

Overview of Indian Telecom Tower and Infrastructure Industry



***Tower and Infrastructure
Providers Association***

About TAIPA

Formed in September 2010, TAIPA is Industry Representative Body of Tower Infrastructure Providers.

Formed to accelerate the success of the Indian Telecom revolution, represents the interest of around 4,00,000+ towers pan-India.

As an industry we have invested over Rs. 250,000 crores in Telecom Infrastructure which supports more than 1 Billion Customers.

Our Business Model is linked to objective of “Sharing”

TAIPA plays an active role in deliberations with ministries, policy- makers, regulators, financial institutions and technical bodies for promotion and growth of telecom infrastructure and telecom services thereby enabling Ease of Doing Business for Members



ATC INDIA



indus
TOWERS

RELIANCE Infratel
Anil Dhirubhai Ambani Group



Tower industry in India

All Indian registered companies are eligible to apply, for IP – I the applicant is required to be registered only

- Companies registered as IP-I can provide assets such as Dark Fibre, Right of Way, Duct space and Towers

Types of towercos:

- Independent tower companies (pure play operators) like ATC, GTL, TowerVision, etc
- Joint ventures like Indus tower which is a joint venture by Airtel, Vodafone and Idea
- Formed through de-merger like Reliance Infratel which is a wholly owned subsidiary of RCom

There are close to 400,000 telecom towers in India which are estimated to increase at a CAGR of 3% over next 4-5 years

Industry average tower tenancy ratio approx 1.77

Tower industry evolution

Year 2000 & IP-1

- DoT invited applications for IP-I and IP-II registrations in the year 2000. Prior to that, telecom service providers were provisioning towers and other passive infrastructures on their own and there was no sharing

Pre-2005

- Minimal infrastructure sharing as Towers operated under integrated model (part of the Operators' domain)

Post 2005

- The telecom infrastructure providers were given on lease/ rent, to telecom service providers (TSPs) for providing cellular telephone services by promoting 'Sharing of Towers'.

Opportunities in the sector

Exponential data growth & spectral scarcity

- Additional sites needed for adequate capacity across technologies

Network upgrades & roll-out of data technology (3G and 4G)

- Addition of 3G sites to provide the adequate quality and coverage across the country. Similarly, 4G networks have just started coming up in India. New entrants like Reliance Jio are expected to push the tower industry growth. Reliance Jio has already entered in tower sharing agreements with multiple tower companies.

New customer segments

- New customer segments such as Government and infrastructure are expected to emerge in the near future. The 'Digital India' initiative presents a gamut of opportunities for the telecom tower companies.

Growing subscriber base

- Increasing subscriber base and tele-density especially in rural areas will drive the new site development and additional tenancies for existing towers.

Digital India: Unleashing Prosperity

- Digital India initiative aims at providing universal access to mobile connectivity and internet to the farthest corners of India.
 - The key objectives of Digital India Initiative are -
- The mission requires extensive use of technology, information and data to improve infrastructure and services



To transform India into digitally empowered society & knowledge economy



To drive economic growth and improve the quality of life of people by enabling local development and harnessing technology that leads to Smart outcomes

