

A Response to the Consultation Paper on  
**'Regulatory Framework for Promoting Data Economy Through  
Establishment of Data Centres, Content Delivery Networks,  
and Interconnect Exchanges in India'** issued by the  
Telecom Regulatory Authority of India, on 16 Dec 2021

by

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## Introduction

This note is a response to the consultation paper (CP) issued by the Telecom Regulatory Authority of India (TRAI) on 16th December 2021, on the subject of 'Regulatory Framework for Promoting Data Economy Through Establishment of Data Centres, Content Delivery Networks, and Interconnect Exchanges in India'.

**This response takes an approach based on principles and global best practices in the regulatory treatment of Data Centres, Content Delivery Networks, and Interconnect Exchanges across the world. It reviews the approach taken in the Consultation Paper and its potential impact on India's nascent DC/IXP/CDN markets. The response treats the questions of the Consultation Paper in two categories, viz. one where TRAI's approach could help expand the market, and the other where it could do the opposite.**

## Comments on TRAI's broader approach to DC/IXP/CDN market

**Many of TRAI's questions in the Consultation Paper are puzzling.** The CP seems to be pursuing two contradictory objectives simultaneously. On the one hand, it explores removing barriers to investment in DCs/IXPs/CDNs. On the other, it seeks advice on additional regulatory burdens

(that virtually no jurisdiction or regulator has considered necessary). It provides no analysis, assessment, evidence, or example of market abuse in the DC/IXP/CDN market and yet raises the spectre of increased regulation in a manifestly working market.

### The Unexceptionable Part of the TRAI approach

The Consultation Paper rightly highlights the importance of the data economy to India, especially to its aspirations as a player and user of digital technologies. It is primarily focused on the growth of data centres (DCs), internet exchanges (IXPs), and content delivery networks (CDNs), which facilitate data movement on and off the internet.

**India has high stakes in DC/IXP/CDN markets.** The size of global DC and CDN markets is estimated to be roughly 20 and 15 billion dollars respectively. India's CDN market is expanding rapidly and will likely be worth over 2.8 billion by 2027. Understandably, India aspires to be a significant player in the DC/IXP/CDN space especially given its size, population, and acknowledged technology depth. It makes eminent sense to explore steps that could enable India to play its rightful role in these markets.

**TRAI has a legitimate interest in the growth of Data Centres, Content Delivery Networks, and Interconnect Exchanges.** The TRAI Act 1997 gives the body the responsibility for ensuring the growth of the sector. At the same time, an economic regulator must ensure that markets work efficiently, are not abused or distorted, and protect consumer interest. It is equally vital that regulatory missteps do not distort effective and efficient functioning markets.

**The Consultation Paper rightly focuses on removing barriers to investment** in Data Centres, Content Delivery Networks, and Interconnect Exchanges. The following issues raised in the Paper deserve careful attention:

- Economic/financial/infrastructure/other challenges being faced for setting up a Data Centre
- Measures required for accelerating growth of Data Centres
- Incentivizing Data Centre operators and global players to attract investments
- Ease of doing business (EoDB)

- Creation of Data Centre Parks/Data Centre Special Economic Zones
- Regulatory or other limitations with regards to captive fibre optic cable connectivity
- Challenges faced in accessing international connectivity through cable landing stations
- Access to power for data centres
- Streamlining of state policies relating to setting up data centres

Responses to the above issues will be valuable in defining a calibrated approach to expanding India's nascent DC/IXP/CDN market.

### Concerns about the TRAI approach in the CP

**Several questions raised in the Consultation Paper are worrying and seem to ignore important market realities** such as:

1. The global data Centres, Content Delivery Networks, and Interconnect Exchanges market are highly competitive and efficient.
2. There is no discernible market failure and virtually no allegation or evidence of market abuse by players in the DC/IXP/CDN market.
3. Barriers to market entry are low. There have been several new players for over 20 years.
4. Buyers face little difficulty in changing service providers conveniently and quickly.
5. The price of services in the DC/IXP/CDN market has fallen steadily for over 20 years.
6. The range and quality of services have improved consistently.
7. The DC/IXP/CDN market is a B2B market catering to discerning, large, value-seeking buyers with specialized knowledge of the product and services they buy.
8. Data Centres, IXPs, and CDNs are not customer-facing services. End users (i.e. individuals and common persons) do not participate directly in DC/IXP/CDN market and face little risk due as the market is a B2B market.
9. Market players have an incentive to ensure privacy, safety, and security for their diverse, and discerning buyers.
10. Market players have an incentive to obtain appropriate certification and comply with stringent industry standards relating to energy, pollution, etc.

