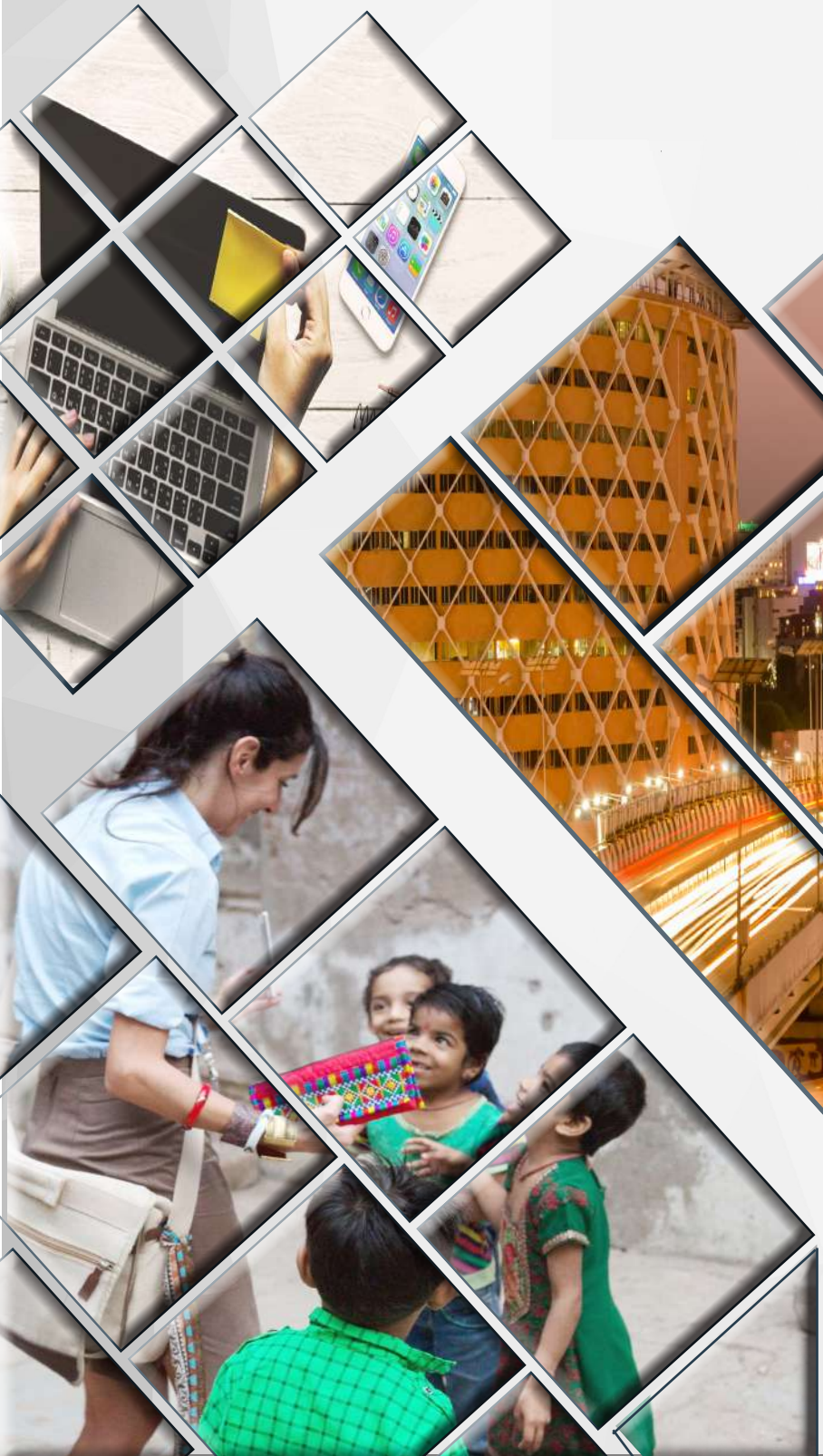
Going Digital

People, Places, Things

Annual Report

2017-18



COAI

COAI

Cellular Operators Association of India (COAI)

Going Digital: People, Places, Things

Annual Report 2017-18

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Chairman's Message

Last year was transformational for the industry; the financial stress in the sector was the highlight. 2018 is expected to be a year that brings new opportunities and renewed hope.

India has truly embarked on a journey to becoming a digital-first nation, powered by digital highways i.e. the mobile broadband infrastructure created by the telecommunications sector.

India now has the 2nd highest number of mobile phones (1 Billion +), around half a billion Internet users and the highest aggregate and per capita mobile data consumption in the world. Further, the Indian digital economy which is already valued at a stupendous INR 18.3 trillion is posed to further grow to INR 67.8 trillion + over the next 5-7 years.

This bodes well for Indian consumers, as it will likely enable viability and adoption of new services such as smart cities, connected super highways, M2M, IoT, artificial intelligence, cloud computing and enhanced e-governance services delivery for citizens. However, in order to deliver to this promise of this future, India needs a healthy and vibrant telecommunications industry.

The industry is in the midst of one of the toughest phases since the privatization of the telecom sector and it will require the collective will and efforts of all stakeholders to solve the challenges and safeguard India's digital future.

A Challenging Year for the Industry

2017 was a year of rapid change, transformation and consolidation for the industry. An unfortunate price war has led to below cost and suppressed pricing. During this period, almost all telecom operators incurred heavy losses and collective revenue declined significantly – AGR declined from INR 1.40 trillion to an estimated (E) INR 1.16 trillion from FY2017 to FY2018. The financial woes of the industry were further aggravated by the steep reduction in domestic and international termination charges.

The industry faces an uphill task of servicing a total debt of INR 7.7

INR 67.8 trillion

Projection for Indian digital economy in the next 5-7 years.

17%

Decrease in AGR from INR 1.4 trillion in FY 2017 to INR 1.16 trillion (E) in FY 2018

30.81 billion

E-transactions in India in 2017 (source: etaal.gov).

trillion, which is close to 7 times the total revenue of the industry. This debt servicing challenge would continue even if profits and revenues are to increase in the short-term. This problem is best exemplified by the fact that the current total profits of the industry are insufficient to cover the interest on the debt (0.4 interest coverage ratio in Q3 FY 2018).

Further, the average Return on Capital Employed of the industry is around 1% which means that investors in telecom have not witnessed returns on their investments and their appetite to invest further may be significantly diminished. Hence, it is not surprising that the sector is finding it nearly impossible to raise funds from domestic lenders.

Despite, the precarious financial position of the industry, it continues to be one of the most heavily taxed sectors in Asia.

In India the estimated total levy on Telecom ranges from 29-32%, which is the higher than most other benchmark countries in South Asia and ASEAN.

The Challenges are here to Stay

The industry will continue to struggle financially in the next few quarters due to the prevailing low-cost tariffs that create pressure on profitability, while at the same time trying to generate capital for investment towards achieving the goal of 'broadband for all'.

While the consolidation between different players will bring some synergies, the need for capital investments will continue to grow, in order to service the growing customer need for 4G data and to prepare the industry for 5G rollout.

Expectations from the Government

Recently, the Government released the Draft National Digital Communication Policy (NDCP) for public comments. The draft policy is visionary, progressive and also inclusive of all stakeholders – telecom operators, customers, ecosystem partners and the Government.

The Draft NDCP has laid an emphasis on 'Broadband for All', which is the primary pillar for Digital India. It aims to create an enabling ecosystem in India to attract investments of USD 100 Billion in the Digital Communications Sector; create additional employment for up to about 4 million people; enhance the contribution of Digital Communications sector towards India's GDP to 8%; and propel the country to be among the Top 60 Nations in the ICT Development Index of ITU from 134 in 2017, thereby ensuring Digital Sovereignty.

The industry wholeheartedly welcomes the above strategic objectives of the policy.

However, in order to achieve the stated objectives of the draft policy, we have requested the Government to ensure the following key enablers:

- Policy consistency and certainty in the sector to attract new investments and also to protect the investments already made by the industry. No policy should discriminate on the basis of technology and platform.

- Expeditious Right of Way (RoW) approvals for installation of towers and laying of fibre. At present, RoW permissions and municipal levies have become a major bottleneck in both installation and operations of towers, and in laying of fibre.

- Availability of sufficient Access and Backhaul spectrum at affordable prices since the telecom growth in India has always been propelled by wireless, be it 2G for voice or 3G/4G for data. We believe that wireless will play a significant role in achieving the vision and mission of the proposed national policy.

- Simplified Licensing regime such as One India Licence and Ease of Doing Business.

- Immediate reduction in the regulatory levies and taxes in the form of Licence Fee, Spectrum Usage Charge, GST, etc.

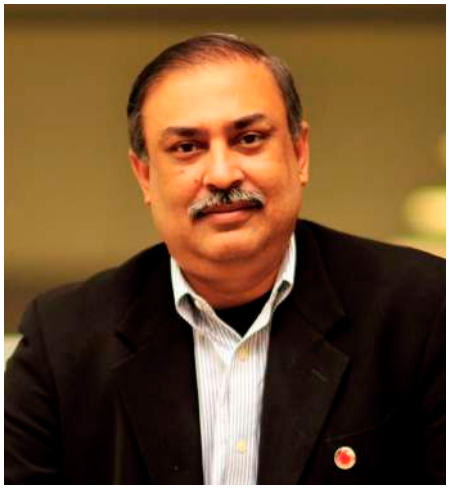
We hope that in 2018-19, the Government and TRAI will work with the Industry and COAI to address the challenges being faced by the Industry.

My best wishes to the COAI team to continue their good work in the coming year, which I am sure, will be crucial for the industry.

- Mr. Gopal Vittal
Chairman, COAI

Vice Chairman's Message

With consolidation, the Industry will benefit from the increased synergy in its operations, leading to improved margins.



"The need for financially strong service providers, with ability to raise and invest capital and judiciously deploy a portfolio of technologies and platforms is therefore now more acute to fulfil the collective vision of Digital India"

Towards a Bold New Future

We are entering a new and exciting era - an era of Digital, Convergence, Big Data, IoT, Cloud, Augmented Reality, Robotics and Artificial Intelligence. The real and virtual worlds are converging at an unprecedented pace to create a bold new future. India, along with the world, is on the cusp of Industry 4.0!

This digital revolution has presented India with a great opportunity to catch up with the more advanced countries and even take the lead in innovating, using these new technologies. Digitalisation across sectors - industry, government, services and administration - is the essential way forward. To emerge as global leaders, all organisations across industry verticals, must partake in this revolution. However, these modern technologies can be benefitted from only if the telecom sector is able to provide a robust and seamless layer of quality connectivity across the country.

The next few years therefore, are going to be crucial to turn the dream of Digital India into a reality. India can't afford to miss or delay availing this opportunity, for the potential downside is immense. Hence, it is only reasonable to expect the Government, the telecom service providers and all other stakeholders to work together and support each other towards achieving the common, larger goal.

Consolidation Brings Opportunities

No market in the world has more than five telecom operators. However, in India, there were more than 10; hence consolidation was critical for the sustenance of the industry and we saw a lot of it during the year.

The new competitive dynamics in the market since 2016 led to falling ARPU, declining revenues, mounting losses, increased debt, causing severe financial distress in the industry and resulted in some operators consolidating while a few went out of business

altogether. It is expected that with the completion of the ongoing consolidation, there will remain 4 large telecom service providers who will get the benefit of increased synergy from operations, thus reducing the overall cost of operations, leading to improved margins.

Despite adversity, the industry remained focussed on delivering value to customers and continued to invest in expanding and upgrading the networks. Eventually, we expect that pricing rationality will return, ensuring sustainability and longevity of the industry.

Make the Industry Strong

The telecom industry is under unprecedented stress. For it to play its due role in Industry 4.0, to foster growth and innovation, it is vital that immediate steps be taken to restore the financial health of the sector. Towards this, the Government needs to heed to the consistent demand of the industry to reduce levies - redefine AGR, bring down the Spectrum Usage Charges (SUC) to cover only administrative costs across all bands, reduce License Fee (LF) and allow the concept of pass through revenues in line with the principles of input line credit.

Further, the introduction of the 18% slab rate pertaining to GST for telecom services, must be reconsidered. The Government needs to treat telecom as an essential sector and charge minimal GST preferably.

Modest reserve prices for spectrum and provision of harmonized, contiguous, interference free spectrum will help reduce costs and make the sector more efficient. Further, the Government should expedite the allocation of backhaul spectrum i.e. Microwave, E & V bands at reasonable prices to the telecom operators.

The Government did take cognizance of the deep financial distress of the industry and constituted the Inter-ministerial Group (IMG), which made its recommendations to the Telecom Commission, to determine what needs to be done to revive the industry. The industry appreciates the proposal to lengthen the time period allowed to repay Spectrum Debt. However, it would have been beneficial if the interest on spectrum debt was lowered.

Create the Right Way

Over the last four years, India has climbed several notches in the ease of doing business rankings. The telecom sector too has benefitted from several progressive decisions including those that enabled optimal use of spectrum.

Our focus as telecom service providers, remains on offering quality services to our customers. Today, availability of optical fibre, essential to carry large bandwidth and surging volumes of traffic is limited. This requires immediate attention for this limitation can potentially jeopardise the entire Digital Revolution. The need is to further ease the Right of Way (RoW) rules and speedily develop related infrastructure, possible via a more concerted and collaborative effort amongst all stakeholders including the central and state governments and local bodies.

RoW rules are considered to be key enablers for expediting the deployment of underground (optical fibre) and over ground (mobile towers) infrastructure in India. The RoW Guidelines aim to rationalize administrative expenses across the country to a maximum of INR 1000 per km for fibre, and a maximum of INR 10,000 per application for overhead towers. It recommends a nominal, one time 'Administrative Fee' that covers the cost of administration for providing the Clearance/ Permits. The rules mandate development of an electronic

application process within one year of the roll-out of ROW rules, single clearance window for application, designation of nodal officers for appropriate authorities, and fast-tracking decision on RoW permits to within 60 days after application. When implemented, these are expected to enable swift deployment of new telecom infrastructure.

The operators, along with the infrastructure providers, have been working tirelessly on the implementation of the Right of Way policy at the state/ circle level. We have managed to align 5 states with the RoW Gazette notification in the last one year. The Odisha Telecom Infrastructure Policy, 2017, is one of the most comprehensive tower policies across the nation. The Odisha policy has been adopted by the Department of Telecommunications as the ideal policy for implementation for all sates across India. The industry is currently working towards policy alignment in West Bengal, Uttarakhand, Karnataka, Gujarat, Goa, Delhi, Himachal Pradesh, Nagaland and Telangana.

Opportunities Ahead

5G is on the anvil and roll out is expected to begin a few years from now. The Government has already set up a committee, the "5G High Level Forum", to see its seamless implementation in the country. Expected to herald a seismic shift, 5G promises to offer much faster access speeds, improve spectral efficiency (data volume per area unit), lower outage probability (better coverage), lower infrastructure deployment costs and higher reliability of communications, overall. A thriving 5G ecosystem requires a converged, layered & flexible approach that utilizes a number of technologies.

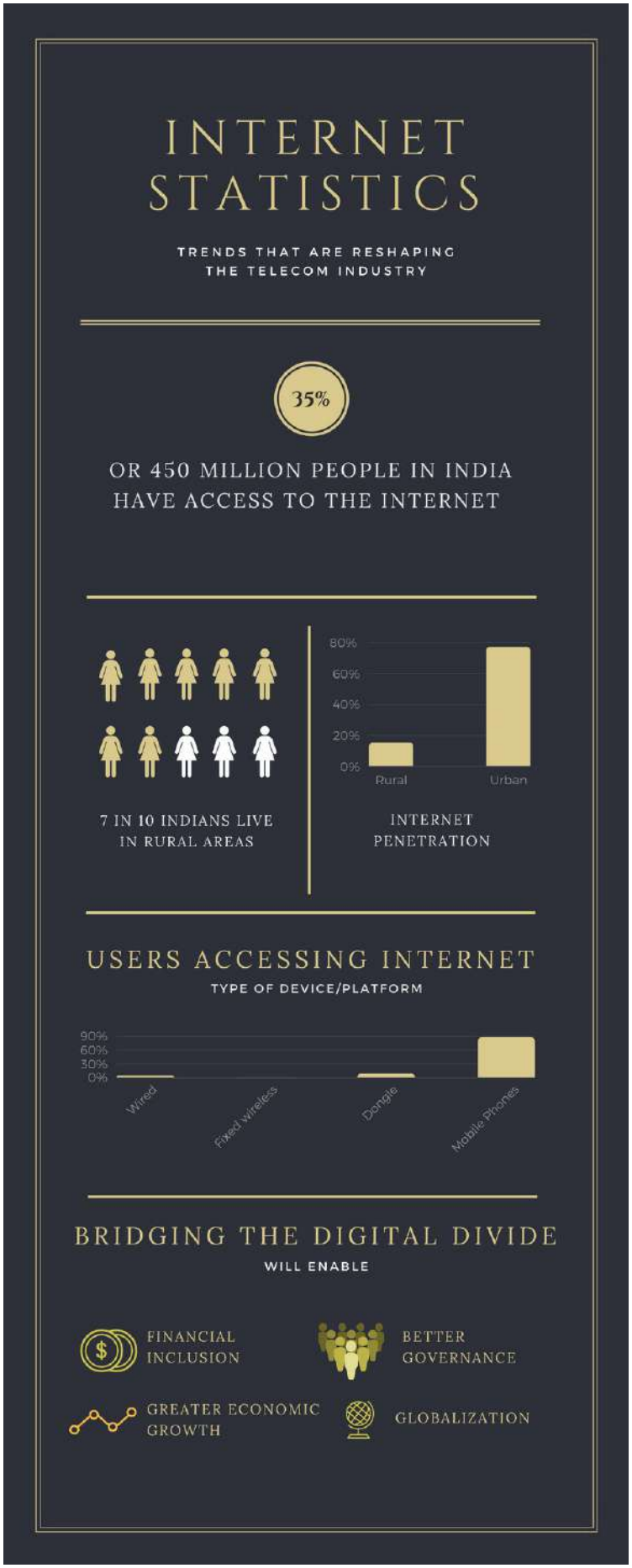
Radio spectrum, fixed infrastructure (optic fibre and cable broadband), mobile networks, satellite, and aerial platforms (High Altitude Platform Systems or HAPS) will all play a role – in both access and backhaul implementations. Hence, timely allocation of the E &V Bands by DoT for backhaul will be essential. The capital investment requirements for these are well over US $100billion over the next five years and this gives further urgency to address the financial health of the industry.

Network security is of paramount importance and the industry is taking all the necessary measures to ensure the security of their networks. The explosive growth in the quantity and quality of personal data has created a significant opportunity to generate new forms of economic and social value. The recent landmark decision of the Honourable Supreme Court, recognising 'Privacy' as a fundamental citizen right has kicked off a robust debate on the definition of 'personal data' and the parameters needed in a 'Privacy Act' that effectuates the Supreme Court ruling. Privacy considerations will now require proactive engineering activities to build privacy into the products from the onset. We are expecting that the new data privacy norms by the Government will address many of these issues.

Bridge the Digital Divide

In a country of more than a billion people, just about 35% or 450 million have access to the Internet. Access to Internet creates a positive socio-economic impact and true progress without digital inclusiveness is a myth.

Over 70% of our country's population lives in rural areas where the internet penetration is just about 15%, much lower than that in urban areas, where it is approximately 77%. A critical, urgent need, therefore, is to bridge this digital gap between rural Bharat and urban India while progressing towards the larger goal of universal



Internet access, a must to fulfil the larger vision of Digital India, the ambition of a cashless economy and for building a digital future for all.

About 87% of the 450 million internet connected population accesses it via the mobile phone. Mobile, with its near ubiquitous reach, will therefore, continue to remain at the forefront for driving 'Internet for All'. Telecom service providers have a large role in bringing all citizens of the country under the digital umbrella and delivering this desired digital future.

The need for financially strong service providers, with ability to raise and invest capital and judiciously deploy a portfolio of technologies and platforms is therefore now more acute to fulfil the collective vision of Digital India.

A Progressive Policy Framework

The recently unveiled 'National Digital Communications Policy 2018', as proposed by the DoT is holistic and forward looking. It is designed to empower Indian telecom to fulfil its designated role of being the 'critical enabler' to achieve the larger vision of a truly Digital India and rightly considers all aspects vital for the development and growth of the sector, to deliver connectivity for all, in both urban and rural areas, across the country, amidst an evolving landscape of convergence, across technologies and platforms. The focus on Connect India, Propel India and Secure India is the right framework for the future.

This policy draft advocates the

need for state-of-the-art infrastructure and a light-touch, technology-friendly framework to propel innovation and usher in new technologies such as 5G, IoT and AI.

It will be critical to execute this policy efficiently to ensure that the playing field remains level and the interest of all stake holders – governments, citizens, operators and investors are served well, resulting in a strong and sustainable telecom sector.

In conclusion

To translate the vision of the digital future into reality, the need now, more than ever, is for all stakeholders to better collaborate, co-create and accelerate execution with a singular focused, consistent approach towards the larger objective of Digital India. The historic mindset of treating telecom as a revenue generating sector rather than as a core enabler for the socio-economic progress of the country has let things drift. Now we must set the course right, progress full steam ahead and create a new legacy.

The existing digital divide between rural Bharat and urban India needs to bridge fast. This is Bharat's time to embrace the digital world just like India is doing and we must make the most of it to deliver the digital future to all!

- MR. SUNIL SOOD
Vice Chairman, COAI

Key Insights

Consolidation will lead to increased synergy from operations, thus reducing the overall cost of operations.

Network security is of paramount importance and the industry is taking all the necessary measures to ensure the security of their networks.

Access to Internet creates a positive socio-economic impact and true progress without digital inclusiveness is a myth.

'National Digital Communications Policy 2018' is holistic and forward looking.

The existing digital divide between rural Bharat and urban India needs to bridge fast.

The capital investment requirements in the sector are well over INR 6.78 triillion over the next five years.

#There is a need to stop looking at the telecom sector as a revenue generating machine and treat it as a core enabler for the socio-economic progress of the country.

From Director General's Desk

The after-effects of the challenges faced by the industry in 2017 will be felt across the sector for a few more years, however, emerging technologies & the new telecom policy can bring financial relief and even present new avenues for revenue generation that can alleviate the finacial woes

As far as the years go, 2017 was as eventful as any the industry has witnessed. The entry of a new service provider who offered highly competitive data prices and compelling offers to the consumers, led to hyper-competition, the scope of which had never been seen before. The year also marked the significant expansion of 4G services for all operators across the country, and it was also the year that saw diversification of operators' services beyond voice and data; providing high-quality services on high-speed broadband and looking to the future for such emerging technologies such as the 5G, IoT, M2M and cloud computing.

India has the second largest Internet user base in the world, despite only 40 percent penetration. Considering that Internet penetration has been directly linked with economic growth of a country, bringing the other 60 percent online should be a priority. The way Indians use Internet is also changing, with more and more people switching to mobile devices for accessing the web. In fact, the mobile data consumption in India surpassed the combined usage of the US and China in 2017!

