (proportionate),
- Technology neutral and service agnosticity, and should foster comparable consumer protections across sectors, where appropriate.
- Regulatory Neutrality.

Final Recommendations/Conclusions

- Implement policies that create an environment in which providers in all parts of the Internet ecosystem continue to have the incentives they need to invest and innovate.

- Recommend adoption of a principles-based framework based on industry best practices focused on consumer choice, competition, transparency, and effective multi-stakeholder processes.

- Recommend against a prescriptive, detailed set of regulations.

- **Exclude the enterprise services from the purview of NN rules as the needs of enterprise users differ from those of a retail consumer mass market.** As noted in the response to Question no.2 above, the key differences are contractual and in the nature of requested services. High-end business services present various specificities that differentiate them from mass-market services which are significantly more complex [telecom services provided across multiple locations and across countries, different

access technologies, bundle of services, very demanding Service Level Agreements (SLAs), etc.

- Further, high-end enterprise users typically have sophisticated knowledge of the technology and economic implications of telecommunications services. From a consumer protection perspective, terms relating to the required quality levels, detailed service transparency, technical characteristics, and penalties for noncompliance, are already addressed in large part under a contract.
- Consult with industry and other stakeholders to develop a set of high-level, self-regulatory principles and establish mechanisms to identify and address any anti-competitive behavior that might occur in the market (to supplement existing enforcement mechanisms).

- Create multi-stakeholder entity to examine these issues over a multi-year period and observe developments in India and elsewhere.

- Take note of the jurisdictions in which co-regulatory approaches have been successful, & adopt global best practices in this regard

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