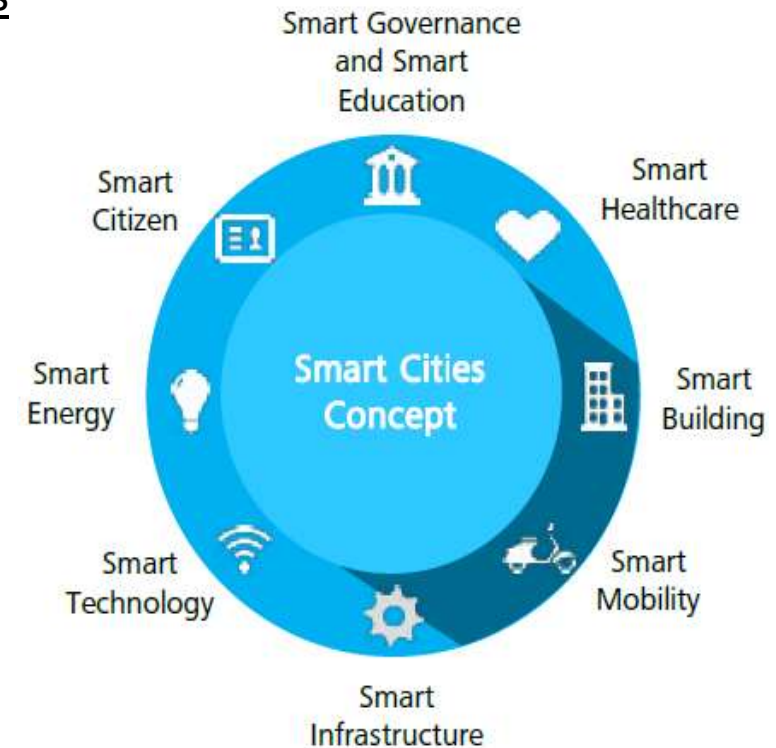


The focus is to bring transformation to realize:
**Digital India:
Power To
Empower**

Smart Cities Mission

The purpose is to drive economic growth and improve the quality of life of people by harnessing technology that leads to smart outcomes

The mission requires extensive use of technology, information and data to improve infrastructure and services



Telecom infrastructure is the bedrock for these achievements.

Other Opportunities being explored

Newer concepts like RAN Sharing and Network Cooperation

- RAN Sharing
- Network Cooperation (NetCo)

New Team/ Skill Development and O&M Process Automation

- R&D and Innovation skills
- Site Analytics management skills
- Automation of Non-intelligent processes

Energy Management

- Clean energy sources
- Data analytics
- Energy efficient equipment

Commercial Models and Opex Reduction

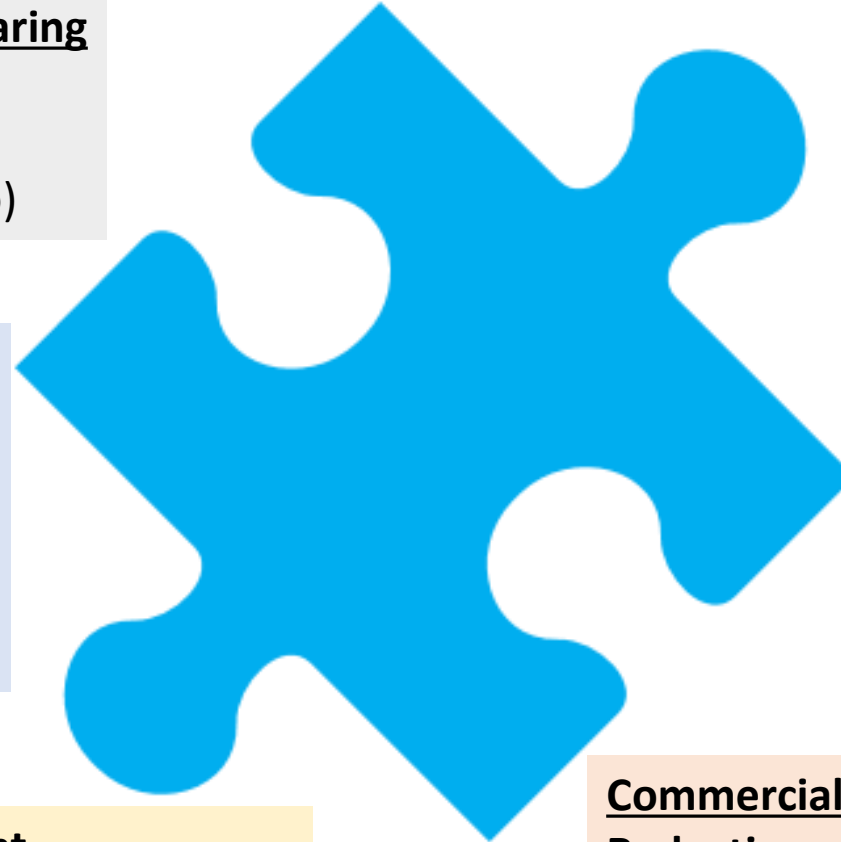
- Pass through vs Fixed fuel cost
- Rent cost reduction
- Field force utilization

New Business Areas

- IBS, Small Cells, WiFi Offloading
- Fiberized backhaul network
- Managed Services