While the industry witnessed phenomenal growth in data and high-quality services, it faced a number of challenges as well. With a cumulative debt of INR 7.7 trillion and revenues under INR 2.5 trillion, the telecom service providers (TSPs) are in severe financial distress.

The number of telecom operators in the telecom sector was significantly reduced this year with the onset of consolidation and two major operators filing

INR 7.7 trillion

cumulative debt owed by the industry with the revenue under INR 2.5 trillion

INR 2 trillion

investment required from telecom industry over the next two years for Digital India

INR 955 billion

is the value of mobile wallet transactions in 2017, which jumped 40 times from INR 24 billion in 2013

for bankruptcy protection. While the outcomes were poor this year, this phase is expected to lead to healthier balance sheets in the future, thereby allowing the telcos to invest in new technologies and offer an array of new services for the benefit of the customers.

Amidst these challenges, but with hope in the improvement of the industry's fortunes in the future, I present the Annual Report for the year 2017-18.

Status On Policy And Regulatory Issues

With the lowest tariffs across the world, the Indian telecom industry crossed the billion connections mark last year. This was a significant achievement for the industry that now has its eyes set on connecting the next billion through broadband to the Internet. The country is now seeing the Prime Minister's Digital India plan taking shape with more and more districts getting connected to the BharatNet optical fibre network.

The INR 420 billion network that aims to connect all 250,000 gram panchayats by March 2019, saw the launch of the second phase in November 2017. Recent data has indicated that broadband services have started in some 48,000 gram panchayats and another 75,000 gram panchayats are ready to start providing high-speed broadband services. A number of private operators have also started using the network to provide broadband services in the remote rural areas of the country.

Last year's demonetization move forced a massive increase in mobile payments and m-wallets. In 2017, there was a notable shift to mobile banking and this proved to be a boon to e-commerce and digital transactions. The value of mobile wallet transactions jumped 40 times from INR 24 billion in 2013 to INR 955 billion in 2017.

While there have been positives, the financial distress of the industry is turning out to be a major hindrance to on-going progress. The industry continues to feel the impact of the past upheavals of the 2009 voice tariff war as well as the even more severe price wars of the present, which were compounded by the expensive spectrum auctions. During the year, the telecom regulator also reduced the interconnection usage rates from 14 paise to 6 paise, which has impacted the earnings of the majority of the TSPs. The financial distress, caused by a number of different issues, is slowing the industry down and hampering the progress of critical Government initiatives, such as, Digital India.

The year 2017, also witnessed the introduction of one of the biggest tax reforms since the liberalization of the 90s by the Government – the Goods and Service Tax (GST). A very welcome move in-principle, it, however, meant an increase from 15 percent in tax to 18 percent, over and above the around 15 percent outgo in levies such as spectrum usage charges and license fees. There are short-term operational implementation challenges, but the sector is optimistic that the GST, License Fee and SUC rate will be revised in time, given the poor financial health of the sector.

In light of the deep financial distress which the industry was experiencing, the Government constituted an inter-ministerial group (IMG) to come up with recommendations to ease the financial stress in the industry. The entire telecom and the banking sector made submission before the IMG, calling for substantive, immediate, and cogent relief. DoT vide its amendment to the license conditions dated 19th March 2018, allowed extension of the deferred payment of the spectrum debt from 10 Years to 16 Years. This initiative will help with the cash flow of the TSPs in the current financially stressed environment.

The Government has also been committed towards the ease of doing business and is likely to come out with the latest National Digital Communications Policy 2018. This will act as a framework document that will take India into the next decade of technology – introducing services such as the IoT and M2M. Services like driverless cars and refrigerators ordering produce directly

from the grocers will also be possible in the near future at the click of a button on your phone. While the urban population is ready for the next revolution in the telecom services, the IoT segment requires a perfect blend of IT and telecom for development of solutions where the telcos intelligent network, driven by smart applications, can actually define the lifestyle of the consumers. This would require light touch regulation, conducive for innovation and growth and forward-looking policies.

The buzzword for 2018 is '5G'. While the TSPs will start preparing to roll out 5G, we expect, it will only start getting deployed in the next 12-18 months. The International Telecommunication Union (ITU) is setting standards that will apply globally. Once that happens, equipment will become available on a large scale, at a viable price for the Indian market. India's telcos have partnered with equipment vendors to test the possibilities while the Government (DoT) has formed a committee to look into enabling policies. The technology will be a key enabler for the Internet of Things (IoT) and mission critical services requiring very high reliability, global coverage and very low latency, so far handled by specific networks, typically public safety, will become natively supported by 5G infrastructure. 5G will integrate networking, computing and storage resources into one programmable and unified infrastructure that will allow for an optimized, dynamic usage of distributed resources, and the convergence of fixed, mobile and broadcast services. In addition, 5G will support multi tenancy models, enabling players to collaborate in new ways.

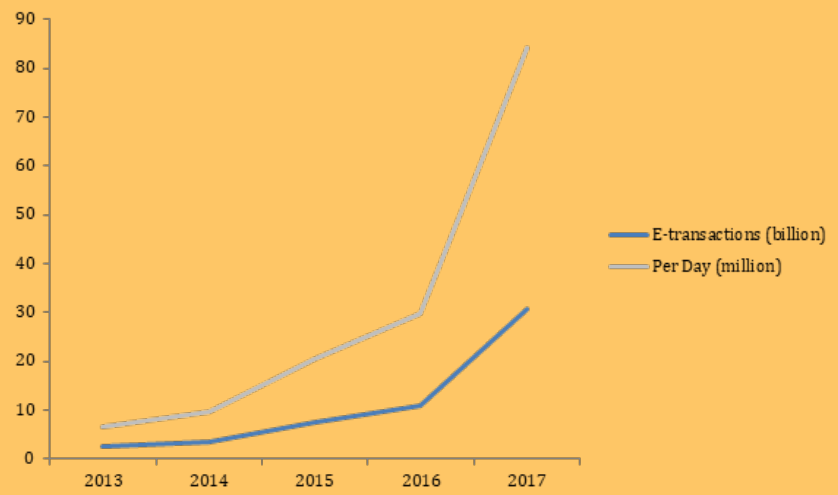
The industry continues to submit to the Government for a stable regulatory and policy environment which facilitates innovation and investment. The cost of capital has gone up as the RoIs have dipped. For Digital India to actualize its full potential, an investment of INR 2 trillion is required over the next two years and this can only happen through a facilitative policy and regulatory environment.

KEY INSIGHTS FROM 2017-2018

18%

GST paid by the industry to the Government, since the introduction of the tax reform. Prior to that, it was 15%.

E-transactions in India (2013-17)



* Data sourced from eTaal.gov

Industry initiatives and achievements

During the year, COAI dealt with various issues of importance to the industry.

1. Telecom Infrastructure and ROW

Post the Gazette Notification in 2016, COAI along with the Government is working with the State Government to align their state policies with the Gazette rules. COAI was successful in getting policies issued in five states including Odisha, Haryana, Assam, Maharashtra and Tripura. The Odisha tower policy, which is one of the most comprehensive tower policies across the nation. The Odisha policy has been adopted by Department of Telecommunications as the ideal policy for implementation all sates across India. COAI is also working with other State Governments for issuance of guidelines including Uttar Pradesh, West Bengal, Uttarakhand, Karnataka, Gujarat, Goa, Delhi, Himachal Pradesh, Nagaland and Telangana.

Apart from the above, Ministry of Defence also issued a policy for installation of telecom infrastructure in areas under the Ministry of Defence. The policy covers allotment of defence land on lease for static towers as well as permission to use land on a licence basis for placing cell towers on wheels, permitting use of rooftop in government and

private buildings, including private land in cantonments and military stations to companies registered with DoT as infrastructure providers. This policy will help improve coverage gaps and reduce call drops in and around military stations and cantonment areas.

2. Privacy and Security of Data

COAI strongly believes that national security and privacy issues are of paramount importance, hence the regulatory framework must ensure their primacy and it is strongly recommended that no exception should be made for any service provider, including the OTT communication service providers, while subjecting them to the rules to meet the national security and privacy norms, i.e. same service same rule should be established for similar service providers.

The TSPs already have clauses in their licenses, which they have to abide for providing access to public networks, which are comprehensive and sufficient for connectivity. Such clauses, or as may be finally decided by the Government, should be applicable to all the players in the eco-system and applied in a uniform manner.

The Government is also cognizant on the issue of data privacy. MeitY formed an expert committee under the Chairmanship of Justice Srikrishna Committee to study various issues related to data protection and to make specific suggestions to

the Central Government. COAI is a member of the Committee and has provided its inputs to the Committee.

3. Approach towards sustainable telecommunications issued on 23.10.17

COAI has been debating the issue of sustainable telecom for the past few years advocating that there should be only one target i.e. carbon abatement and there should not be any Target for RET deployment.

Considering the submissions of COAI, TRAI recommended that TSPs should voluntarily adopt the RET solutions, energy efficient equipment's and high capacity fast charging storage solutions, there should be no mandatory provisions for RET deployments and only one target i.e. Carbon Footprint reduction is proposed.

This is a positive recommendation from TRAI for the consideration of the DoT. As per the TERI report dated September 2012, the cost to meet the RET deployment targets would amount to approx. INR 370 billion to the industry.

4. Mandatory Testing of Telecom Equipment

The Government issued Gazette Notification mandating testing of all telecom and ICT equipment from Indian labs beginning from October 1, 2018.

COAI submitted that while the industry is moving towards optimistic business climate with improving business conditions uniformly across the country, the proposed draft guidelines for "Mandatory Testing" of telecom equipment is surely going to adversely affect the entire telecom sector eco-system which is already debt ridden, overburdened with regulatory & policy interventions and multiple government/sectoral compliances including various other testing requirements.

Based on requests from COAI, TEC formed various Committees for different types of Equipment to prepare Essential Requirements of testing for each type. We continue to work with the DoT to ensure that this does not become an impediment to the orderly growth of the industry and the ease of doing business is maintained.

5. Subscriber Verification through Aadhaar based e-KYC

DoT issued guidelines post a recommendation from the Supreme Court, for re-verification of all the existing subscribers through Aadhaar based e-KYC in one years' time. The TSPs started the process, however, various issues in the Court regarding usage of Aadhaar and privacy have been raised. The Hon'ble Supreme Court, as of now, has kept the timeline for reverification of subscribers through Aadhaar based e-KYC open till the pronouncement of the final judgement.

6. Promoting Local Telecom Equipment Manufacturing Issued on September 18, 2017

For India to become a center for telecom equipment manufacturing, there are certain issues that need to be tackled realistically with the intention to make their goals translate to a pragmatic and actionable roadmap.

The Government may look at holistically promoting the overall manufacturing eco-system within the country which can be plugged into the global supply chain. It was emphasized that the Government needs to thoroughly analyze and then develop an actionable plan to promote local manufacturing in the country.

It is important to note that even countries which are recognized as global manufacturing hubs are not present across the entire value chain. Hence no single country is wholly self-sufficient in such a technologically complex industry, including US, China, Japan, France, etc. Thus, there is a need to review the entire eco-system and not make policies in silos.

7. Finance Issues

Though the industry is reeling under acute financial distress, however, there were some positive developments. The Government allowed extension of the deferred payment of the spectrum debt

from 10 Years to 16 Years. This initiative will increase the cash flow of the TSPs in the current financially stressed environment.

After much pursuance with DoT, it was clarified that the Pass-through charges for international roaming would be allowed on the basis of authentication by the authorized signatory of the operator and certificate of the statutory auditor.

DoT also instructed CCAs to reopen those cases wherein the pass-through charges for international roaming had been disallowed in the past on the basis of order issued by DoT in 2014. This clarification will enable the operators to reverse the past disallowance on this account.

The Government of J&K announced the Amnesty Scheme to facilitate voluntary payment of tax arrears, payable under the General Sales Tax Act. As per the scheme, it provides remission of 100% of penalty and interest on arrears of admitted tax.

Other Activities of the Association

This year COAI hosted the country's largest and first ever iconic Mobile, Internet, and Technology event in India – India Mobile Congress 2017. This platform was a much awaited event in the country, which has over a billion subscribers and has seen tremendous growth in the number of Internet users and a large number of IT and Telecom companies operating and investing in India. The event was supported by DoT, MeitY, and Ministry of Skill Development and Entrepreneurship.

The event took place under the support, guidance, and leadership of Mr. Manoj Sinha, Minister of Communication and actively supported by Ms. Aruna Sundarajan, Secretary, DoT and Chairperson of the Telecom Commission, for translating this vision into a reality.

The event comprised of Ministerial & partner programmes in Digital India, Smart City, emerging technologies, Make in India Projects, Skill Harmonization, business innovation, knowledge sharing, etc. There was a technology showcase offering a glimpse into virtual reality, connected cars, m-health, smart wearables, smart home, artificial intelligence, drones, robotics, smart energy, internet of things, blockchain, machine vision, cloud computing, etc.

COAI also led in coordination with the DoT and the GSMA, in facilitating the visit of the Indian Government delegation comprising of the Minister of State (I/C) for Telecom Mr. Manoj Sinha, Secretary DoT Ms. Aruna Sundararajan, Chairman TRAI Mr. R.S. Sharma, Member of TDSAT, Mr. Bhargava along with senior staff from their respective organizations to Mobile World Congress 2018, held in the month of February-March at Barcelona, Spain. The delegation successfully represented the Indian Telecom Industry and highlighted the immense opportunities present in the country.

COAI being the market representation partner of 3GPP from India, has been constantly engaging with 3GPP on requirements coming from the Indian market. COAI along with IF3, hosted all the three plenary meetings of 3GPP in Chennai from March 19-23, 2018.

The meetings made considerable progress and finalized the standard for Non Stand Alone-New Radio (NSA-NR), which allows 5G deployments over existing 4G networks. More than 300 delegates from across the globe participated in these meetings including the largest Indian participation ever. This ascertains that companies working on 5G products are on track for commercialization of 5G services in 2019.

In a bid to strengthen India's position on the use and deployment efforts of 5G technology, COAI announced the formation of the '5G India Forum'. The Forum aims to bring together different voices of the Indian Telecommunications, Mobility & Connectivity eco-system in order to become the leading force in the development of next generation communications.

The Forum would facilitate synergizing of national efforts

and will play a significant role in shaping the strategic, commercial and regulatory development of the 5G ecosystem in India and aid in the Make in India & Digital India initiatives of the Hon'ble Prime Minister.

COAI has participated and partnered with other entities in the co-organization and co-creation of various Seminars and Workshops on issues of common interest and benefit to its members and for generating subject matter awareness amongst consumers. COAI and its members also continued active participation in Organizations such as CII, FICCI, ASSOCHAM, NASSCOM, GSMA, TSDSI, TCOE, TSSC, amongst others, as well as activities of many telecom events in India.

To keep pace with the growing ecosystem and to represent the whole gamut of the communications industry, COAI continued to expand its Associate Membership by inducting new members such as Amazon Seller Services Pvt. Ltd., Atria Convergence Technologies Pvt. Ltd., and Ciena Communications India Pvt. Ltd.

The COAI Executive Council headed by Chairman, Mr. Gopal Vittal, Vice Chairman, Mr. Sunil Sood and comprising senior representatives from all member operators, met several times over the last year to deliberate on a variety of issues impacting the telecom industry. They were ably assisted by proficient advice from the various Working Committees that have been set up in COAI.

In the end, I want to express my deep appreciation for to all the Committees and Working Groups and their Chairmen and Vice Chairmen for their unstinted support and cooperation. We are grateful to you all for taking time to contribute towards various industry issues and helping the Association in representing them in a proficient and timely manner.

I would like to thank the Chairman, Mr. Gopal Vittal and the Vice Chairman, Mr. Sunil Sood, for their personal involvement and support in all the activities and initiatives of the association for the last year, especially in the face of the many challenges faced by their respective companies during the year. We request their continued support and guidance in future as well. Their leadership and contributions have helped the association grow and position itself as the definitive voice of the industry.

I would like to record my deep gratitude to the COAI Secretariat team, which has always provided excellent support and assistance in all our endeavours. I appreciate their willingness and dedication in taking up new projects and contributing successfully towards it. I am indebted to their efforts in contributing significantly to all the achievements of COAI.

Mr. RAJAN S. MATHEWS
DIRECTOR GENERAL, COAI

Going Digital

People, Places, Things

We are at the precipice of a digital transformation and the telecom sector has played a leading role in getting us there. A final push to complete the transformation will mean connecting the next billion and bridging the digital divide. For a truly Digital India, we will need to connect all people, all places and all things.

Technology has brought about a paradigm shift in the way we lead our lives; Internet and connectivity have opened up a world of possibilities and prospects for everyone. What seemed like a distant, futuristic possibility, a few years ago, is a reality today and the advancement and innovations in technology are driving that change. We have moved from fixed-line telephones and dial-up Internet to sophisticated smart phones offering unbelievable data speeds within a span of 25 years. Now we are looking at the next generation of mobile networks that are expected to enhance the user experience manifold.

Multiple reports indicate that the number of Internet users in India is expected to reach 500 million by June 2018; and this digital growth is going to have a number of positive implications. India is presently the second largest telecom market in the world, surpassing the US, and trailing China. Growing at a blitzkrieg rate over the past decade, the market is contributing significantly to India's GDP, making 'digital' a key focus area for the policy makers. Everything – people, places and things are and will continue to be impacted by this digital disruption and phenomenal growth.

Access to the Internet is one of the major pivotal parameters that can directly impact GDP growth of a nation. For every 10% increase in Internet penetration for a country like India, GDP is conservatively projected to grow between 1.0% and 1.8%. Therefore, it is hugely transformative and creates a ripple effect for an emerging economy like India.

At a Glance

500 million internet users by June '18

Just by improving Internet penetration, India can experience significant growth that can help establish it as a global leader in technology.

In 2023

India's mobile traffic per month will be at par with the worlwide mobile data traffic per month in 2017.

970 million smartphone subscribers

by 2023 and smartphone traffic expected to grow 11 times to 14 Exabytes (EB) per month by the same time.

Just by improving Internet penetration, our country can experience significant growth that can help establish it as a global leader in technology. Currently, the country has less than 35% penetration and this needs to be addressed on a priority basis, with a sense of urgency and purpose.

The Government's Digital India program is conceived to do this very thing – transform the country into a digitally empowered society and a knowledge economy. It intends to connect every citizen and provide universal access to the Government and other key information services on demand, thereby ensuring digital empowerment of every citizen. There are three key vision areas of the initiative – digital infrastructure as a utility to every citizen, governance & services on demand and digital empowerment of the citizens. This can only be made possible through a robust communications industry, not just in terms of connecting people, creating jobs, and providing access to knowledge, but also in terms of economic growth and financial inclusion.

A digitally connected nation, where even the remotest village is connected via high speed Internet will not only facilitate delivery of crucial government services but also assist in providing targeted social and financial benefits, bringing inclusion in the true sense of the term. Every connected citizen becomes a part of the very infrastructure that forms the pivot of socio-economic growth.

Keeping access to high-speed internet at the core, the Government has laid out several services. The Jan Dhan- Aadhaar and Mobile number (JAM) trinity can link all the citizens of the country to one common financial, economic, and digital space, thereby playing a crucial role in facilitating responsive, sensitive, effective, transparent and accountable governance.

From computerisation of departments to the availability of numerous services available on mobile phones, e-Governance has been steadily growing in the country. It must now take into account the issues of service orientation and transparency.

As a part of the digital thrust, the Government has identified six aspects crucial for ensuring that governance and services are made available on demand to all citizens and other stakeholders. These are seamless integration of services across departments or jurisdictions, digitally transformed services and entitlements, real-time availability of services, portability of entitlements and availability on cloud, financial transactions become electronic and cashless, and the leveraging of Geographic Information System (GIS).

While the evolution of and advances in voice communication played a major role in India having one of the fastest growth rates in terms of Gross Domestic Product (GDP), data will add sustenance and enhance it further. The National Broadband Plan is expected to chart new roadways for India's socioeconomic progress and make India a knowledge-based digital economy.

Putting People First

For India to be truly digital, what is needed and what we are achieving includes – holistic and all-encompassing broadband highways, universal access to mobile connectivity, Public Internet Access Programme, e-Governance: reforming government through technology, e-Kranti - electronic delivery of services, information for all, electronics manufacturing, IT for jobs and early harvest programmes.

The National Broadband Plan via the BharatNet initiative has already connected 250,000 gram panchayats and 6000 villages till date and aims to integrate all networks and cloud infrastructure in the country to provide high speed connectivity and a cloud platform.

As per the Mobile for All initiative, the Government is spending around INR 160 billion to connect around 55,619 villages in the country, that don't have mobile coverage – in separate phases. This is imperative because eight of every nine users are connecting to the Internet for the first time using the mobile phone. The Ericsson Mobility Report 2017 states that smartphone subscribers in the country are expected

to touch 970 million by 2023, and smartphone traffic is expected to grow eleven-fold to 14 Exabytes (EB) per month by 2023.

This is crucial for BharatNet which aims to provide communication and connectivity till the last mile and to the last person. However, USOF which funds Bharatnet, still has a lot of underutilised funds. The need is to rationalise USO fund contribution to 2%, from the current 5% and ultimately do away with it within 2-3 years. The TSPs have already achieved their rural penetration targets and they continue to persist in that direction. The Government should, therefore, incentivise rural penetration being done by TSPs for a quicker infrastructure roll-out.

Then comes Information for All, which aims to make the Government engage with citizens through social media and web based platforms, SMS and emails and help citizen access key data and documents online. The Government is focussing ardently on the growth of internet and broadband in the country as a part of its Digital India campaign. Internet connections at the end of December, 2017, stood at 446 million, of which 314 million were in urban areas and 132 million were in rural areas and this number will witness further upswings going forward.

BharatNet alone would facilitate Broadband connectivity for over 600 million rural citizens of the country. The largest rural connectivity project of its kind, it will facilitate delivery of services and applications including e-health, e-education, e-governance and e-commerce. The Prime Minister, recently, also launched the UMANG app, which brings over 163 government services online, on a single platform, serving over 6 states.

Technology is making strong inroads everywhere, be it individuals or sectors. Let us take healthcare for example. In India, there has always been the challenge of affordable access to quality healthcare and inadequacy of present healthcare infrastructures, especially in rural areas. These challenges are being addressed through innovative and disruptive digital health solutions. Technology is creating unique opportunities to increase accessibility and quality while reducing the cost of healthcare.

For example, tele-medicine reduces wait times for patients and also makes travelling to the doctor redundant, at a fraction of the cost currently incurred. Moreover, EMRs can digitise patients past health records, thereby helping doctors to make accurate diagnosis in a shorter time-frame. Similarly, smart health monitors can collate personalized vital signs and test results in real time, which further facilitates quick diagnosis and quicker treatments.

Human DNA analysis will enable personalised genome testing and treatments for certain genetic diseases. 3D organ printing is also proliferating rapidly. Moreover, there are several health centric apps now available on phones. They not only help in preventing fatal diseases by improving patient engagements, but also provide health education & expert guidance from one's care provider.