## The conventional regulatory approach to DC/IXP/CDN markets

Given the above, international regulators have seen little to no merit in imposing external controls on the DC/IXP/CDN market development. There is recognition that it is better to conserve regulatory resources and time and leave industry players to regulate themselves and intervene only if end-consumers or the market face imminent harm.

## DCs/IXPs/CDNs are not conventional telecommunications services

There are references in the Consultation Paper to several concepts, e.g. interconnection, in the context of DC/IXP/CDN players. **Unlike telecommunications service providers, the latter are not subject to traditional interconnect regulation in most jurisdictions.** A key reason is that DC/IXP/CDN players do not impact access to end-users, whereas telecommunications players do as their customer is the individual consumer. DC/IXP/CDN and telecommunications players mutually negotiate their transit and peering arrangements depending on market forces. There is no evidence that the markets are restrictive or distorted.

**Internet interconnection is widely recognized to be highly efficient and inexpensive.** It is counterintuitive to mandate networks to join IXPs. A misplaced fear of possible abuse in the future is a poor reason to intervene in an efficient market.

## Ethics, Privacy, Data Protection

The Consultation Paper worryingly raises issues relating to privacy and data protection which it has disposed of earlier. It also ignores that the parliament is currently engaged with a comprehensive Bill on the subject and that any sectoral regulation must emerge after the overarching data law has been established.

## Net neutrality

**The Consultation Paper erroneously raises the issue of net neutrality in the context of CDNs.**

The reference is problematic on two substantial grounds. First, Net Neutrality applies to ISPs to ensure that end-users have equitable access to the entire internet, and is therefore not applicable in B2B arrangements. Secondly, TRAI and the Department of Telecommunications have explicitly ruled out the application of Net Neutrality in the case of CDNs.

## Misleading treatment of international experience

The comparative global data included in the document has several shortcomings, including:

1. The data is sparse and provided with little context. Only a handful of disparate countries are considered for comparison. In most cases, countries selected for comparison, are not India's peers.
2. There is no explicit indication that most countries regulate B2B markets, such as DC/IXP/CDN market.
3. There is little differentiation between regulatory incentives – e.g., in Singapore- and burdens.
4. The context of regulatory measures taken in countries, e.g., Germany, is missing.
5. The data provides no clear direction.

## The tone of some of TRAI's questions will discourage investors

Given the absence of any market failure or complaints from users or service providers, the tone of the following questions will worry potential investors and hurt the very objective of TRAI's exercise.

Q.25: Is there a need for Data Centre Infrastructure Management System (DCIM) for Data Centres in India? What policy measures can be put in place to incentivize Data Centre players to adopt futuristic technologies? Elaborate with justification.

Q.26: What institutional mechanism needs to be put in place to ensure digitization of hard documents within a defined timeframe?

Q.29: Whether the absence of a regulatory framework for CDNs is affecting the growth of CDN in India and creating a non-level-playing field between CDN players and telecom service providers?

Q.30: If the answer to either of the above question is yes, is there a need to regulate the CDN industry? What type of Governance structure should be prescribed? Do elucidate your views with justification.

Q.31: In case a registration/licensing framework is to be prescribed, what should be the terms and conditions for such a framework?

Q.40: Whether there is a need for a separate light-touch licensing framework for operating IXPs in India? If yes, what should be the terms and conditions of the suggested framework?

Q.41: What business models are suitable for IXPs in India? Please elaborate and provide detailed justifications for your answer.

Q.42: Whether TSPs/ISPs should be mandated to interconnect at IXPs that exist in an LSA?

The above questions collectively portend possible regulatory interference in the DC/IXP/CDN market. They will confirm industry misgivings on the TRAI approach to the regulation of cloud services as being heavy-handed.

## Conclusion and Recommendations

1. TRAI should recognize that self-regulated DC/IXP/CDN markets have a long and impressive record of working efficiently. Intrusive regulatory intervention can only be counterproductive. Higher regulatory cost – compliance or financial – will deter Indian and foreign investors and stretch regulatory capacity.
2. Instead of increasing the prospective players' interest in expanding India's DC/IXP/CDN market, new regulatory burdens will reduce it. It will hurt India's legitimate aspirations in a market vital for its industry and the economy at large.
3. There is virtually no justification for ex-ante regulation of a dynamic, globally booming market without any evidence of market failure.
4. Given the strategic importance to India of a strong DC/IXP/CDN market, India must instead systematically dismantle remaining barriers to investment.
5. TRAI must shun unorthodox, economically untenable approaches to DC/IXP/CDN market and follow well-established global practices.