Innovative Site Acquisition & Rollout models

- Site Deployment
- Acquisition for data roll-out
- Street level coverage



Challenges

Operator consolidation

- Can lead to reducing demand for additional sites however, consolidation will be restricted to smaller players, thereby having a limited impact on tower companies

NetCo & other infrastructure sharing

- The operators might enter into NetCo agreements wherein they share their networks for cost optimization, as a result of which the site requirement for different operators would be less

Traffic off-loading

- Due to large traffic volumes expected in next 4-5 years, operators are expected to off-load a large amount of traffic on micro sites, small cells and Wi-Fi, which might render the macro site tenancy growth lesser than expected

Spectrum sharing & carrier aggregation

- Currently, spectrum sharing is not allowed in India, however, if allowed it may negatively impact the additional site requirements across the operators

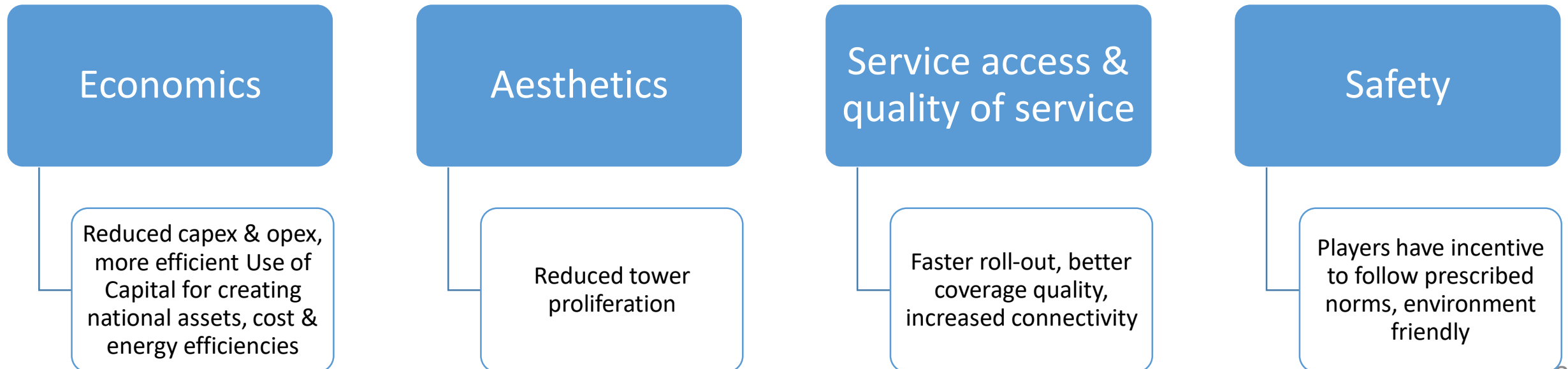
Alternate access technologies

- Entry of new market players such as Comcast and Google can pose further competition to network operators

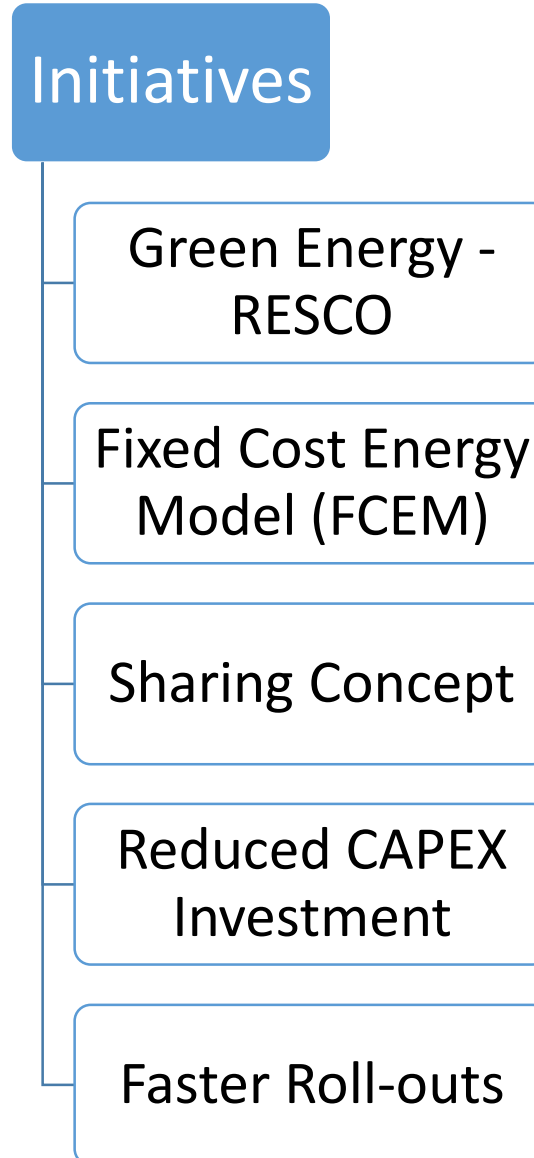
Sharing infrastructure – need & benefits