Thus, the amalgamation of genomics, digital devices, connectivity and precision medicine are going to transform the future of healthcare access or delivery across the globe. All these provide access to quality healthcare, efficient patient outcomes in less than half the cost currently incurred. Another aspect is personalised healthcare delivery by engineering insights generated through data analyses – collected both from digital as well as traditional practices. Going forward, we would see that advancements in technology are contributing towards providing the right healthcare services to the right people, when and where they want them.

India is predominantly an agricultural economy; therefore, it is unlikely that digitisation will not touch the lives of over 65% of the people in this country. Digitisation is helping farmers to seamlessly access timely, targeted and localised information and services that can make farming profitable, as well as sustainable-

socially, economically and environmentally, while ensuring safe and affordable food for all. Rural connectivity, thus, ensures high-speed, low-cost voice and data services that can help farmers to earn sizeable profits, which will in turn boost their economic well-being and overall livelihood of the farming community. Fin-tech is also playing its role in building a digitally inclusive socio-economic ecosystem, benefiting all and sundry.

Thus, digital technology will not only improve agricultural productivity by delivering customised recommendations to farmers based on crop, planting date, variety sown, harvest time, real time localised observed weather and projected market prices, but it will also contribute in opening up a plethora of other value added services that the rural populace can access, and benefit from. Technological abilities like big data analysis and remote sensing can contribute significantly to improved hydrology and watershed management, soil health, crop coverage and crop health estimates among other applications such as prevention against pests and disease outbreaks.

Digital agriculture is also actively leveraging social media platforms. Digital Green is using participatory videos, where farmers explain and share best management practices with other farmers. This is far more effective than other services as farmers trust other farmers more and can relate better to someone like them who are building a livelihood under similar circumstances. Digital agriculture will also help achieve the objectives of the National Food Security Act in the most efficient, effective and equitable manner.

Going Places with IOT

Talking about urban India, the very concept of a Smart City hinges on digitisation. Simply defined, a Smart City is all about using digital technologies, information technologies and communications services (including machine-to-machine communications) to improve a city's infrastructure and services. It means embedding devices that can aggregate real time information - which are then processed by intelligent analysis systems to provide optimisation in terms of transport systems, power supply, healthcare et al. In such a system, a lot many services such as CCTVs, traffic lights, bike racks, car parks, energy meters, elevators and plugs will be connected to the network, in what is referred to, as the Internet of Things (IoT).

The number of devices under IoT is projected to touch 1.9 million units by 2020. India's IoT market size is estimated to increase 7 times—from INR 88.13 billion last year to INR 610.13 billion by 2020. As per a report by Deloitte, IoT devices in India are around 60 million currently and this is estimated to grow manifold, on the back of the Government's INR 6.8 trillion initiative for 100 smart cities. India is also installing 14 smart grids and 130 million smart meters soon, which in turn with catapult the M2M market in utility application.

Moreover, the era of Intelligent Things is permeating our lives, thanks to tech innovations and superior connectivity. Artificial Intelligence, Augmented Reality, Mixed Reality and Machine2Machine are enabling intelligent things to perform, immerse and interact with people and surroundings in a more connected way. Computing, networking, sensors and their integration into 'Things' are making people smarter.

Then there are virtual personal assistants like Google's Alexa and Samsung's Bixby. These technologies, once considered futuristic, are now coming seamlessly into our homes. In smart cities, this will be the order of the day. According to Global Forecast published by Markets and Markets(TM), the Smart Home Market is expected to be valued at INR 9.3 trillion by 2023, growing at a CAGR of 13.61% between 2017, and 2023.

These technologies, hinging on telecom and devices, are going to revolutionise businesses, the Government, education, healthcare, administration, real estate, smart homes, smart cities, smart buildings, entertainment, logistics and retail. Everything is becoming smarter. Minimalistic multi-functional devices beckon our future.

The Government's aim of making India a cashless economy is also becoming a reality, thanks to e-wallets and digital money or online transaction in general. Post demonetisation, contact-less and cashless transactions have come to be the preferred medium of payments for many. Along with digital wallets, quick response (QR) codes, near field communication (NFC) technology, sound wave systems, virtual cards, unified payment interface (UPI) and Aadhaar Pay are providing best in class and secure payment options – the innocuous smartphone is offering all that and more, on one single unified platform. E-Wallets and POS devices have revolutionised the retail sector like no other- not to forget e-commerce and m-commerce.

Digitisation is transforming businesses too. E-commerce and m-commerce are enabling small mom and pop stores and SMEs chart new gradients of growth. Internet has emerged to be one of the most fertile grounds for businesses and rightfully so. E-commerce is indeed a great leveller. Any seller from anywhere, big or small, can sell to anyone anywhere in India using the power of an online marketplace. Not only they can herein generate greater revenues but can also cater to a large share of their target audience, across geographies and demographics. E-commerce places power in the hands of even the smallest merchant hailing from the most remote corners of the country.

In the education sector too, digitisation has left its mark: think MOOC and the wide array of LMS systems, and e-education modules. For a country like India, where there is a dearth of adequate school infrastructure, this is indeed a blessing.

However, it must be noted that this ambitious Digital India plan is reliant on the telecom sector, which is in financial distress for a long time now. The sector has a cumulative debt of as much as INR 4.6 trillion and the diminished rate of return on capital of just 1% has made handling of this debt very difficult.

The sector pays as much as 30% of its revenues to the Government in taxes and levies. It is estimated that the sector has to spend as much as INR 2 trillion in the next 3 to 5 years, to deploy mobile towers, optical fibre and other infrastructure for the new technologies and greater coverage in the country.

It is imperative that the country's telecom sector be treated as an essential service and taxed the minimum as is the case in most major markets. It should be given infrastructure status on the same footing roadways and railways.

Digitisation is transforming life in a way, hitherto unseen. What seemed impractical and downright science fiction a few years ago is very much a part of our reality now.

The right kind of policies and regulatory mechanisms are all that is needed to fulfil the aspirations of the country of a billion dreams.

Hope floats!

INDIAN TELECOM INDUSTRY - AN OVERVIEW

682 m

Urban Subscribers (as of March 2018)

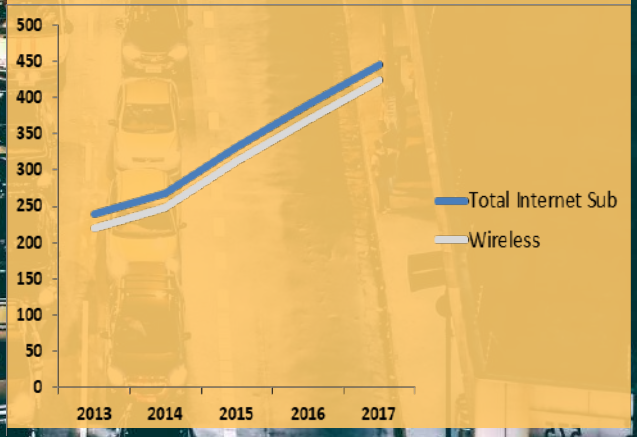
525 m

Rural Subscribers (as of March 2018)

+ 302 m

Mobile Subscribers (2013 - 2017)

Total Internet Subscribers & Wireless Internet Subscribers (in millions)

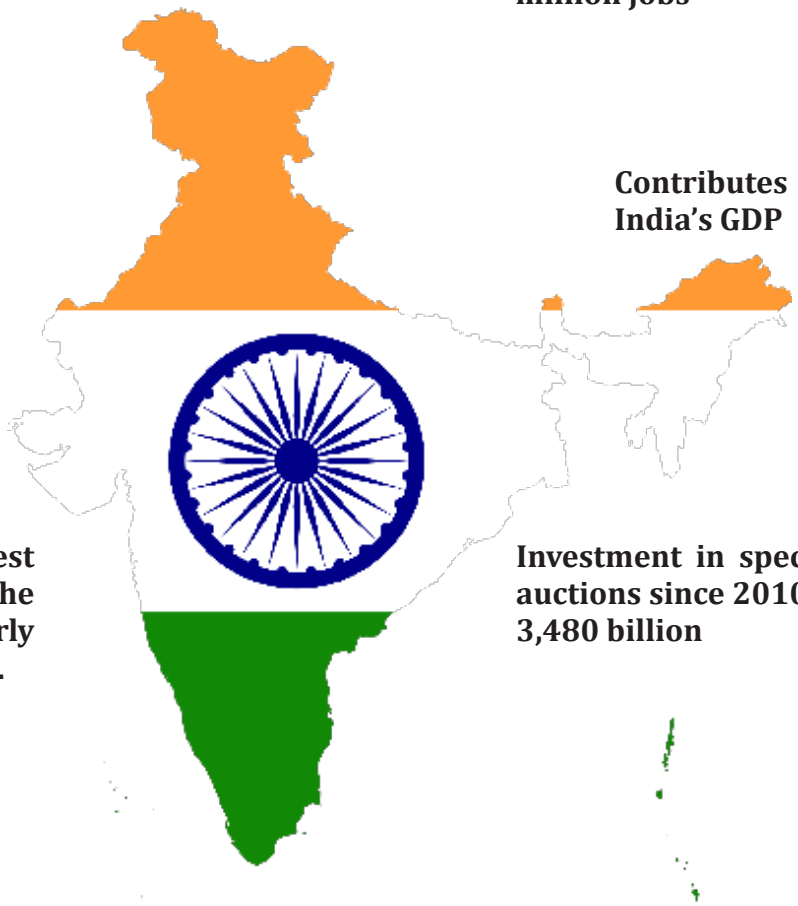


Telecom Industry - Contribution to India

Over 500,000 villages covered

Lowest voice and data rates in the world (ARPU INR 81)

Contributes directly to 2.2 million employment & indirectly to 1.8 million jobs



Among the highest contributors in FDI in the last two decades: INR 1,307.29 billions

Contributes 6.5% to India's GDP

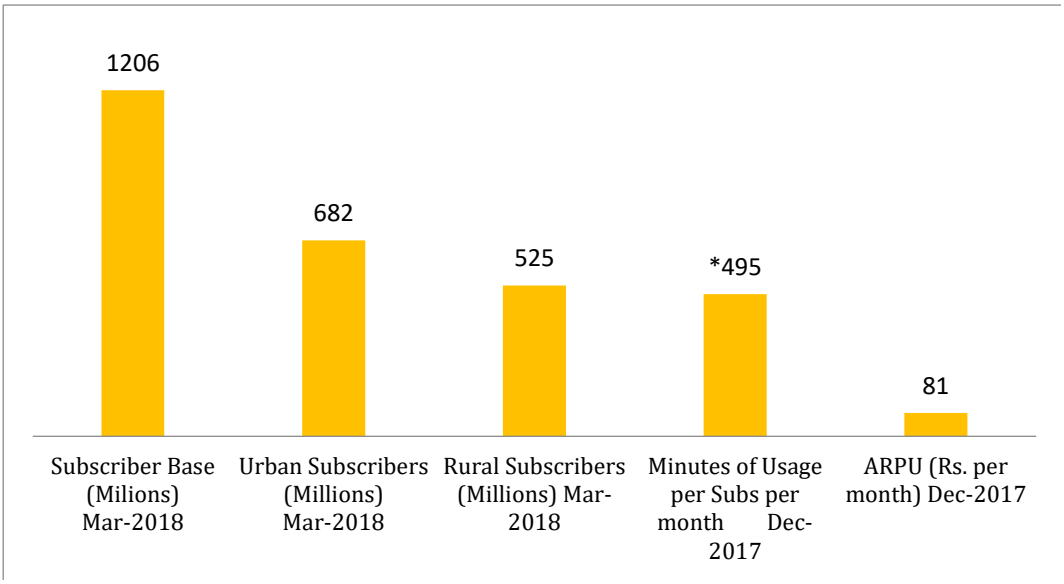
Among the highest contributors to the Government: nearly INR 700 billions p.a.

Investment in spectrum auctions since 2010: INR 3,480 billion

Second largest private sector investment in infrastructure: INR 10,440 billion

Source: GSMA - The Mobile Economy India Report 2016, DoT, TRAI, COAI estimates

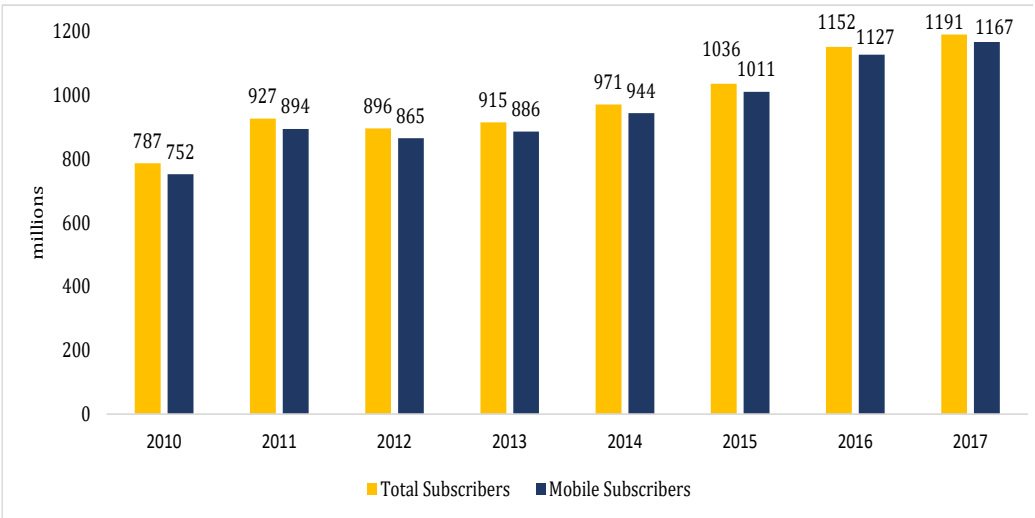
I. Key Statistics of the Telecom Industry in India



* Only for GSM Subscribers including LTE
Source: TRAI Subscription Report March 2018 & PMR Dec 2017

II. Industry Subscriber Figures

A. PAN India Total and Mobile Subscribers



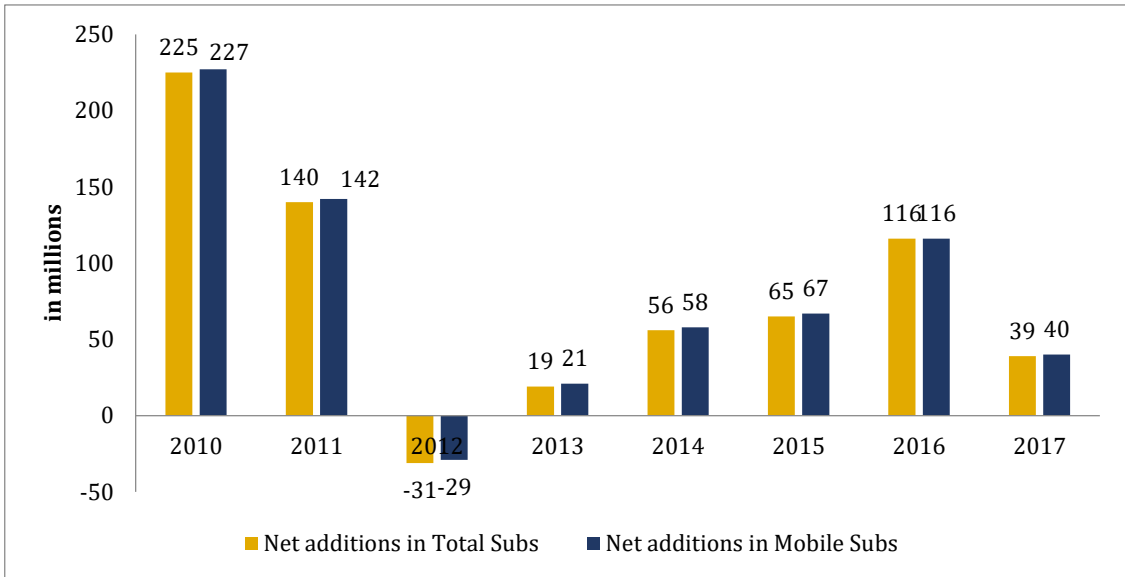
Key Observations

51%

increase in the total subscribers between 2010 and 2017

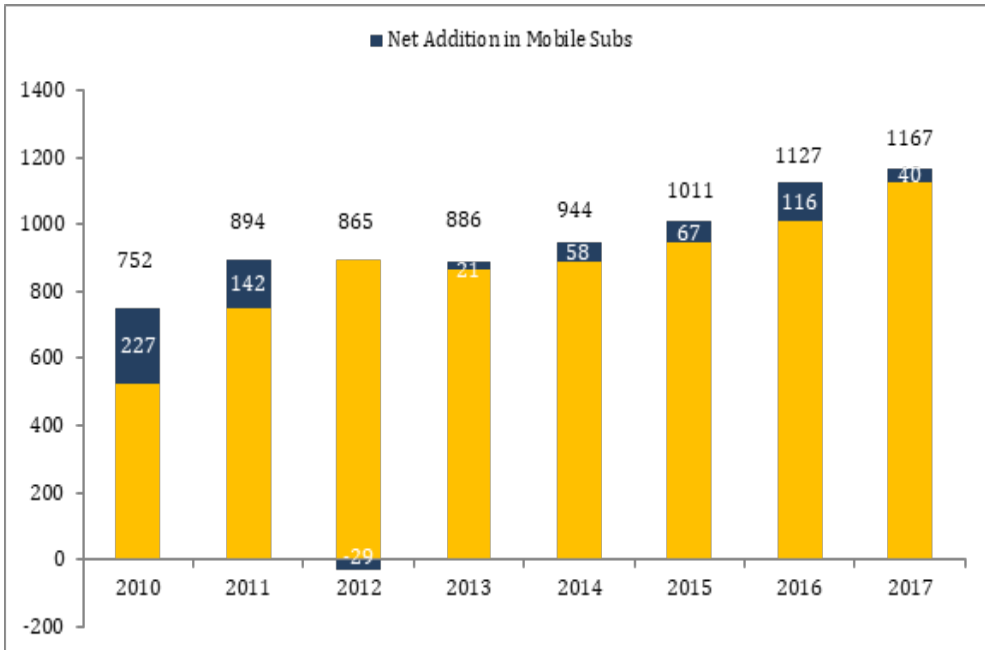
Source: TRAI PMR (Year ending- December)

B. Net Additions- Total Subscribers & Mobile Subscribers



Source: TRAI PMR (Year ending- December)

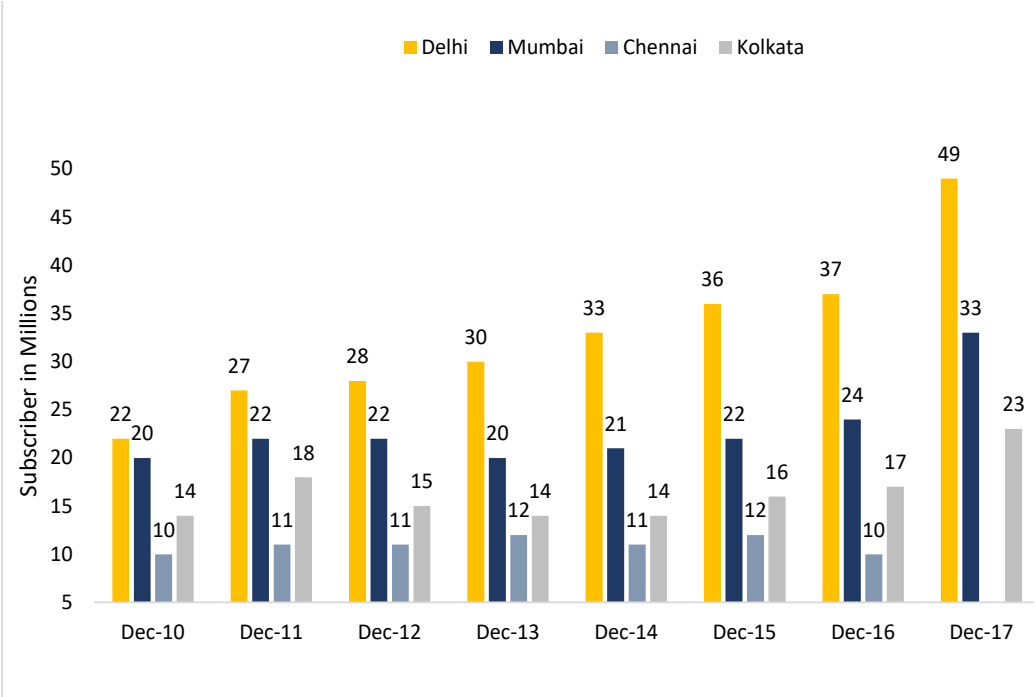
Key Observations



55%

increase in the total number of mobile subscribers from 2010 to 2017.