- The Tower industry facilitated and support the unique and innovative concept of “Tower Sharing” through Project “MOST” (Mobile Operators Shared Towers) initiated by Union Ministry of Urban Affairs and Ministry of Communications, Government of India
- Introduced new Master Service Agreement (MSA) to encourage sharing by bringing down cost to existing as well as new sharer.
- Non-discriminatory, encouraged new technologies with ‘loading charges’

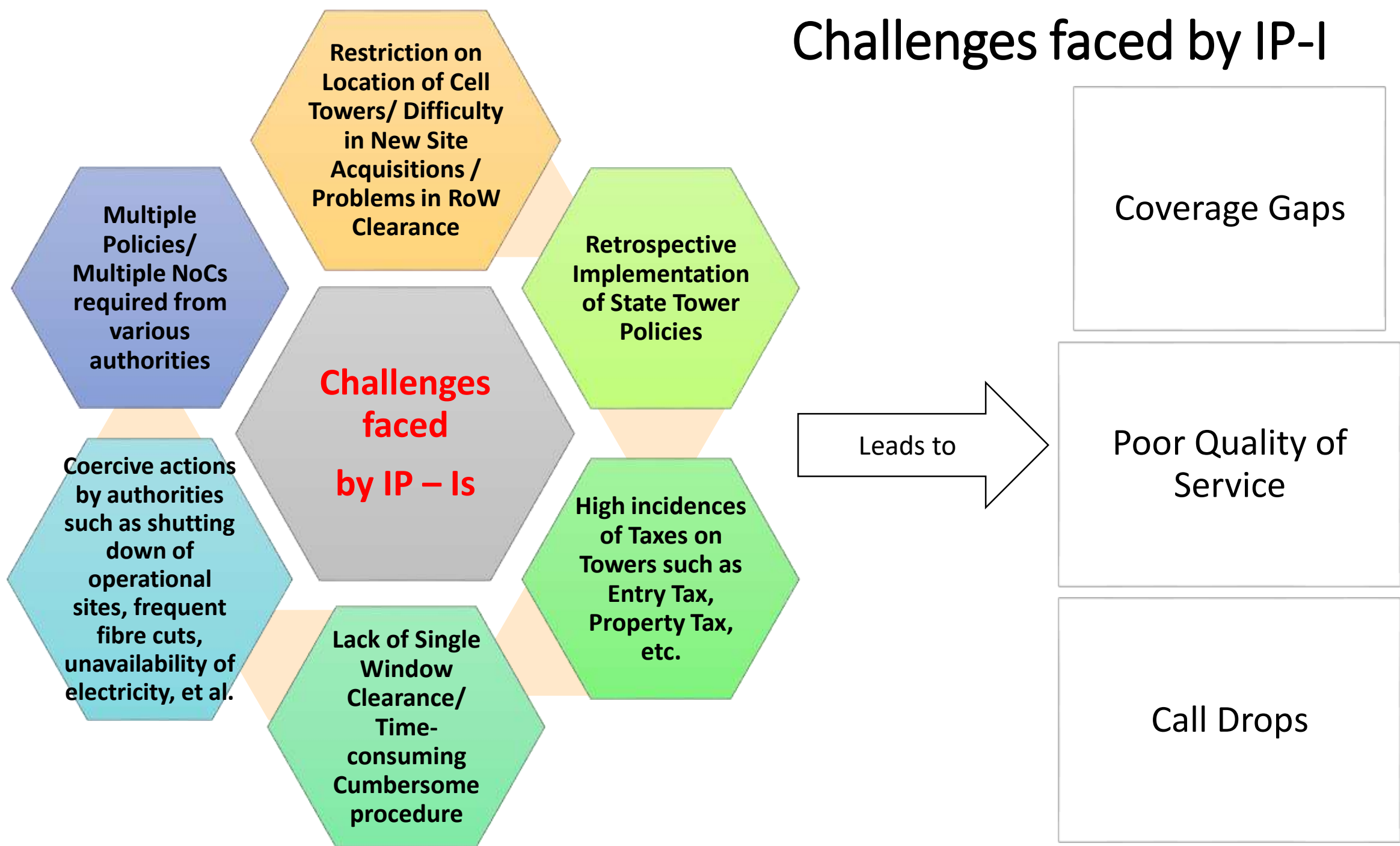
Sharing benefits



Trends in tower sector



Challenges faced by IP-I



Key concerns of the sector

Indian Telegraph Right of Way Rules, 2016

- IP-1s have not been extended the benefits of notified RoW Rules.
- IP industry needs to be extended the Right of Way Rules to IP-1s also for providing necessary infrastructure and services within the scope of their registration certificate only to the Licensees of Telecom Services licensed under section 4 of Indian Telegraph Act, 1885 on a non-discriminatory basis.

Availability of Government lands and buildings for installation of telecom infrastructure to TSPs/IP-1s

- IP industry needs to be extended Government Lands & Buildings including Post Offices for provisioning of telecom infrastructure and as per the scope of their registration certificate the same will be sharable only to the Licensees of Telecom Services licensed under section 4 of Indian Telegraph Act, 1885.

Reclassification of Common Telecom Infrastructure

- There is a need to re-classify/ redefine 'Common Telecom/ Digital Infrastructure' to include Antenna, Feeder Cable, Node B, RAN & Transmission System, coaxial cable, combiners, splitters, directional couplers and passive antennas etc. which must be allowed to be owned and maintained by IP-1s and shared amongst the Licensed Telecom Operators only under its existing Registration Certificate(s).

Support extended by DoT & TRAI

- Issuance of Advisory guidelines on Installation of cell sites to Chief Secretaries.
- Engagement of Telecom Minister with Urban Development Department for installation of cell sites on Government land and buildings.