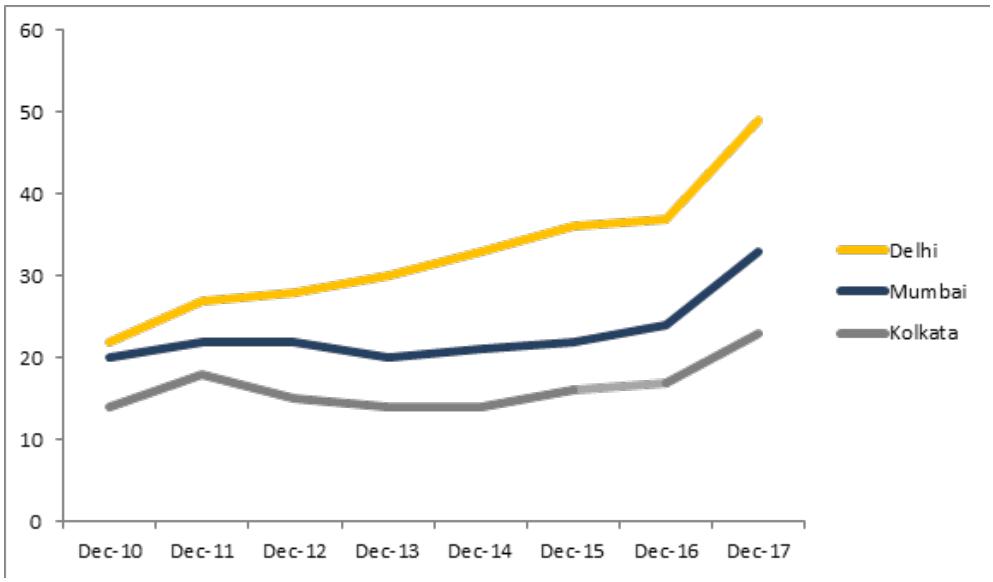
C. Mobile Subscribers - Metros



Source: Only COAI members (Year ending- December)

Key Observations

Delhi and Mumbai have shown a robust growth

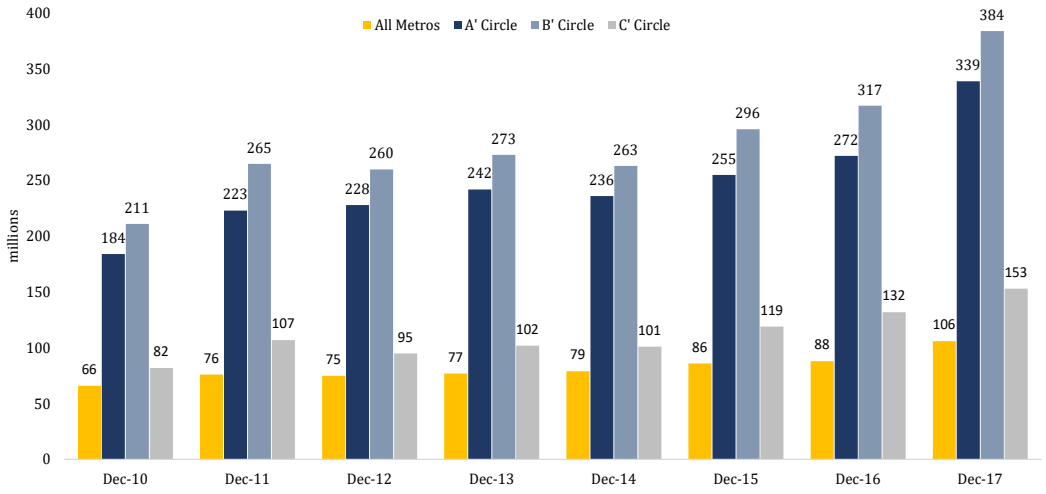


122.7%

increase in mobile subscribers in Delhi between 2011 and 2017

Mobile subscriber growth in Metros in millions (Dec-10 to Dec-17)

D. Mobile Subscribers Circle Wise



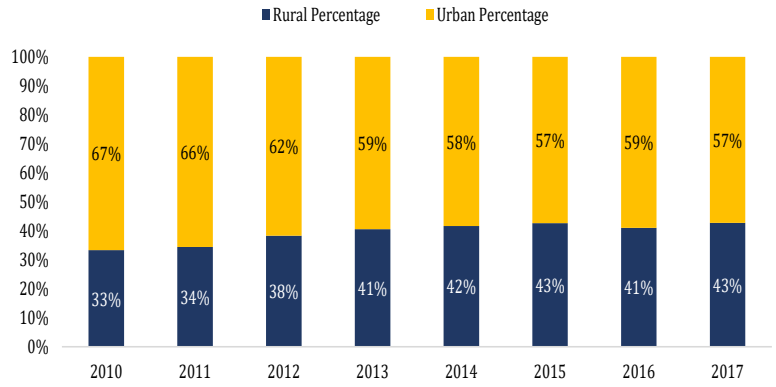
Key Observations: Percentage Increase in Mobile Sub (2011-17)

- **Metro** 61%
- **A-Circle** 84%
- **B-Circle** 82%
- **C-Circle** 87%

Source: Only COAI members (Year ending- December)

Key Observation: Significant increase in mobile subscribers in Circles A, B & C between 2016-17. Category B circle has been leading.

E. Wireless Rural Subscribers as % of Total Wireless Subscribers



99%

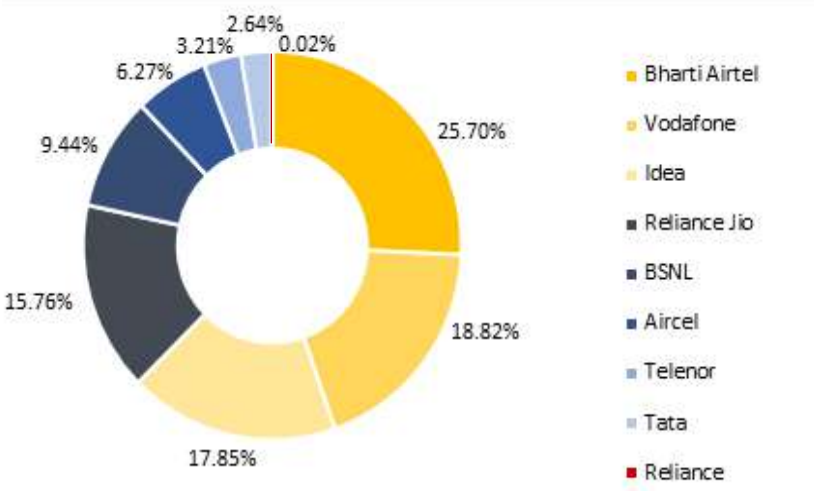
growth in wireless rural subscribers between 2010 and 2017

10 percentage points

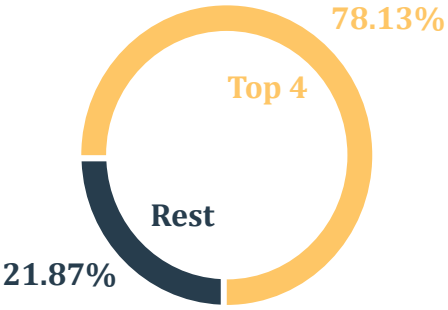
increase in the share of wireless rural subscribers between 2010 and 2017

Source: TRAI Subscription report (Year Ending – December)

F. Market Share of Wireless Operators in Terms of Subscribers



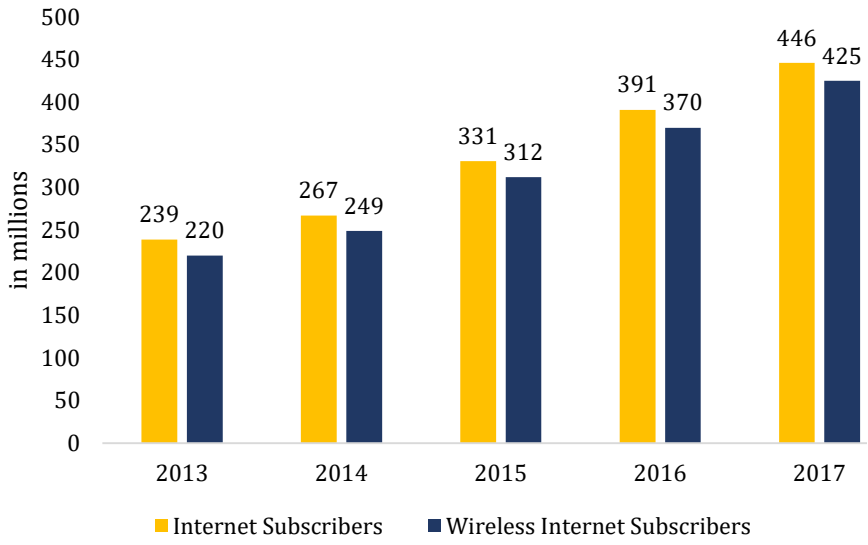
Key Observation



Market share held by top 4 operators against the rest

Source: TRAI Subscription report – Mar 2018

G. Total Internet Subscribers & Wireless Internet Subscribers



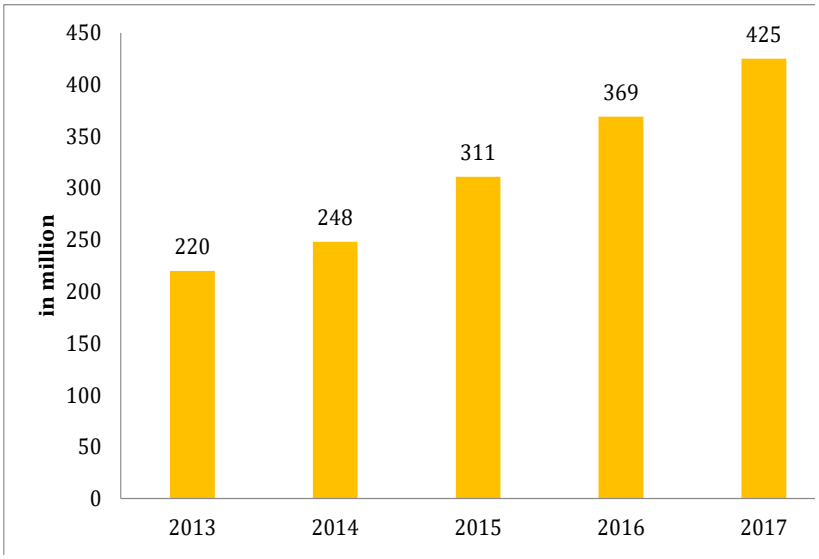
Key Observation

86.6%

increase in the total Internet subscribers in India from 2013 - 2017

Source: TRAI PMR (Year ending- December)

H. Wireless Broadband Subscribers



Key Observations

93.1%

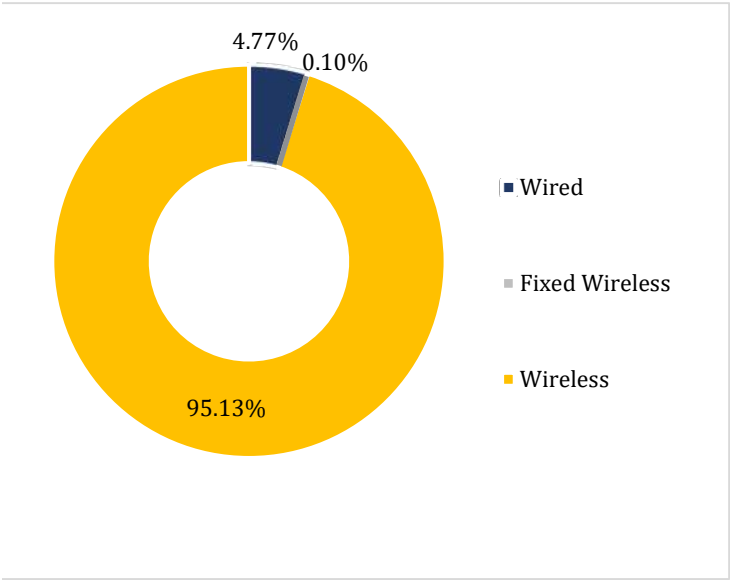
growth in mobile broadband subscribers in India between 2013 - 2017

15%

in mobile broadband subscribers in India (2016-17)

Source: TRAI Subscription report (Year Ending – December)

I. Broadband Access: Share of Different Modes



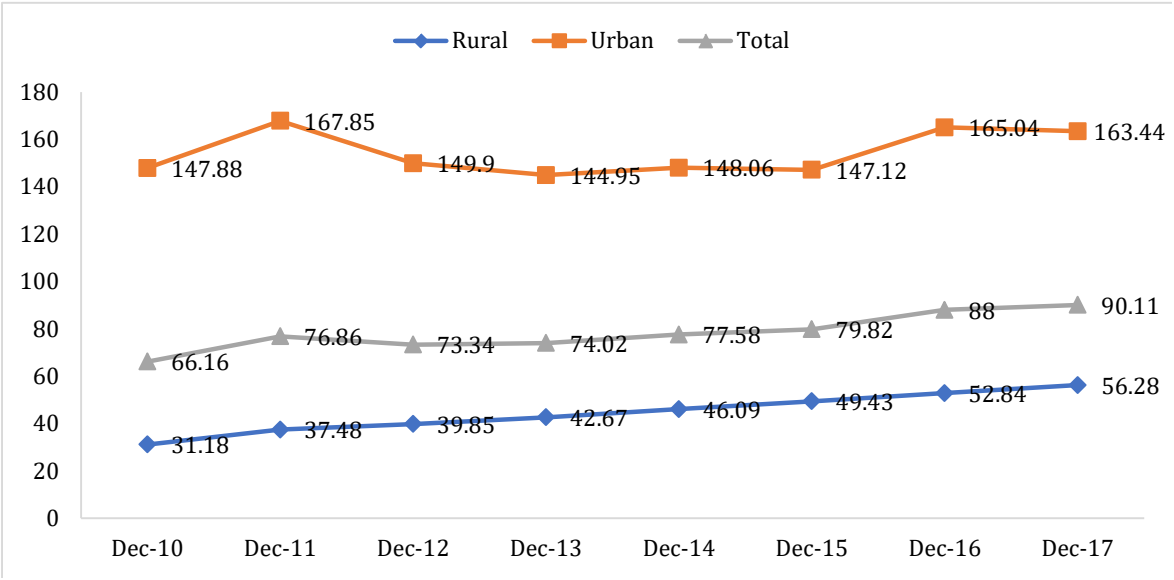
Key Observation

Wireless broadband has emerged as the most popular medium for broadband access

Source: TRAI PMR (December 2017)

III. Wireless Tele-density

A. Total Wireless Tele-density (%)



Source: TRAI PMR (Year ending- December)

Key Observations

80.5%

increase in rural tele-density (2010 - 2017)

10.5%

increase in urban tele-density (2010 - 2017)

36.2%

increase in total tele-density (2010 - 2017)

1%

decline in urban tele-density (2016-17)

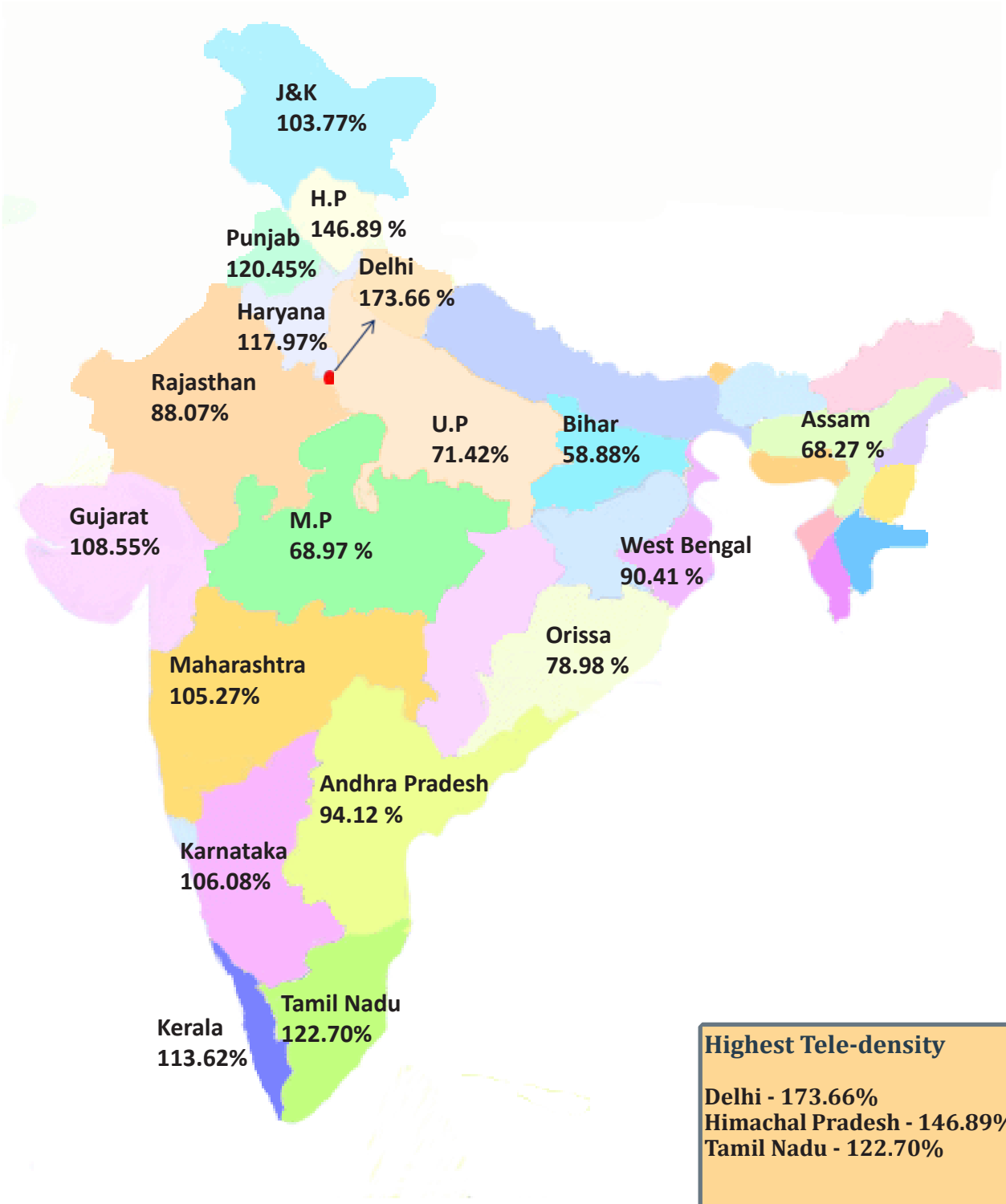
7%

growth in rural tele-density (2016-17)

2%

growth in total tele-density (2016-17)

B. Wireless Tele-Density Across Telecom Circles – Dec 2017



Highest Tele-density

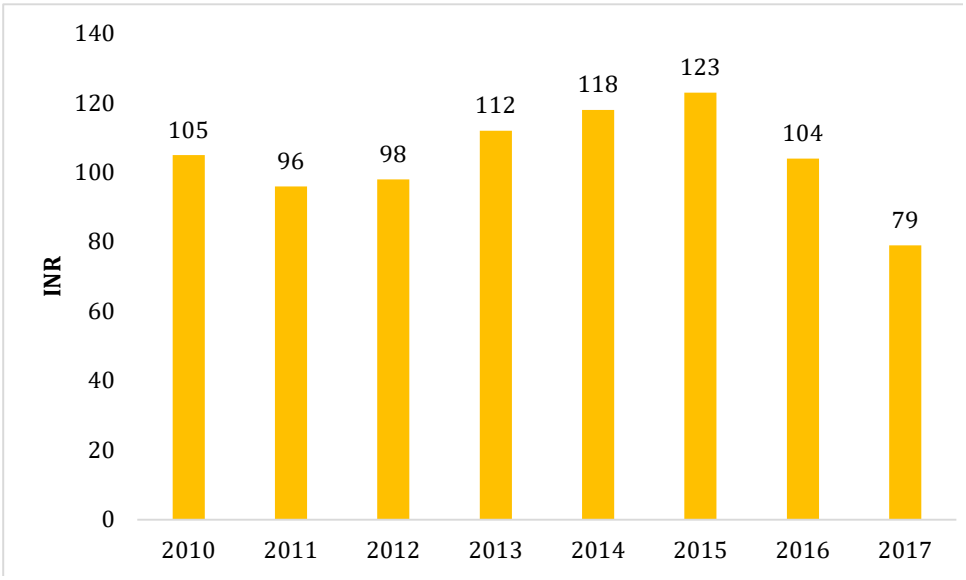
Delhi - 173.66%
Himachal Pradesh - 146.89%
Tamil Nadu - 122.70%

Lowest Tele-density

Bihar - 58.88%
Assam - 68.27%
Madhya Pradesh - 68.97%

IV. Revenue and Usage Parameters

A. Monthly Mobile Subscriber ARPU

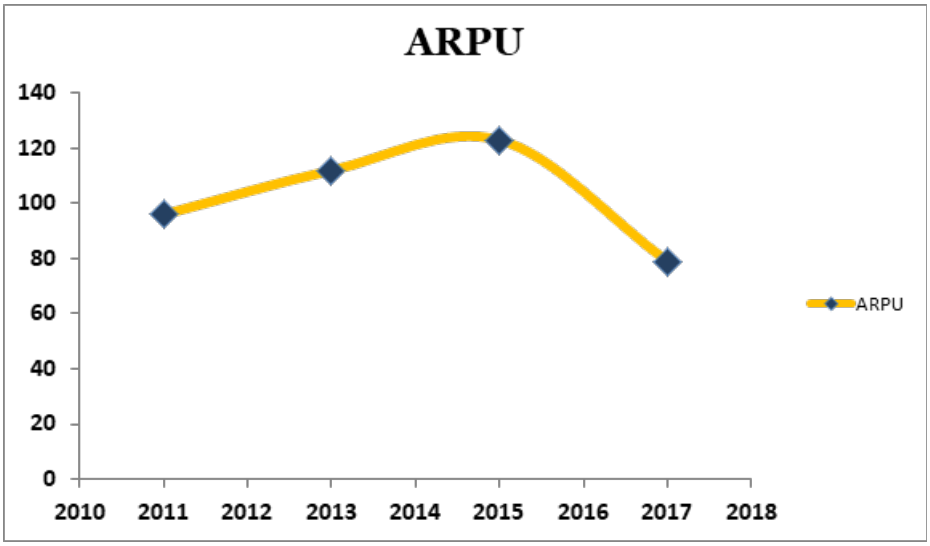


24%

decrease in the ARPU in 2017. This was the second successive decline in ARPU in the last two years having previous dropped by 15.4% in 2016.

Source: TRAI PMR (Year ending- December); GSM including LTE

Key Observations

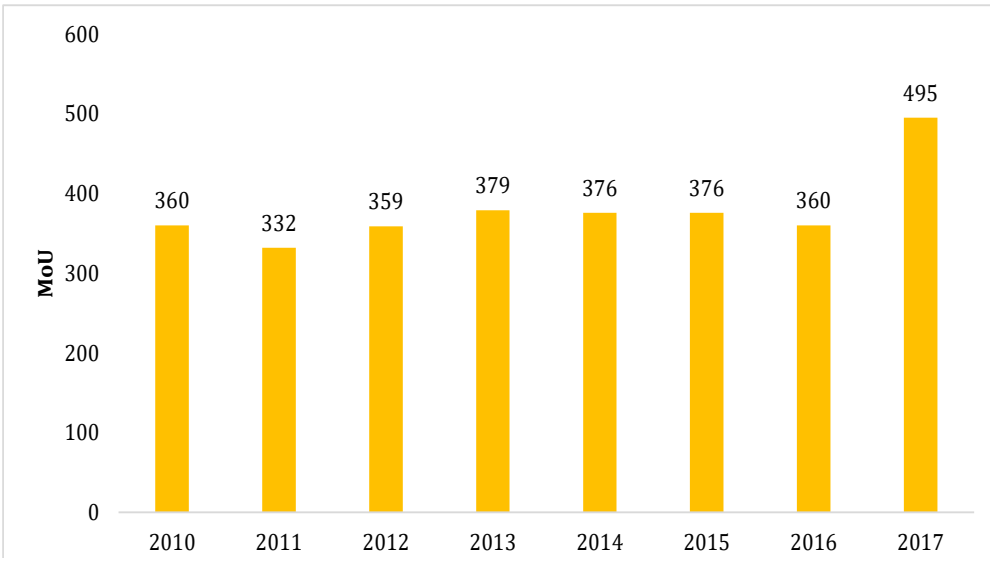


In 2017, the industry experienced the lowest ARPU since 2010.

INR 123
2015

INR 79
2017

B. MoU per Subs/Month-Mobile Subscribers



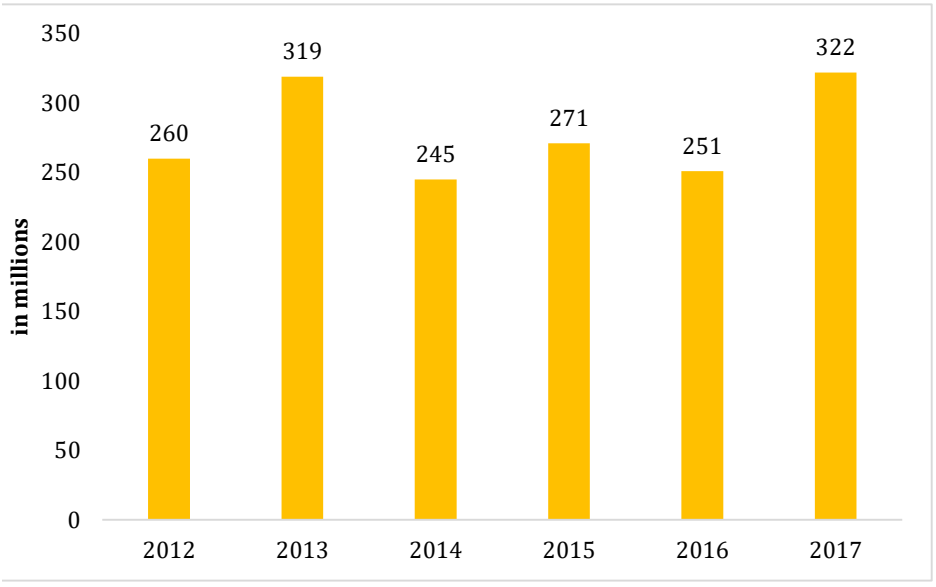
Key Observations

37%

increase in MoU/ subscriber/ month between 2016 & 2017

Source: TRAI PMR (Year ending- December); GSM including LTE

C. Total Outgoing MOU for Internet Telephony



Key Observations

23.19%

2013-14

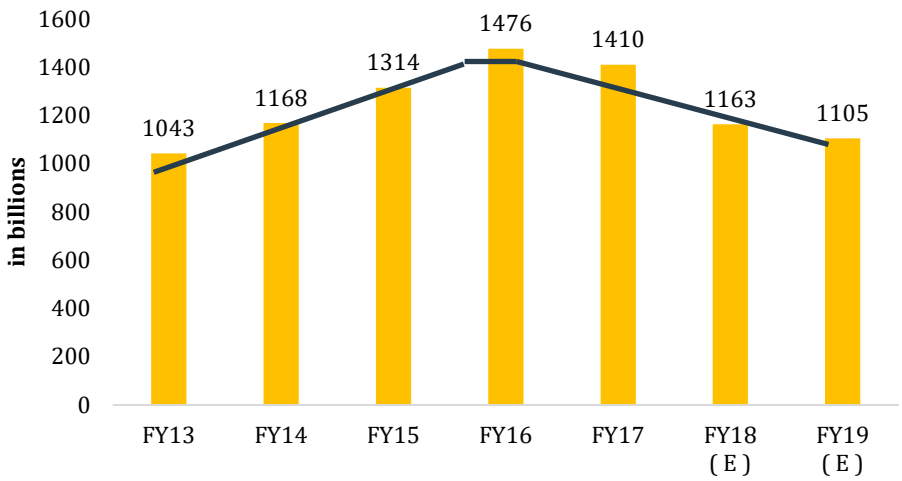
28.28%

2016-17

Source: TRAI PMR (Year ending- December)

V. Telecom Financial Data

A. Industry Adjusted Gross Revenue (AGR)



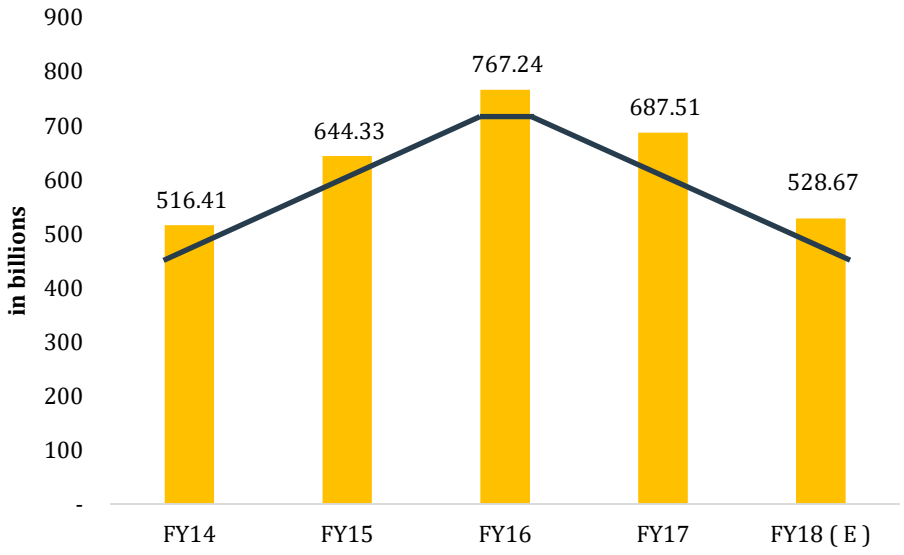
Key Observations

21%

in the Industry AGR between FY 2016 to FY 2018

Source: TRAI PMR (Financial Year); estimates; does not include NLD ILD operators

B. Industry EBITDA & EBITDA Margin

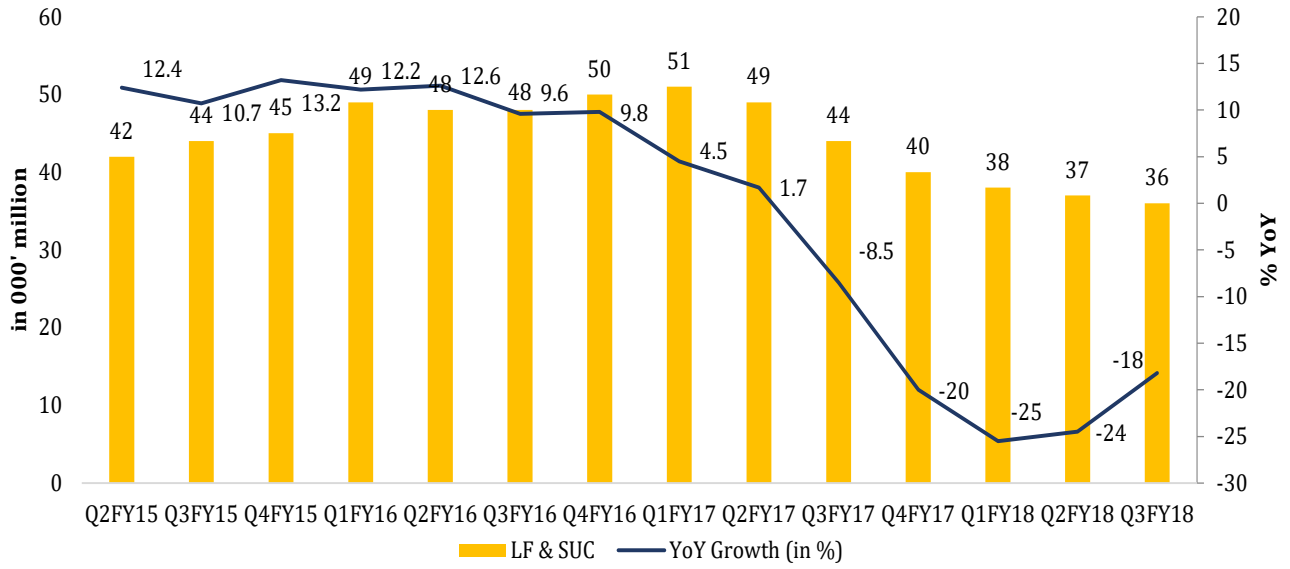


Key Observations

Significant decline in margins from FY 2016-FY 2017 and FY 2017 - FY 2018 (E)

Source: COAI Analysis (Financial Year), Estimates

C. Revenue to the Exchequer



Source: TRAI; excluding NLD, ILD for LF

Key Observations

Growth in LF & SUC (YoY)

9%
Q3FY15-16

8%
Q3FY16-17

18%
Q3FY17-18

LF & SUC Comparison

44m
Q3FY15

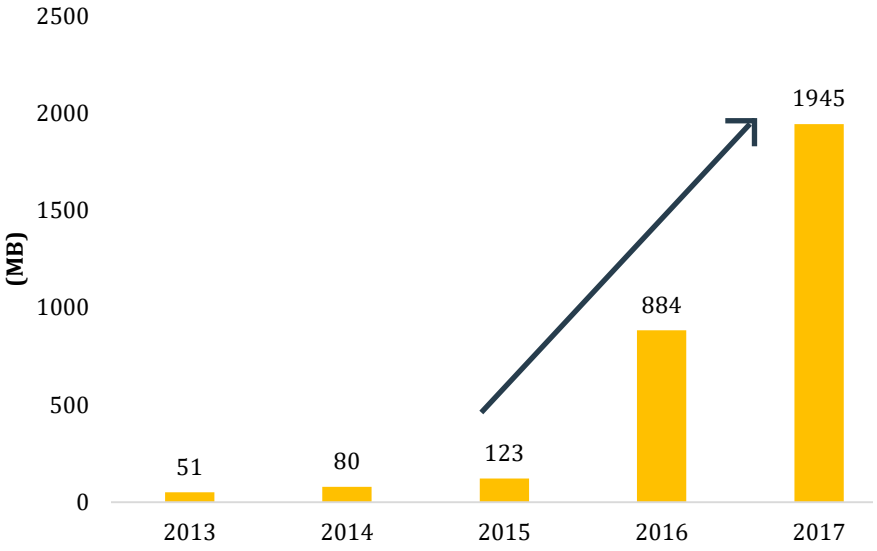
48m
Q3FY16

44m
Q3FY17

36m
Q3FY18

VI. Data usage of Mobile Users

A. Data Usage/Subscriber per Month-Mobile Subscribers



Key Observations

120%

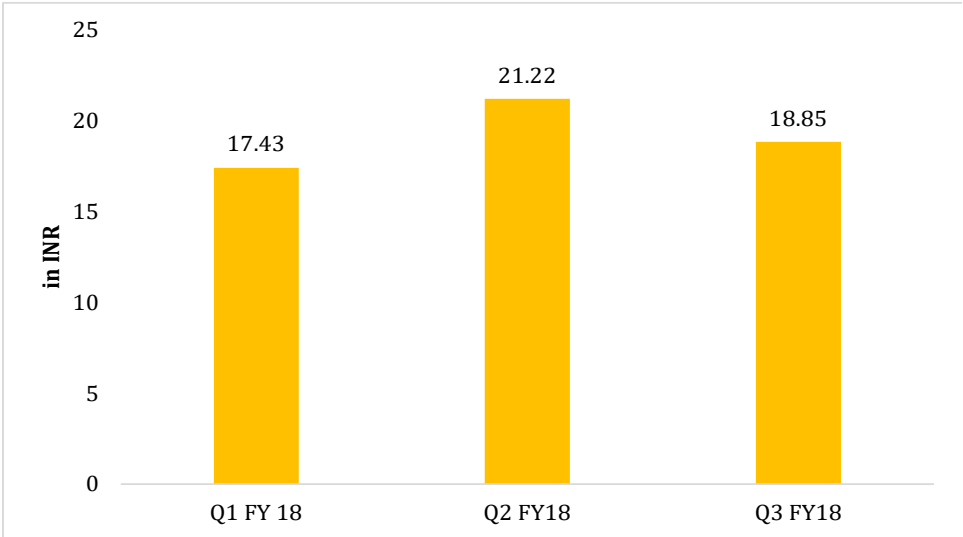
sharp increase in data usage per subscriber per month (2016-2017)

590%

sharp increase in data usage per subscriber per month (2015-2016)

Source: TRAI PMR (Year ending- December; excluding CDMA subscribers)

B. Average Data Realisation per GB for Mobile Subscribers

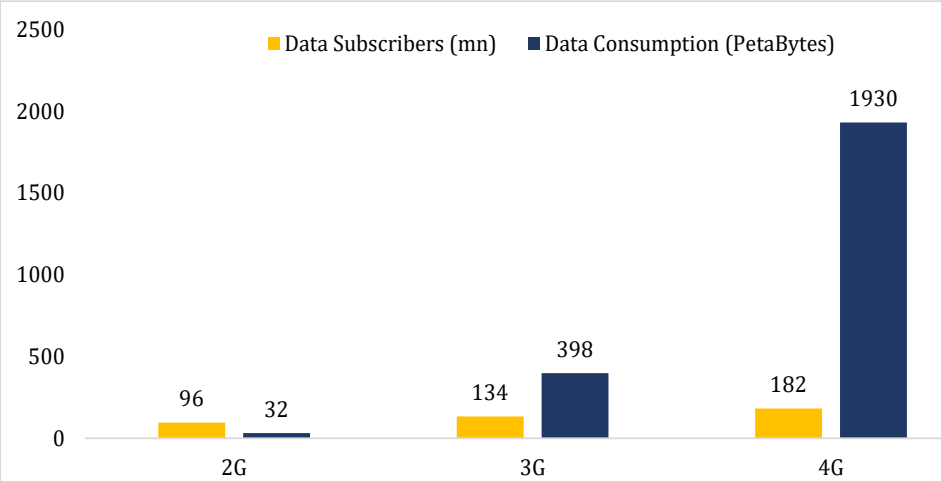


Key Observations

Avg data realisation has fallen in the third quarter of FY 2018 after it had increased in the previous quarter.

Source: TRAI PMR (Year ending- December; excluding CDMA subscribers)

C. Data Subscribers and Data Consumption



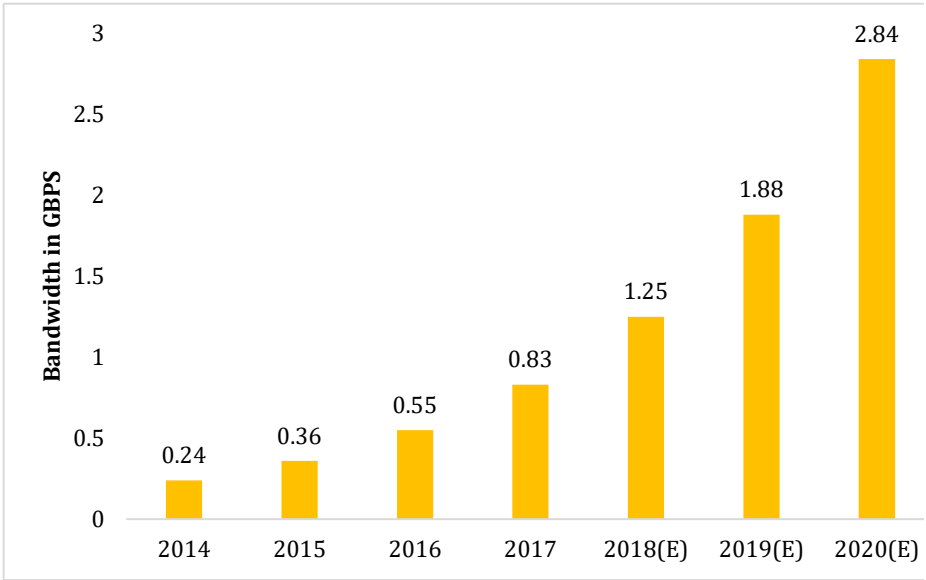
Key Observations

385%

more data consumption on 4G networks than 3G networks in 2017

Source: Nokia Mbit 2018, data is for the year 2017, Data consumption is as per month, data subscribers refers to active data subscribers, 1PetaBytes= 1024^3MB

D. Mobile Backhaul Traffic in India



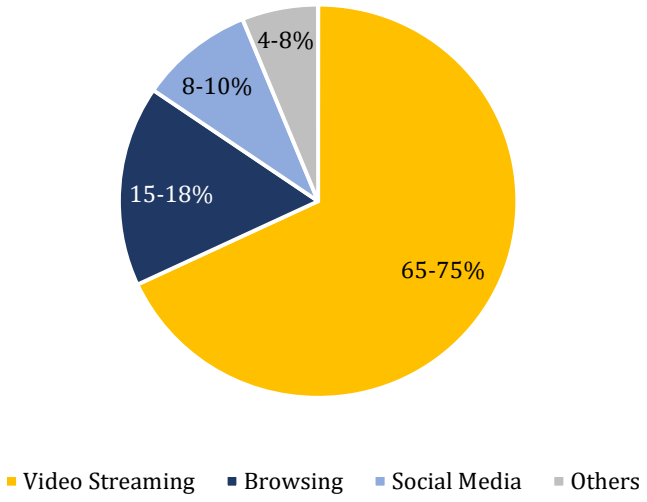
Key Observations

242%

growth is expected in the mobile backhaul traffic between 2017 and 2020

Source: Financial Express; Estimates

E. Contributors of Mobile Data consumption

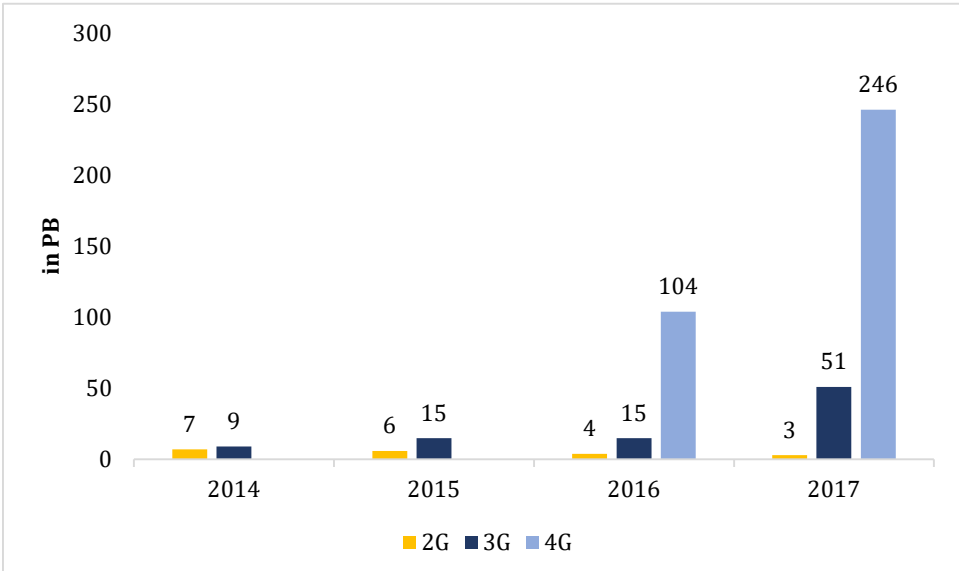


Key Observations

Video streaming is the highest contributor to mobile data consumption in India.