- DoT's involvement with State Government's – Letters to various Chief Secretaries explaining the issue in detail
- EMF Awareness & Mobile Towers outreach program launched by DoT across the country
- TERM Cells letters to Municipal Corporations and various other authorities. Issuance of strict EMF norms and continuous monitoring of the same. Govt. of India allowing installation of mobile towers around the hospitals thereby allaying fear of EMF/radiation scare.
- Support in various litigations on the matter of EMF/Towers.
- GoI accorded an Infrastructure Status to Telecom Sector/ Telecom Tower in the year 2012.
- Directions by Central Pollution Control Board (CPCB) - directions wherein DG sets up-to 1MVA are exempted from the purview of consent mechanism.
- Tower Design options: The IPs are allowed to follow any tower design as long as they are structurally safe.
- Amendments in Unified Building Bye Laws: The UBBL 2016 have been amended to allow installation of towers on residential buildings in New Delhi.
- DoT's involvement with State Government's – Directed Letters to various Chief Secretaries & other authorities highlighting the role of telecom infrastructure.

Road Ahead

- The Indian tower industry has witnessed many key changes in the past few years as the focus has shifted from growth to operational prudence.
- Fuelled by the exploding data usage and the rollout of next generation 4G/VoLTE networks, the Indian tower industry will continue its growth journey.
- Various Government programs such as Digital India, Smart Cities & BharatNet project will be the enablers for telecom infrastructure in the coming years
- Sharing of network infrastructure is the key going forward as rapidly increasing requirements of data needs to be catered to.
- TowerCo will look beyond traditional business models and capitalize on opportunities in areas such as IBS, WiFi Hotspots, Fiberization, etc.
- Implementing Forward Looking & Enabling Policies by the Government will play a pivotal role in faster roll-out of telecom infrastructure thereby establishing ubiquitous connectivity