Source: Nokia MbiT 2018, Analysis Mason

F. Data Usage in Metros



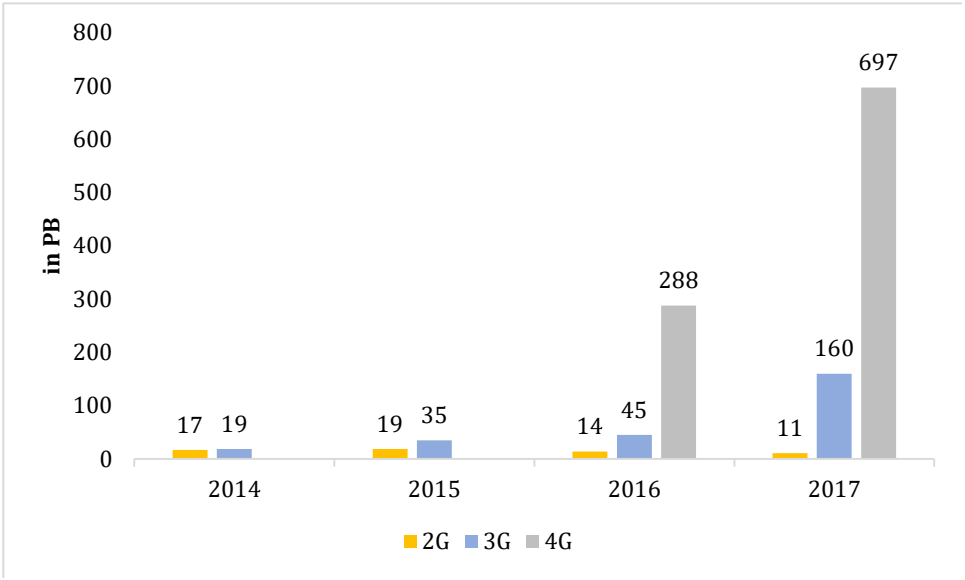
Key Observations

137%

growth was experienced in 4G data usage in 2016-2017 in the metros

Source: Nokia Mbit 2018

G. Data Usage in Circle A



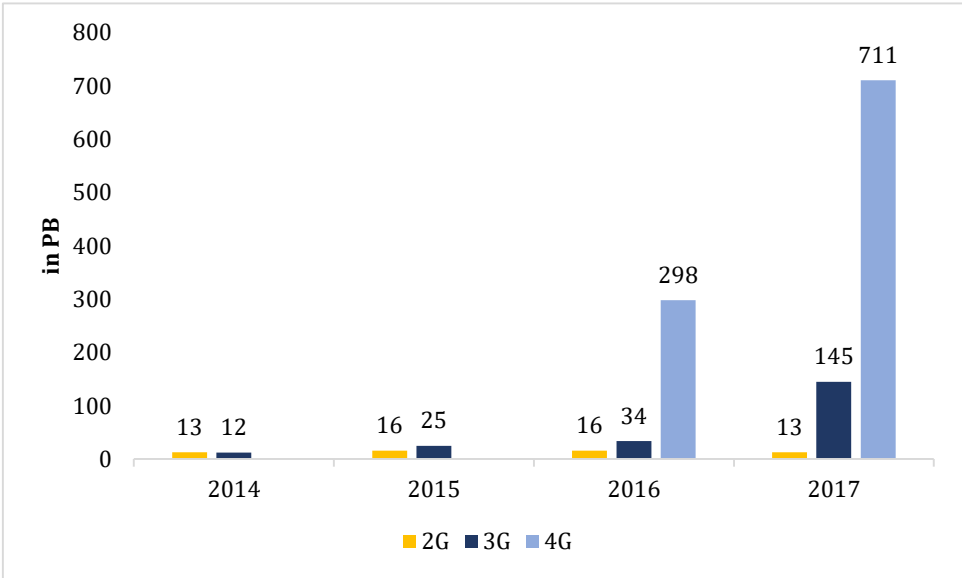
Key Observations

142%

growth was experienced in 4G data usage from 2016-2017 in Circle A

Source: Nokia Mbit 2018

H. Data Usage in Circle B



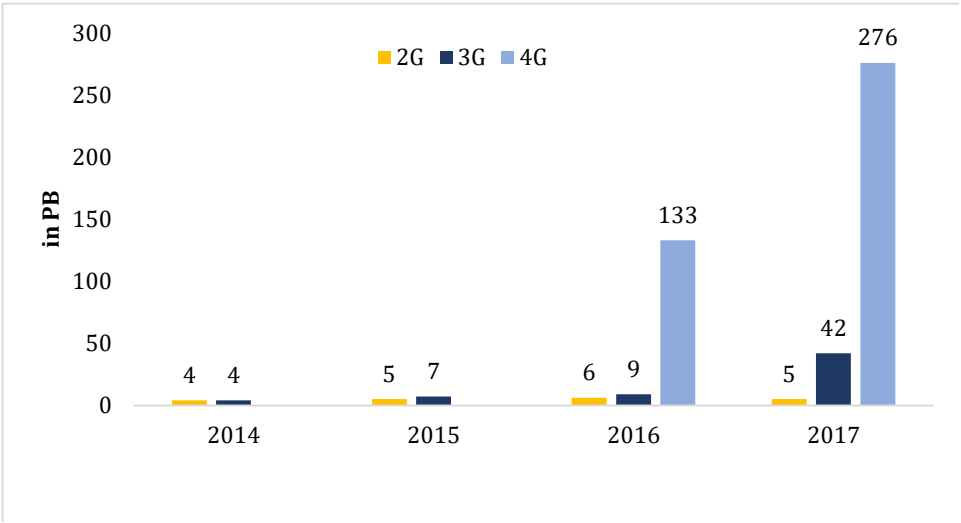
Key Observations

139%

growth was experienced in 4G data usage from 2016-2017 in Circle B

Source: Nokia Mbit 2018

I. Data Usage in Circle C



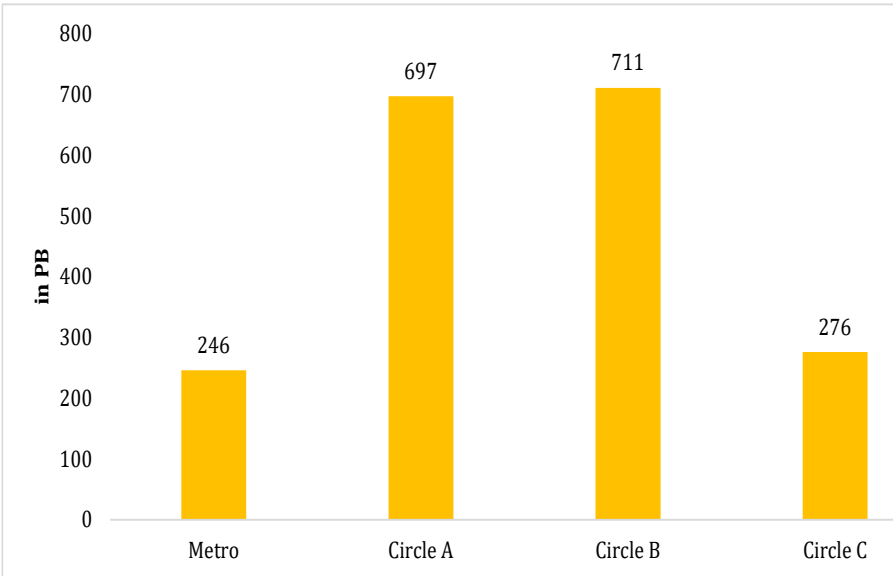
Key Observations

108%

growth was experienced in 4G data usage from 2016-2017 in the Circle C

Source: Nokia Mbit 2018

J. 4G Data Usage in 2017

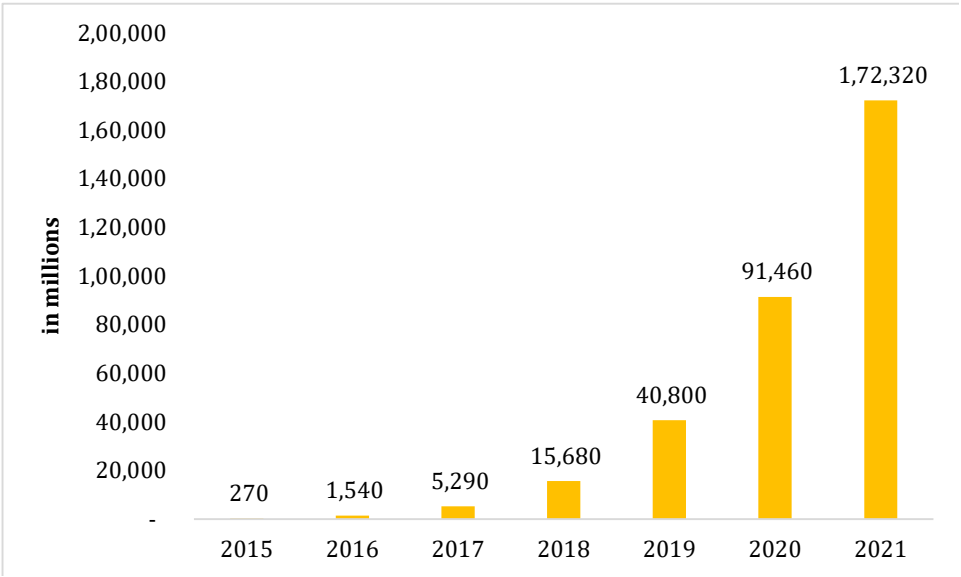


Key Observations

In 2017, Circle B recorded the highest 4G data usage

Source: Nokia Mbit 2018

VII. Mobile Payment Forecast in India

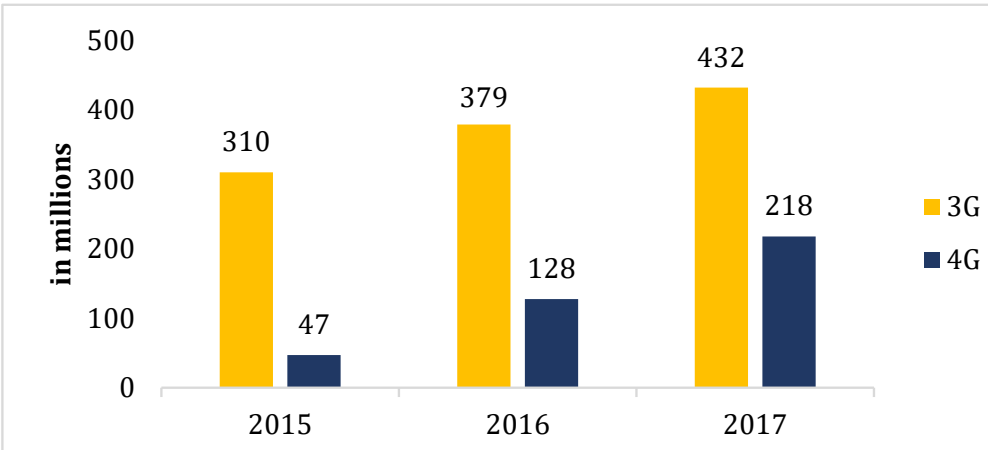


Key Observations

Mobile payments are expected to see an increase of 3000% from 2017-2021

Source: E & Y, Statistica (Year ending- December)

VIII. Smartphone Devices in India (3G/4G)



Key Observations

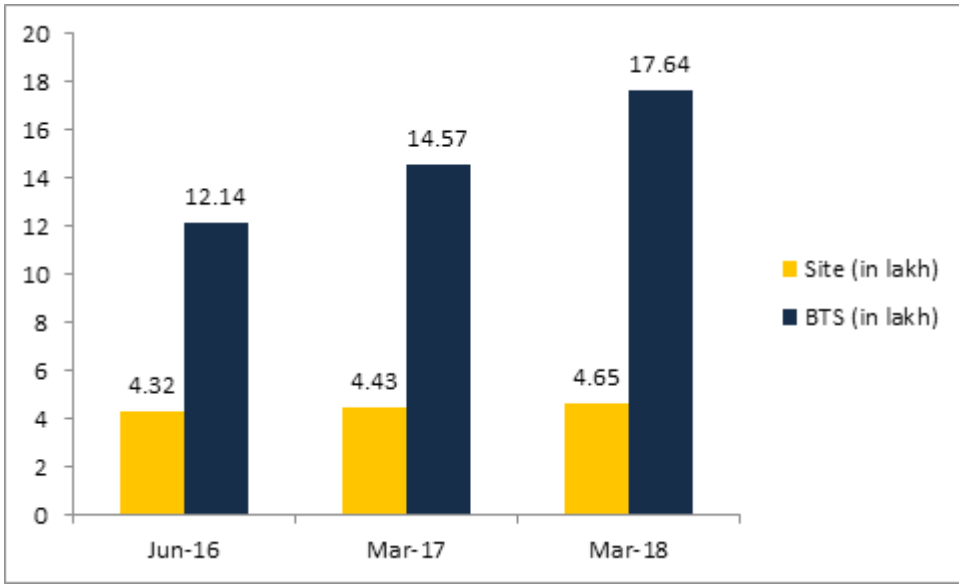
1.7x

increase in the number of 4G smartphone devices in india between 2016 and 2017

Source: Nokia MbiT 2018

IX. Telecom Infrastructure

Number of Base Transceiver Stations (BTSs) and Sites



Key Observations

45%

Increase in the number of BTSs from June 16 - March 18

States With the Highest Number of Base Transceiver Stations

>148000

Maharashtra

>136000

Andhra Pradesh

>121000

Karnataka

Source: Tarang Sanchar

TELECOM IN INDIA

A STORY OF INNOVATION, EXPANSION &
CONNECTING A BILLION PEOPLE

1992 — PRIVATE PLAYERS ALLOWED IN THE MARKET FOR THE FIRST TIME

1997 — THE TELECOM REGULATORY AUTHORITY OF INDIA (TRAI) ESTABLISHED

1999 — FIXED LICENSE FEE TO REVENUE SHARING REGIME

2000
- BSNL WAS ESTABLISHED BY THE DOT
- INFORMATION TECHNOLOGY ACT INTRODUCED

2002
- REDUCTION OF LICENSE FEES
- ILD SECTOR OPENED UP

2003
- CALLING PARTY PAYS (CCP) IMPLEMENTED
- UNIFIED ACCESS LICENSING (UASL) REGIME

2004 — BROADBAND POLICY 2004 FORMULATED
LICENSE FEE REDUCED
USO FUND ESTABLISHED

2005 — FDI LIMIT INCREASED FROM 49% TO 74%

2011
- MNP IMPLEMENTED
- LAUNCH OF UCC

2014
- M&A GUIDELINES
- SPECTRUM AUCTIONS

1994	1999	2012	2018
NTP 1994	NTP 1999	NTP 2016	NDCP 2018

NATIONWIDE DEPLOYMENT OF MOBILE GENERATIONS IN INDIA

2G	3G	4G	5G
1995	2011	2016	2021 (E)

Annual Report 2017-18

International Trends

India has the second largest telecom subscriber base in the world and it is growing at a tremendous pace. India also leads the world in minutes of usage per subscriber per month.

1

Subscriber Base

India has the second largest subscriber base in the world, second only to China and followed by the United States of America.

2

Mobile Penetration

India has 90% mobile connections, compared to its national population. UAE with 202% has the highest mobile penetration in the world.

3

Data Usage

Data usage in India on mobile devices per subscriber on both mobile and fixed wireless networks was around 8.65 GB (per month) in 2017.

4

Mobile Share of Web traffic

79% of the total web traffic originated on mobile devices.

MOBILE DATA GROWTH PROJECTTION

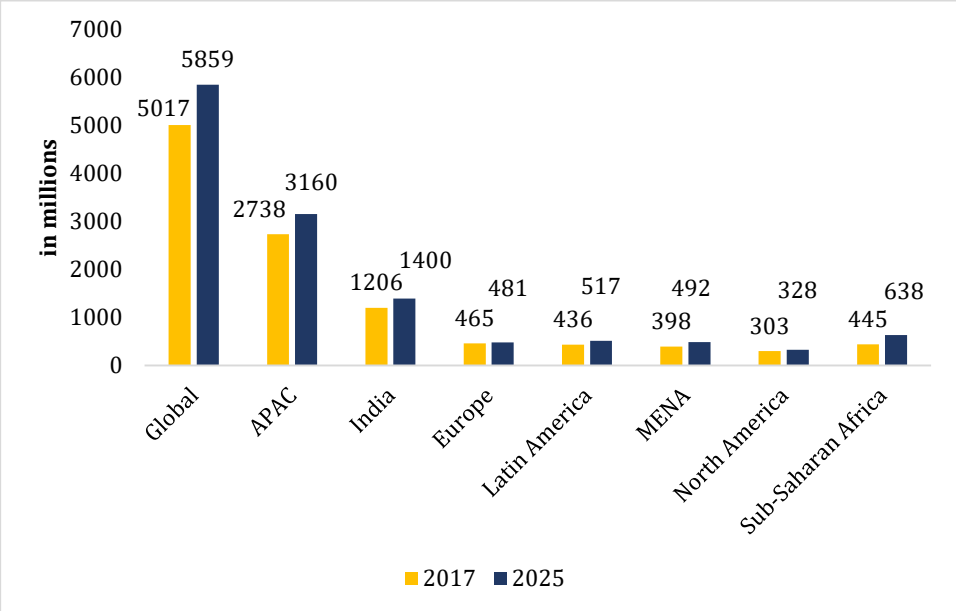
2017 2023

According to the current growth patterns, by 2023, India could be consuming 14 exabytes of data per month, which will equal or be more than the data consumption of several continents and geographical regions across the world.

In India, only 17% of the population actively accesses top social media sites using mobile devices

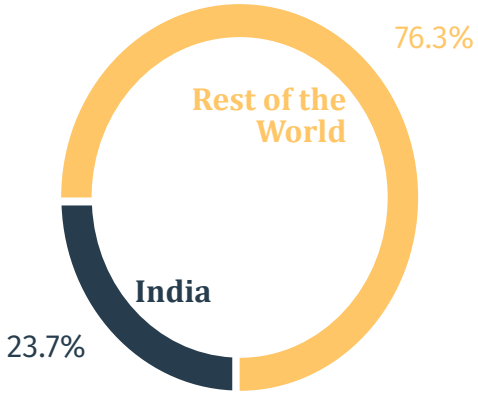
46

A. Subscriber Base



Source: GSMA Intelligence ending Dec 2017; India figures as of Mar 2018

Indian share of total subscribers in the world



5 Billion + Subs

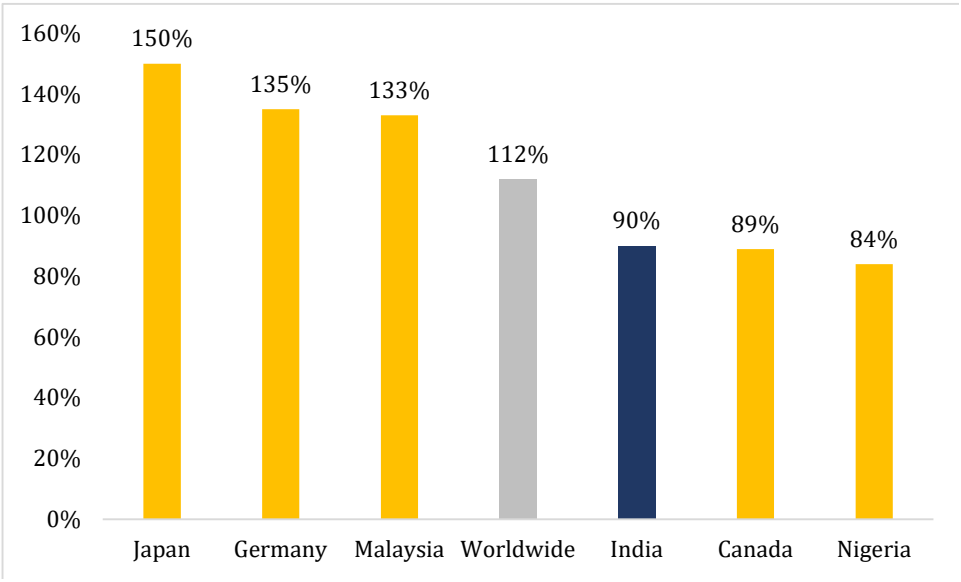
Key Observations

1400 million

telecom subscribers in India expected by 2025

India acounts for one fourth of the total world's subscribers

B. Mobile Teledensity

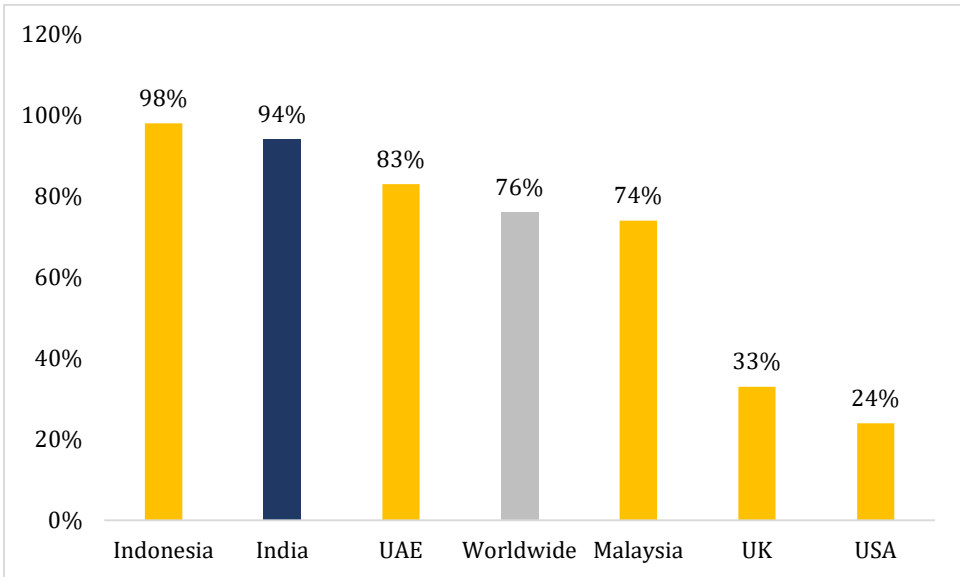


Key Observations

India's mobile teledensity is 22% lower than the worldwide average

Source: HootSuite report 2018 (as of Jan 2018)

C. Share of Prepaid Connection

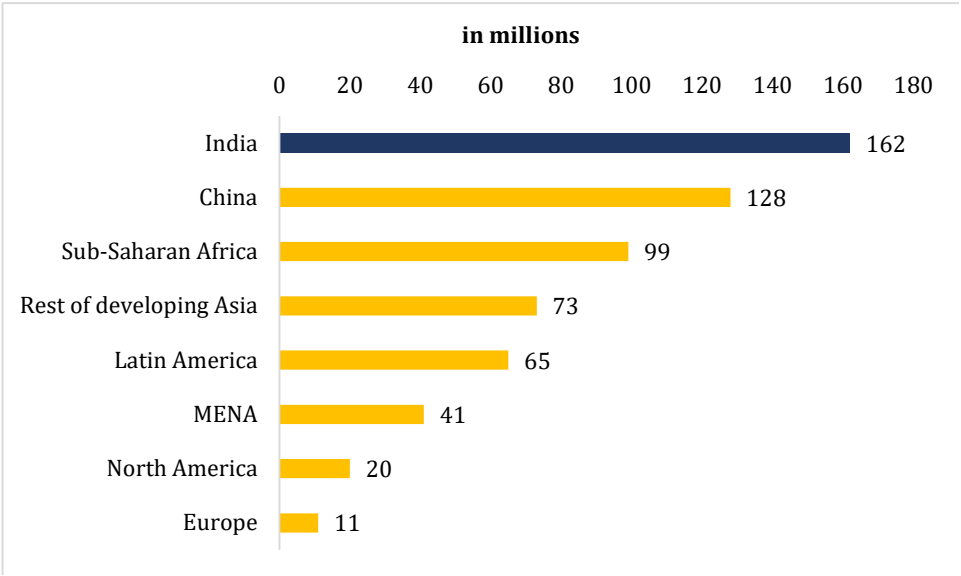


Key Observations

India's prepaid share is one of the highest in the world, more than the world average.

Source: HootSuite report 2018 (as of Jan 2018)

D. Net growth in Mobile Subscribers Q2 2017-2020E

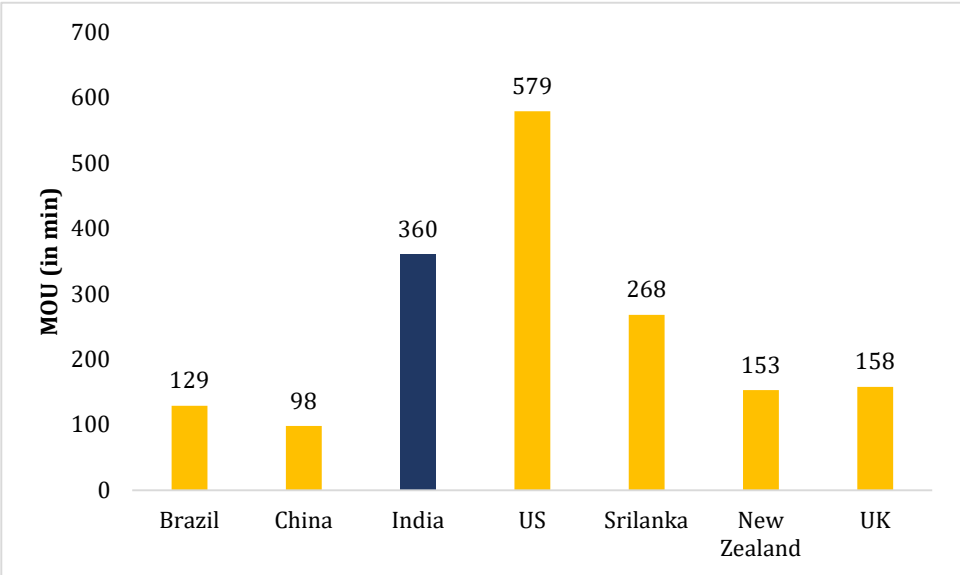


Key Observations

In the next three years, India is expected to witness tremendous growth in mobile subscribers in comparison to the rest of the world.

Source: GSMA

E. Minutes of Usage per Subscriber per Month (MOU)

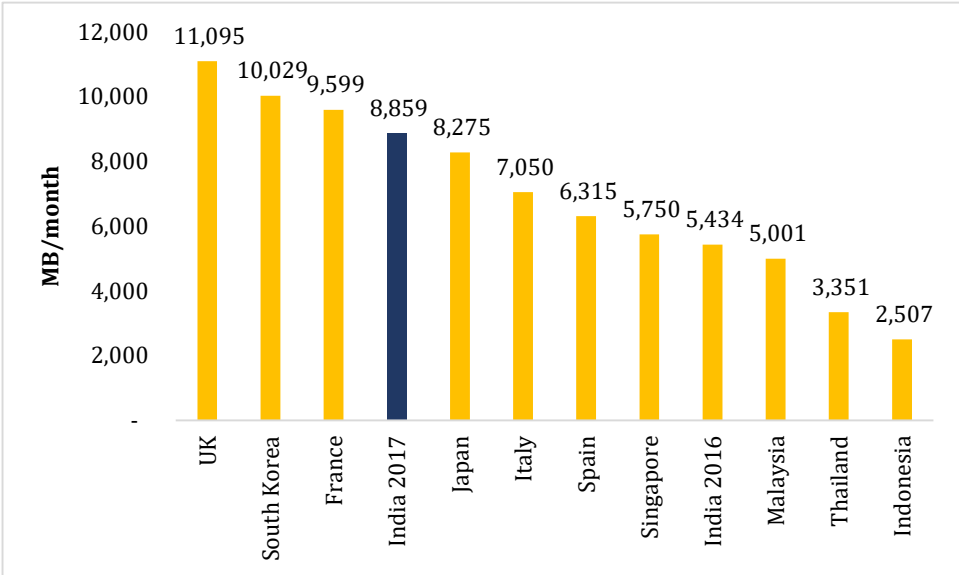


Key Observations

The MoU in India is 128% greater than the MoU in the UK but 61% lesser than the MoU in the US

Source: COAI estimates till Dec 2017

F. Data Usage on Mobile Device Per Subscriber on Both Mobile and Fixed/Wi-Fi Networks

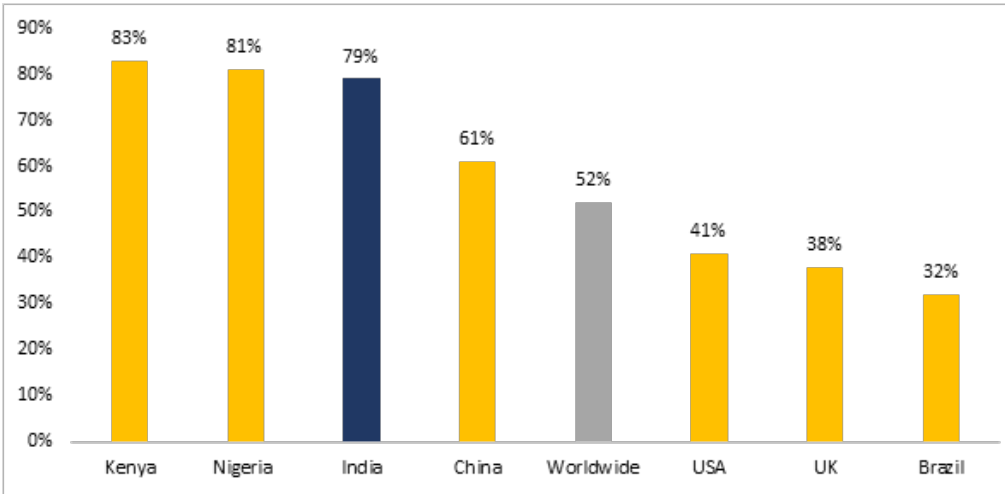


Key Observations

India's data usage per subscriber on mobile devices and fixed/wi-fi networks is very high as compared to several Asian countries

Source: Nokia MBiT 2018

G. Mobile Share of Web Traffic

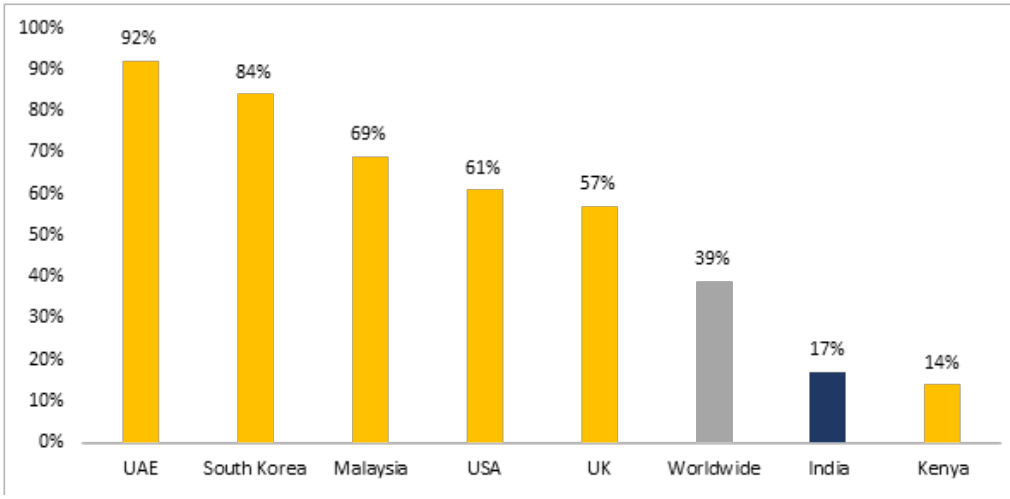


Key Observations

By January 2018, 79% of all website traffic in India was generated through mobile.

Source: HootSuite report 2018 (as of Jan 2018)

H. Mobile Social Media Penetration

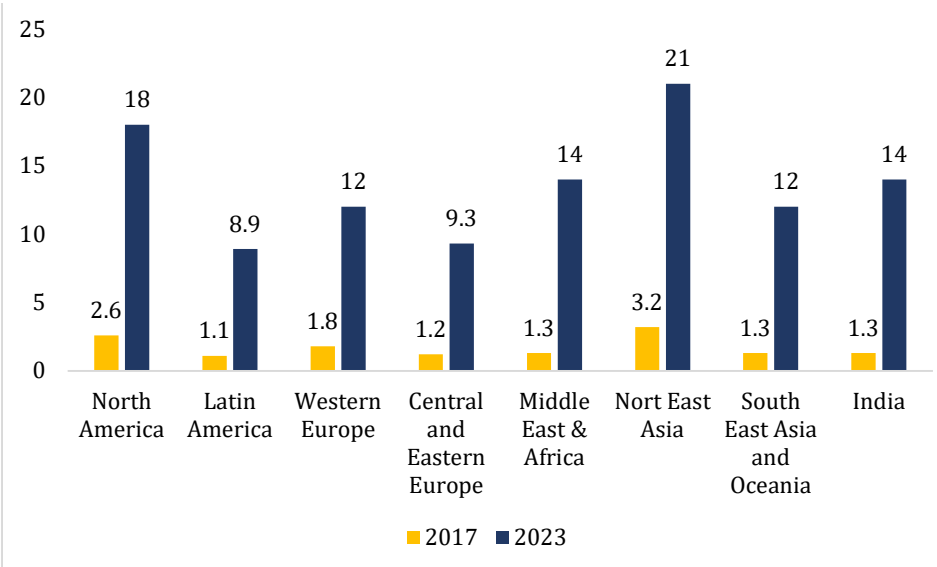


Key Observations

There is tremendous scope to enhance social media penetration in India

Source: HootSuite report 2018 (as of Jan 2018)

I. Global Mobile Data Traffic- Projected Growth



Key Observations

India, Middle East & Africa likely to witness robust growth in data traffic

Source: Erricson Mobility report 2017; 1 Exabyte= 10^3 Petabyte

Significant Achievements 2017/18

NDCP 2018

COAI provided inputs and also made presentations to all the working groups on NDCP 2018 in addition to submitting its response and providing inputs to the TRAI Consultation paper on NTP.

Telecom Infrastructure & RoW

Odisha Mobile Towers, OFC (Optical Fibre Cable) and related Telecom Infrastructure Policy, 2017 was notified by the state Electronic and Information Technology department (E&IT). The Odisha Tower Policy is one of the most comprehensive tower policies across the nation.

Media Advocacy & Stakeholder Outreach

Advocacy on relevant telecom issues including the National Telecom Policy, Call Drops, Quality of Services and Ease of Doing Business.

New Technologies

Finalisation of of standards for non-standalone new radio (NSA-NR), which allows 5G deployments over existing 4G networks. This ascertained that companies working on 5G products are on track for commercialization of 5G services in 2019.

India Mobile Congress

IMC

COAI organised India's biggest, first-ever mobile, telecom and technology conclave and exhibition that brought together industry stelwarts, the policy makers and all other relevant stakeholders under one roof.


9
8
7
6
5

Finalization of Standards for Non Stand Alone-New Radio (NSA-NR)

COAI being the market representation partner of 3GPP from India had been constantly engaging 3GPP on requirements coming from the Indian market. COAI along with the IF3 hosted all the three plenary meetings of 3GPP in Chennai from March 19-23, 2018.

The meetings made considerable progress and finalized the standard for Non Stand Alone-New Radio (NSA-NR), which allows 5G deployments over existing 4G networks. More than 300 delegates from across the globe participated in these meetings including the largest Indian participation ever. This ascertained that companies working on 5G products are on track for commercialization of 5G services in 2019.

National Digital Communications Policy 2018

a. The DoT announced the preparation of the new National Telecom Policy (NTP) or the National Digital Communications Policy and constituted 12 working groups with different themes to provide inputs on the topics, issues and statements that need to be included in the National Digital Communications Policy .

b. COAI provided inputs and also made presentations to all the working groups on NDCP.

c. Further, COAI submitted its response and provided inputs to the TRAI Consultation paper on NDCP.

d. TRAI issued its recommendations on the NDCP-2018 on 02.02.2018 and included almost all the inputs of COAI in its recommendations to the DoT.

e. Some of important recommendations are:

i. Rationalization of regulatory levies and taxes by 2019

ii. Review of the definition of Gross Revenue and the concept of pass through revenues in line with principle of input line credit

iii. One Nation – One License concept for services

iv. Separation of licenses/ permissions for infrastructure, network, services, and applications providers

v. Incentivizing TSPs for faster roll-out in rural areas

vi. Broadcast services using converged wireline/wireless networks

vii. Further liberalize spectrum sharing, leasing, and trading regime

TRAI recommendations on approach toward Sustainable Telecommunications issued On 23.10.17

a. COAI in its response to the TRAI Consultation Paper on Approach towards Sustainable Telecommunications made the following submission:

i. There should be only one target i.e. carbon abatement

ii. There should not be any target for RET deployment

b. Considering the submissions of COAI, TRAI made the following recommendations on the subject:

i. TSPs should voluntarily adopt the RET solutions, energy efficient equipment and high-capacity, fast-charging storage solutions

ii. No mandatory provisions for RET deployments

iii. Only one target i.e. carbon footprint reduction

c. These are positive

recommendations of TRAI for the consideration of the DoT. As per the TERI report dated September 2012, the cost to meet the RET deployment targets would amount to approx. INR 370 billion.

Reduction in Regulatory Levies

a. Industry made several representations to the DoT on the reduction of the levies highlighting the financial stress beleaguering the telecom sector. COAI also prepared a note on the Financial Health of the sector for its members. Following requests were made in the representations to the DoT:

i. USO: Reduce the USO levy to 3% to start with, with the ultimate objective of ending this subsidy in the next 2-3 years in line with TRAI recommendations.

ii. SUC: Reduction of SUC charge to a uniform 1% of AGR across all Spectrum Bands.

iii. GST: At most 12% slab rate of the GST should be considered for the telecom services.

iv. Schedule for The Payment of Spectrum Debt: Reduce debt burden by charging nominal interest rate, providing a 5-year moratorium and extending payments over spectrum usage period.

b. The DoT vide its amendment to the license conditions dated 19th March 2018, allowed extension of the deferred payment of the spectrum debt from 10 Years to 16 Years. This initiative will increase the cash flow of the TSPs in the current financially stressed environment.

TRAI committee constituted to purge the infructuous regulations on tariff, QOS & licensing related issues

a. TRAI constituted a committee to purge the infructuous regulations.

b. The TRAI committee further constituted three sub-committees on Tariff; QoS & Licensing-related issues to provide inputs to the main committee.

c. COAI was part of the Tariff sub-committee. COAI provided its inputs to the sub-committee after detailed discussions with its member operators.

d. Almost all the inputs provided by COAI were accepted by the sub-committee.

TRAI per port mnp transaction charge & dipping charge regulations issued on 31st January 2018

a. COAI in response to the TRAI consultation paper on per port transaction charges & dipping charges had recommended to TRAI that the per port transaction charges should be kept at Rs. 2/-.

b. Considering the recommendations of COAI, TRAI vide its said regulation decreased per port transaction charge brought it down from Rs.19 per port for each successful porting to Rs. 4/-.

Formation of Telecom Infrastructure Committee (TIC)

For effective management of both EMF and infrastructural policy issues, it was decided that a higher level of participation by both telecom service providers and infrastructure providers would be required. This would ensure that the RoW and EMF advocacy campaigns are more impactful and will fuel the desired growth of Telecom infrastructure.

With the constantly shifting demands of the telecom ecosystem, a greater focus is being laid on the implementation of the Right of Way Policy at the state/ circle level. In light of these developments, it was decided to reconstitute the existing EMF committee by widening the horizons of advocacy by including state-level policy perspectives in the revised scope of work. The Circle Coordination Committee, (CCC) at the state level was also linked with the TIC for effective ground level coordination.

Telecom Infrastructure and RoW

1. States/Union Territories policies notified and in line with DoT RoW rules

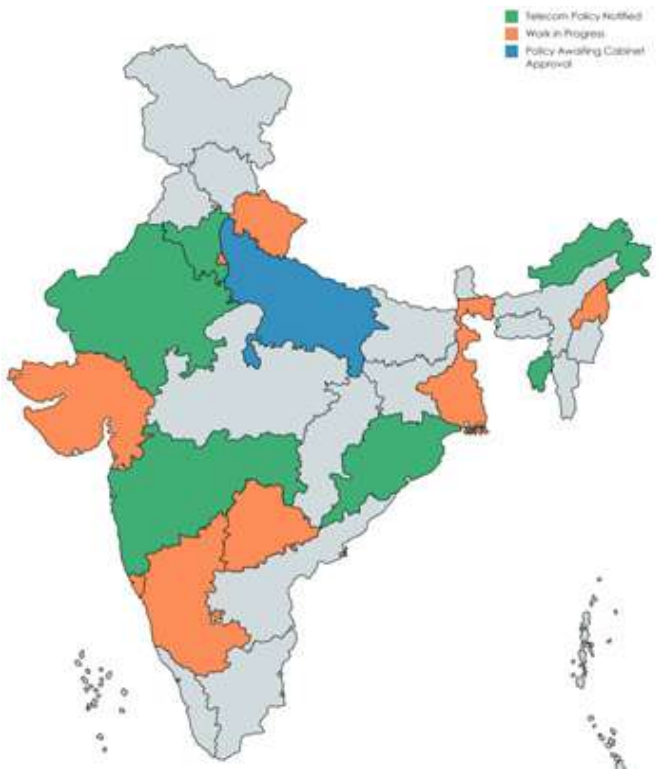
a) Odisha Mobile Towers, Ofc (Optical Fibre Cable) And Related Telecom Infrastructure Policy, 2017:

Odisha Mobile Towers, OFC (Optical Fibre Cable) and related Telecom Infrastructure Policy, 2017 was notified by the state Electronic and Information Technology department (E&IT).

The Odisha Tower Policy is one of the most comprehensive tower policies across the nation. It is capable of addressing telecom infrastructure needs for the next 15-20 years. The Odisha policy has been adopted by the Department of Telecommunications as the ideal policy for implementation in all states across India.

b) Haryana Communication and Connectivity Infrastructure Policy:

The Department of Electronics and Information Technology has notified the Communication and Connectivity Infrastructure Policy on including telecom as an essential service and telecom installations as critical infrastructure. The Policy is effective immediately and encourages industry to roll out mobile infrastructure in the state.



c) Assam guidelines for granting Right Of Way (RoW) to Telegraph Infrastructure 2018:

Assam has become the fourth state in the country to issue the Right of Way (RoW) guidelines for telecom service providers. The new guidelines will regulate the establishment of underground and over-ground telecom infrastructure, and also facilitate telecom infrastructure on government buildings and premises.

d) Maharashtra Telecom Infrastructure Policy:

The Department of Information Technology & Urban Development, Maharashtra Government, has notified the state Telecom Infrastructure Services Policy to be in sync with the Centre's RoW policy. The policy will help in creating and maintaining telecom infrastructure for its citizen-centric digital initiatives.

e) Tripura Government Order:

Department of Information Technology, Tripura Government has issued an order for the Additional District Magistrate & Collectors to grant permission

for the deployment of underground (optical fibre) and over-ground (mobile towers) telecom infrastructure with fees aligned with the RoW Rules 2016.

2. Policies Likely TO Be Notified Shortly in Line With Dot Row Rules:

The Department of Information Technology & Electronics, Government of Uttar Pradesh, has considered inputs from the industry for drafting an industry-friendly policy. The policy is awaiting cabinet approval and is likely to be notified soon.

3. Policies Under Discussion For Review:

Industry is working towards policy alignment in the following states (i) West Bengal (ii) Uttarakhand (iii) Karnataka (iv) Gujarat (v) Goa (vi) Delhi (vii) Himachal Pradesh (viii) Nagaland and (ix) Telangana.

4. Ministry of Defence (MoW) Policy For Establishing Telecom Towers And Related Infrastructure:

The Government has notified the policy for installation of telecom infrastructure in areas under the Ministry of Defence (MoD) vide letter no No.F.11026/1/2005/ D(Lands) dated 26th February 2018.

The policy covers the allotment of defence land on lease for static towers as well as permission to use land on a licence basis for placing cell towers on wheels, permitting use of rooftop in government and private buildings, including private land in cantonments and military stations to companies registered as infrastructure providers with the DoT. This policy will help improve coverage gap and reduce call drops in and around military stations and cantonment areas.

5. Forest Land Guidelines For Sanctioning Proposals On Laying Of Underground Drinking Water Pipeline And Optical Fiber Cables Inside Protected Areas:

The Ministry of Environment, Forest and Climate Change (Wildlife Division) has issued the guidelines vide letter no F.No.6-175/2017 WL dated 19th February 2018 for the laying of optical fiber cables along the Right of Way of the roads inside the national parks, wildlife sanctuaries and tiger reserves or any other protected area notified under the Wildlife (Protection) Act, 1972, to the State Board for Wildlife (SBWL).

6. Gujarat Regulation For 4G Towers-Amendment to The GR NPL/4512-3438:

The Government of Gujarat issued clarification that the existing government order dated 3rd October 2012 is applicable to all Infrastructure Providers (IPs) / Telecom Service Providers (TSPs) rather than a single player at a reasonable fee.

7. Enhancement of Telecom Network – FIFA U-17 World Cup 2017:

Industry was expected to provide congestion-free telecom networks, especially mobile networks, in 6 Host Cities to ensure best facilities and telecom network for the FIFA U-17 World Cup held during 6th -28th October 2017.

Since there was an urgent requirement for the deployment of additional infrastructure across stadium, following a lot of coordination with the DoT and Sports Ministry and FIFA Team, industry managed to put on-air a total of 59 critical sites for the tournament in 6 cities within a short span of two months to provide seamless connectivity to the spectators; this includes permanent sites, MBTS, IBS and de-sealed sites in some of the cities,

Public Facing Advocacy On Emf Issues Across Identified Circles

Awareness Campaign regarding EMF Emissions and Telecom Towers (April 2017 – March 2018)

Spreading Awareness: Direct Engagement with approx.1000 citizens

DoT and experts joined hands to lead Public EMF Awareness Campaign: Approx. 100 Government officials and approx. 300 medical & technical experts joined the Public Awareness campaign

Maintained connectivity and Quality of Services (QoS): Saved many telecom towers and facilitated installation of thousands of BTSs across the country to improve connectivity

Four DoT-led EMF Awareness Workshops in Gurugram

Four workshops in 04 different zones of Gurugram were organized by the Department of Telecommunication (DoT) to spread awareness around the scientific facts about the EMF emissions from telecom towers. One of the biggest achievements of these awareness sessions was that Shri V. Umashankar, Commissioner, Municipal Corporation, Gurugram, announced the formation of a committee to provide a coordination forum for interaction amongst various agencies involved in resolution of concerns related to EMF Emissions from Base Transceiver Stations (BTSs) located in Gurugram.

The general sentiment of the attendees was positive towards these workshops. A presentation on the Tarang portal was also given during these workshops, which were highly appreciated by the participants. Stakeholders requested an assurance from the authorities against the sealing of towers by the municipal corporation. The authorities assured all gathered that no such actions will be taken against people who are helping the govt. increase mobile connectivity to the last mile.

DoT led EMF Awareness Workshop Mysuru in April 2017

A workshop in association with the Department of Telecommunication was organized at Mysuru on 6th April 2017 to spread awareness about the scientific facts regarding EMF emissions from mobile towers. The work shop was attended by over 100 people including Shri. Prathap Simha Hon'ble Member of Parliament, Mysuru, and Shri Kaveesh Gowda, Secretary, Vidya Vikas Educational Trust, Mysore.

DoT-led EMF Awareness Workshop Aizwal in April 2017

An awareness workshop on EMF radiations and

telecom towers in association with the Department of Telecommunication was organized at Aizwal, Mizoram on 26th April 2017 to bust myths regarding EMF emissions.

The highlight of the workshop was the address delivered by Kannan Gopinathan, IAS, Deputy Commissioner, Aizwal, Mizoram, who called for a greater participation and co-operation from the general public. The workshop received a warm response and was attended by over 70 people from the Central and State Governments. Doctors, NGOs and representatives of educational institutes in the region were also present.

DoT-led EMF Awareness Workshop In Dot Indirapuram In Feb 2018

An awareness workshop was convened by the Department of Telecommunications to spread awareness about the scientific facts regarding EMF emissions from mobile towers. The workshop was highly appreciated by the DoT for being one of the most interactive sessions attended by them till date with a genuine sizeable audience. It was attended by representatives of local municipalities, RWAs, and by doctors from the Indian Medical Association, Ghaziabad.

DoT-led engagement with medical fraternity at Sawai Mansingh Hospital (SMS), Jaipur in Feb 2018:

A workshop in association with the Department of Telecommunication was organized at the Sawai Mansingh Hospital (SMS), Jaipur on 9th February 2017, which was attended by over 300 hundred senior doctors, postgraduate medical students and faculties of hospitals across Jaipur.

It was the single largest session that brought doctors from various medical colleges of Jaipur and other key influencers under one roof to clarify any radiation-related misconceptions the general public harbored.

A far-reaching media exercise across 5 TV Channels and 7 regional publications ensured the effective propagation of the message that mobile tower radiation is not linked to human health.

DoT-led EMF Awareness Workshop in Surat in March 2018

In order to address misconceptions regarding EMF emissions from telecom towers, the Department of Telecommunication (DoT) organized an EMF Awareness Workshop in Surat, Gujarat on 6th March, 2018. More than 140 participants attended the event including officials from Municipal Corporation and the Hon'ble Mayor of Surat.

Finance & Commercial Related Issues

1. Goods and Services tax (GST)

We made various representations to the Government at various levels includingto Advisory Group of Law Review Committee, Revenue Secretary and to concerned senior officers of the Ministry of Finance and to DoT on the key issues such as centralised registration, rate of GST for telecom service and other allied issues. We also highlighted key challenges which are faced in state-wise GST registration framework and again reiterated the request for centralised registration and centralised assessment for the Telcom Industry.

Telecom is today one of the most critical of the infrastructure sectors providing not only a communication link across the country but also a backbone for the Digital India campaign. The above two GST related issues are critical for smooth functioning of this important sector of the economy and we requested the Government and GST Law Review Committee's intervention in getting these issues resolved in the ongoing review of GST law.

• Centralized Registration: It was submitted that that the Telecom services are already highly regulated and provides to over a billion customers across 22 licence areas or circles that India is divided into as per the telecom licence rules. Under the GST system, the jurisdictions are as per the geographic state and UTs. This leads to overlaps between states and circles and has resulted in the deployment of additional manpower and significant time taken in remaining compliant with both systems.

There are also a number of tax uncertainties and increased costs that will cropped up due to the multiple assessments and audits and cascading impact of taxes on account of credit blockages without yielding any incremental revenue for the Government; ease of doing business is also badly impacted. The millions of transactions carried by the telcos daily also mean additional IT and filing

systems which are also an added expense and is time-consuming. We requested the Government that these issues can be resolved by granting centralized registration for the sector.

• Centralised Assessment : Since one of the outcomes of statewise registration is multiplicity of assessment and audits, which by itself is time and resource consuming, as an alternative it was submitted that a special dispensation be made to grant facility of centralised assessment to telecom operators which should be done by only one set of authorities centrally at one location on behalf of all 36 tax authorities.

• Rate : While telecom services are essential services, it does not receive the benefits of that category. Telecom, being an essential service as per the Essential Services Management Act, has been allotted a higher standard rate of tax of 18% GST – Higher than the Service tax rate of 15%. Singapore has a GST rate of only 7% on Telecom Services, Malaysia of 6% and Australia of 10%. Given the adverse financial health of the sector, we made a recommendation to consider lowering the GST for telecom to be same as that of essential services.

• Credit on Towers: We informed the Government that Telecom towers are a necessity for Telecom operators for provision of services. Despite towers being essential for rendering telecom service, GST law bars credit on Telecom towers. This would result in cascading and increased cost of rendering telecom services. Not providing credit for input to an industry where the revenue is fully subject to GST, flies in the face of all rationale. Moreover, credit is being denied on largest part of input cost. We requested the Government that the same be revisited and be made available for Input Tax Credit.

• GST - Telecom Circle Vs State: Telecom divided in 22 Circles whereas GST will be leviable in each of the 36 States / UTs. Non-alignment of Circle with State/ UT boundaries e.g. Delhi NCR Circle has Gurgaon, Faridabad and Noida as its part which are in Haryana and Uttar Pradesh. There are 12 Circles which are Multi-State Circles and 5 States which are multi-Circle States.

Circle-wise accounting is mandated for AGR purposes. State wise accounting is mandated for GST purpose. In order to meet both the statutory requirements, Maintaining two sets of books is required i.e. one Circle based for AGR and another State based for GST.

We requested the DoT to realign definition of circles boundaries with the state boundaries to avoid issues arising out of maintaining dual set of books. DoT has agreed to setup a committee on this issue.

• GST - Payment of invoices within 180 days: The CGST Act provides that if the invoices in respect of goods and services are not paid within one hundred and eighty days from the date of issue of the invoice, then the recipient would be liable to reverse credit so availed along with applicable interest.

There are many long term contracts as well as commercial negotiations wherein payment of invoices after one year or more are commercially agreed to between the parties.

The said proviso takes away the right of the person to commercially negotiate longer terms of payment.

While the objective of the above proviso is noble inasmuch as it seeks to avoid bad debts, however, requiring the recipient to also pay interest is too harsh.
We met and requested the Government that the provision may be dispensed with and eligibility of credits should not be linked to payments to vendors as long as tax has been discharged by the vendor.

Or alternatively no interest should be payable at the time of reversal for non-payment where payment of invoices is not made within 180 days as tax already stands deposited

• GST - Credit note in respect of supplies made prior to 1st July 2017

The CGST Act provides for

issuance of credit note in respect of supplies of services effected prior to the appointed date (01-07-2017) and that the credit note shall be deemed to have been issued under the GST Law.

The state GST Acts do not provide similar provision for issuance of credit note in respect of services. Service Tax has been paid @15% on the original supplies whereas GST rates may differ depending on the nature of supplies. We met with the concerned authorities and requested for the clarification :

a) Whether such credit notes are required to be issued only with CGST @15% or with CGST @9% and SGST 9%.
b) We requested that the GSTN portal also to support the same

Key Takeaway: On January 11, 2018, Finance Minister of J&K announced the Amnesty Scheme for Telecom in the budget of J&K and a formal notification was issued by the Government on February 06, 2018. Our key asks are being accepted by the Government.

2. International Roaming:

a. After much pursuance with DoT, on November 10, 2017, DoT issued the clarification that the Pass-through charges for international roaming would be allowed on the basis of authentication by the authorized signatory of the operator and the certificate of the statutory auditor.

b. DoT has also instructed CCAs to reopen those cases wherein the pass-through charges for international roaming had been disallowed in the past on the basis of the order issued by DoT in 2014.

c. This clarification will enable the member operators to reverse the past disallowance on this account.

Key Takeaway: On November 10, 2017, DoT issued the clarification / guidelines for allowing the pass-through charges w.r.t. international roaming and also defined the process for claiming the deduction. The format submitted by the industry was accepted by the DoT with suitable modification.

3. GST on spectrum assigned prior to April 2016

Representations were made with regard to carrying forward unutilized credit of the tax paid on spectrum under GST. MoF clarified that the Telecom Companies, that have been allotted Spectrum auction 2016 can avail the remaining 2/3rd Cenvat Credit under the new tax regime.

Cenvat Credit Rules were amended to provide Cenvat credit in respect of such services that remain unavailed on the day immediately preceding the 'appointed day' may be availed of in full on that very day. Appointed day refers to the day when Central GST comes into effect. It was stated that the amendment would enable service recipients to carry forward such unavailed credit of Service Tax under the GST regime.

As a result, Telecom Service Providers that have been allotted Spectrum in auction conducted in 2016 and have already availed one-third credit in respect of Service Tax paid by them, during 2016-17, would be eligible to take the remaining two thirds credit pertaining to 2016-17 in the GST regime, scheduled to roll out on 1st July, 2017.

Key Takeaway: This clarification will help the industry in reduction of blockage of funds of members and will also enhance ease of doing business.

4. DoT - LF / SUC - deduction of Tax deducted at source (TDS)

In February 2018, DoT issued clarification w.r.t deduction for TDS. DoT clarified that irrespective of date of payment of TDS, deduction for TDS shall be allowed in the same quarter in which the related transaction occurred.

Key Takeaway: This clarification will help the industry in reduction of blockage of funds of members and will also enhance ease of doing business.

MEDIA ADVOCACY & STAKEHOLDER OUTREACH

1. Union Budget 2018-19

Union Budget 2018-19 was an important development for the telecom sector due to its deteriorating financial health.

COAI submitted its recommendations for the Union Budget for Financial Year 2018-19 to the Ministry of Finance, Government of India, on behalf of its members. Top demands included reduction in extremely high and unsustainable levies & taxes, reduction in BCD on 4G LTE Equipment, clarity on Right of Way related taxation at the state level, & clarification on lowering the tax rate to 1% on discounts extended to small dealers. The engagement with print, electronic and online media on the key asks generated a strong voice in the industry.

Authored articles by Mr. Rajan S Mathews, DG, COAI appeared in the leading financial dailies including The Hindu Business Line and The Financial Express.

Post the Budget announcement, a video of Mr. Mathews voicing the opinion of the telecom sector was shared with the leading portal ETTelecom.com. The four minutes video highlighted the key asks of the industry and how the telecom industry did not receive appropriate incentives.

Telecom sector cries on no mention of tax rebates

Govt pegs ₹48,661 crore revenue from stressed operators

S RONENDRA SINGH

New Delhi, February 1

Unhappy is the telecom sector with the Finance Minister Arun Jaitley's Budget. Feeling left out they said the Budget 2018-19 did not have much for the telecom sector, and the government also did not make much target revenue as it expected from spectrum auctions in the last year's Budget.

It has pegged 58 per cent increase in revenue at ₹48,661.42 crore from the stressed telecom sector in 2018-19 against the revised revenue estimate of ₹30,736.47 crore for the current fiscal.

The government had made a provision of ₹44,342.2 crore revenue from telecom services in 2017-18, through licence fee and spectrum usage charges, from telecom operators.

It was quite higher in the previous year because the government expected much from spectrum auctions, and according to analysts and industry experts, the spectrum auctions that give higher revenues to the government.

There were no auctions last year and the auctions in 2018-19 will depend on Telecom Regulatory of Authority recommendations. The Department of Telecom has sought for views from TRAI on spectrum pricing and timing for the auction.

According to the Cellular Operators Association of India (COAI), the Finance Minister Arun Jaitley had no mention about the telecom sector, which is the backbone digital highway.

"While, the FM has emphasised the importance of moving to a digital economy, the actual digital highway, which is telecom has found no mention in terms of substantive support, unlike road, railway, highways, electricity, which have received substantial mention. We are saddened to see that telecom which is the bedrock for moving the Digital economy forward, continues to remain an Orphan," Rajan S Mathews, Director General, COAI, said.

He said the sector had sought a reduction in levies and taxes, and an urgent intervention is critical for resuscitating the sector, which is currently experiencing its worst financial health and hyper competition.

"We reiterate our four key asks, reduction extremely high and unsustainable levies and taxes, reduction in BCD on 4G LTE Equipment, clarity on right of way related taxation at the state level, and clarification on lowering the tax rate to one per cent on discounts extended to small dealers," he added.

But, according to Aruna Sundararajan, Secretary, Telecom, the DoT is already working on National Telecom Policy 2018 and hence it was not much necessary for a mention in the Budget.

"This was Budget...we are having a separate Telecom policy to see some of the other issues. The Budget was on expected lines (for us)," she said.

The Telecom Secretary was hinting on the proposals that the FM has announced for the BharatNet project, for which there is a sanction of another ₹10,000 crore in 2018-19. in the last year's Budget also, Jaitley had sanctioned ₹10,000 crore out of which ₹7,000 has been utilised till now, Sundararajan said.

Broadband access

The government proposes to set-up five lakh Wi-Fi hotspots that will provide broadband access to five-crore rural citizens as part of this investment.

The DoT has already activated 32,000 Wi-Fi hotspots in some parts of the country over the last one year.

Apart from this, the Finane Minister also announced to harness the benefit of emerging new technologies, particularly the 'Fifth Generation' (5G) technologies and its adoption. And, the DoT will support establishment of an indigenous 5G Test Bed at IIT, Chennai, Jaitley said.

Dialling for growth

- Government pegs ₹48,661.42 crore as estimation from telecom sector against revised revenue estimate of ₹30,736.47 crore for the current fiscal
- Sanction of ₹10,000 crore for BharatNet project, same amount as last year
- To provide 5-lakh Wi-Fi hotspots from 32,000 right now as part of this investment
- 5G Test Bed at IIT, Chennai
- Industry unhappy as no mention of tax rebates, but DoT says that will part of Telecom Policy 2018

Scant focus on telecom

FINANCE MINISTER Arun Jaitley should be commended on a well thought out, meticulous Budget. Apart from addressing key hurdles across the agricultural and infrastructure value chain, this Budget promises significant empowerment at the grass-roots level.

The COAI is pleased with doubling of allocation towards Digital India and the aim to invest in research, training and skilling in robotics, AI, digital manufacturing, big data, quantum communication and IoT, to be overseen by the DST. This is a sign the government is cognisant of the importance of a resilient cyberspace and welcoming of new technologies. The initiative is timely and also suggests that industry has the full support of the government when it comes to the next generation of technology. The support extended to IIT Chennai for indigenous 5G test bed is welcome, as is the proposal to set up five lakh Wi-Fi hotspots across India.

However, it is disappointing the government has ignored telecom industry's submissions on the fundamental changes that need to be made, when the sector is experiencing financial distress and is in need of help. A lot more needs to be done, if the sector is expected to help achieve the PM's goal of digitally empowering every citizen and ensuring economic growth that improved connectivity guarantees.

The telecom sector is amongst the highest FDI contributors to the economy (₹1.3 lakh crore), and the second-largest investor in infrastructure (₹9.2 lakh crore). It contributes 6.5% to the GDP, paying ₹70,000 crore in FY17 only and employing 40 lakh people directly and indirectly. Telcos have committed to invest ₹74,000 crore to improve infrastructure to address call drops. Yet when the sector needed budgetary intervention, the government chose to ignore. Given that for every 10% penetration, the GDP gets a 4% boost, telecom is one of the essential sectors.

The sector is struggling with a cumulative debt of ₹4.6 lakh crore, and revenues are down to ₹2.5 lakh crore. Hyper-competition has left no room for improvement and the sector is out of ideas how to cut costs. Digital India is almost completely dependent on telecom that needs ₹3 lakh crore over few years.

Ours is one of the most taxed sectors. Whereas telcos in Pakistan and China pay 20% and 11% tax, respectively, Indian telcos pay over 32%, including 18% GST and 15% in licence fee and SUC. We urge GST Council to bring it down to 5%.

The key asks included reducing high levies/taxes and BCD on 4G LTE equipment, clarity on RoW related taxation at state level and reduction of tax rate to 1% on discounts extended to small dealers.

While much emphasis was laid on moving to a digital economy, the digital highway — telecom sector — did not feature in the Budget, like the railways, highways and electricity sectors did.

The industry will continue to work towards a fully connected India, fulfilling PM's mission of Digital India. We do hope, though, that in the same way as BharatNet got due support for the critical programme it is, the asks of telecom sector will also be addressed for speedy roll-out of infrastructure across the country that will ensure widespread connectivity and bridge the digital divide between urban India and rural Bharat.

RAJAN S MATHEWS
DIRECTOR GENERAL, CELLULAR OPERATORS ASSOCIATION OF INDIA

A Webinar with The Economic Times was conducted for DG COAI. A week prior to the Webinar, The Economic Times carried a graphic containing details of the Webinar as the Top Banner for their Daily Newsletter, which resulted in positive branding of COAI.

The Webinar was attended not only by the consumers of telecom services but also by the journalists from other media houses who asked a variety of questions.

While the primary focus was on the upcoming budget, other issues of cyber security, financial health and Aadhaar were also touched upon, which resulted in a successful webinar.

2. TRAI on Ease of Doing Business in Telecom Sector

Telecom regulator issued recommendations to ease the way business is conducted in the telecom sector. This included faster timelines for mergers and acquisitions, organization of penalties in line with the severity of offense and various other points of importance.

Media Outreach:

Welcoming the regulator's recommendations, COAI issued a statement which was covered by PTI and leading publications including The Economic Times, The Times of India, Mint, Business Standard, etc. The statement also received good space in the relevant online news portals.

3. Call Drops

In January, the Quality of Service (QoS) and an increase in the level of call drops had come under the scanner. This invited scrutiny from the telecom department, and Telecom Secretary, Smt. Aruna Sundararajan was planning a meeting with operators soon to convey concern over call quality.

Call drops issue telco-specific, can't be generalised: COAI

Industry body Cellular Operators' Association of India (COAI) has said call drops are a result of operator churn and difficulty in getting approvals for installing infrastructure and operator-specific issues on service quality are not "emblematic" of the whole industry. The comments come when a spurt in call drops has again come under the telecom department's gaze and Aruna Sundararajan, telecom secretary, is planning a meeting with operators to convey concern. COAI Director General Rajan Mathews said the problem was confined to geographical pockets and some companies. It should not be seen as industry-wide problem, he said. PTI

Media Outreach: By issuing a statement in media, COAI highlighted the reality that the issue of call drops is not telco specific and cannot be generalised.

The statement was well received by media and was covered in newswires and major financial publications such as The Economic Times, The Financial Express. It was also widely covered in mainlines and regional newspapers.

The Times of India carried an Op-ed authored by Mr. Sandip Sen, titled "Torrent of call drops makes Digital India sound like a joke. One answer: Segregate voice from data".

The article incorrectly mentioned the country's leading telecom service providers, as well as tower companies for high incidences of call drops and also questioned their intent and cited their capital lack of investments as the root cause of the problem, offering unscientific, technology implausible solutions and fallacious advice to address this problem.

In response to this, an authored article by DG COAI appeared on the Op-ed page of The Times of India, setting the record straight on the issue of call drops. The article adequately communicated COAI's stand.

4. Quality of Service (QoS)

COAI engaged with media by issuing a statement on the new call drop norms. COAI's stand was, telecom regulator TRAI must meet the telecom players to discuss the results of the new call drop norms.

The difficulties faced by telecom operators and outcome of the new stringent Quality of Service (QoS) norms and formulae applied should be discussed before the results are made public by the regulator.

Media Outreach: COAI's stand was communicated in the form of a statement which was carried by prominent print publications like The Economic Times, Business

Telecom operators are providing India with world class infrastructure, the call drop problem has been managed

Rajan S Mathews

This is in response to the article 'Torrent of call drops makes Digital India sound like a joke. One answer: Segregate voice from data', authored by Sandip Sen (March 29, 2018). The author has wrongly blamed the country's leading telecom service providers as well as tower companies for high incidences of call drops and cited their lack of capital investments. It also offered unscientific and technologically implausible solutions to address this problem.

Telecom operators have, over the last few years, invested a hefty amount of over Rs 9 lakh crore to create a world class telecom infrastructure currently serving 1.15 billion subscribers in the country. In the last three years, the operators have added almost 10 lakh new base transceiver stations to cater to the requirement of subscribers.

Further to this, the sharing of telecom infrastructure is an Indian global best practice that has become a Harvard Business School case study. These companies combined their telecom towers to provide "shared telecom infrastructure" to wireless telecom operators on a non-discriminatory basis.

The recently published Independent Drive Test Reports of Trai for the cities namely Indore, Nagpur, Mysore, Bhubaneshwar, Bhiwani, Kanpur, Kota, Patna, Raipur, Ranchi, have shown that the operators are in compliance with call drop rates benchmarked by the regulatory authority. This is

The sharing of telecom infrastructure is an Indian global best practice that has become a Harvard Business School case study

quite evident from the press release of Trai while publishing these drive test reports.

It is pertinent to mention that all these recent reports of Trai are of the cities outside Delhi-NCR and major metros. This must be juxtaposed against the author's remark that call drop rates are higher outside Delhi-NCR. If that is the case, then call drop rates in Delhi-NCR and major metros

must be even better.

The author also opines that increase in data usage – for example with viral videos – affects the network's ability to manage call quality. However, voice traffic is not impacted by increase in messages/ videos sent over the OTT platform, as in the telecom networks there is a provision to ensure that voice traffic is not hampered by data traffic.

Separate channels are allocated to voice and data traffic so as to ensure that data does not impinge upon the quality of voice. Thus the author's comparison between data surges on the telecom network and electricity surges causing the power supply to trip has no basis in fact whatsoever.

Call drop rates are being measured by Trai during the busiest hour of the day when the voice tariff surges and reaches its peak. Still, operators are meeting the benchmark or are close to meet the prescribed benchmark of Trai.

Moreover, load balancing, traffic management and the latest technologies utilising "Self Optimising Networks" (SON) have been deployed by telecom service providers to ensure that networks respond to subscriber demand in an optimal way.

Hence to indicate that towers are "switched off" suggests an inappropriate understanding about how telecom networks are managed. Further, inadequate quality checks on devices, particularly dual SIM devices are a problem that merits urgent attention.

Telecom operators have been making humongous investments, both in terms of capital and intent, to create a world class telecom infrastructure in the country towards ensuring the country's dream of becoming a $4 billion digital economy by 2022. Despite facing pressing issues such as 'right of way', non-availability of electricity to run the base transceiver stations, myths around the towers emitting dangerous radiation, etc, operators have already demonstrated their ability to make committed and long term investments into the sector.

The article does disservice to an industry which has offered consumers the lowest tariffs in the world and continues to invest in the sector despite debilitating financial health and declining revenues, as many media reports attest. The industry has added over 3,50,000 base transceiver stations last year, taking the total to now over 17,00,000 stations across the country.

The writer is Director General, Cellular Operators Association of India (COAI)

TRAI SUGGESTS FRAMEWORK FOR APP-BASED CALLING

'Apps must take same route as normal voice calls'

ENS ECONOMIC BUREAU
NEW DELHI, OCTOBER 24

SUGGESTING A framework for app-based calling on networks of mobile service providers, the Telecom Regulatory Authority of India (Trai) Tuesday said that operators would need to design their apps in a way that it takes the same route as normal voice calls and also attract applicable connection charges when the call is made to another network.

The framework, recommended to the Department of Telecommunications (DoT) on a suo motu basis would not be applicable for apps such as WhatsApp, Viber, etc but is meant only for operators with valid licenses to offer telephony services, including mobile virtual network operators (or MVNOs).

Trai has also recommended that if an overseas call is made using an internet telephony app by subscribers on international roaming, it should be routed via international gateway to the network on which the call has been made, ensuring that it takes the same route as normal voice call.

"In case the access provider is not able to ensure that Internet Telephony call originated outside of the country is coming through ILDO (international long distance operator) gateway, international out-roaming to internet telephony subscribers of the access provider should not be allowed," Trai noted.

Industry body Cellular Operators Association of India's director general Rajan Mathews pointed out that there are a number of practical issues with internet telephony. "The subject of Internet Telephony involves important issues such as the need for an underlying access network, separate numbering series, interconnection, network security etc., which still need to be addressed," Mathews said.

The regulator also highlighted that if the government had a different understanding of the subject, DoT may issue amendment to access service licences so that internet telephony service is untethered from the underlying access network. In April last year, the DoT had amended the norms under the unified license to allow termination of calls on an internet protocol (IP)-based network.

Earlier this year, public sector firm Bharat Sanchar Nigam Ltd (BSNL) had launched an app for its subscribers to connect with BSNL network though the app using WiFi or internet service when abroad and make calls to any network in India. However, BSNL's service was suspended upon government's intervention after private telecom operators alleged that the company was attempting to bypass call connection charges with the help of the app. The Trai recommendations released on Tuesday clarified that such internet telephony apps will have to be linked with mobile number series allocated to telecom operators.

Standard, Mint. The statement was also covered in major online news portals like ET Tech, EconomicTimes.com, ET telecom, The Indian Express etc.

5. Statement on 'Internet Telephony, call from Wi-Fi'

The subject of Internet Telephony involves important issues such as the need for an underlying access network, separate numbering series, interconnection, network security etc., which needed to be addressed. TRAI issued a set of recommendations on Internet Telephony and stated that Internet Telephony service is un-tethered from the underlying Access Network. In this regard, the position of COAI and its members was that internet telephony can only be provided by a licensee using its own access network.

Media Outreach: COAI's views on the recommendation was stated in a statement across the telecom media which got carried by PTI and prominent publications like The Economic Times, The Times of India, The Indian Express and Business Standard. The statement was also got traction in major online news portals like ET Tech, EconomicTimes.com, ET CIO, TimesofIndia.com, CommunicationsToday.com, etc.

6. 100 days of GST

On the completion of 100 days of GST and prior to the council meet, COAI highlighted that under current GST regime, tax (and cess) payable by the telecom services sector increased to 18%, from 15%. For the sector, this additional 3% has to be absorbed by the service providers due to hyper-competition; the industry is going through one of its most competitive phases, making it almost impossible to increase tariffs. The Government has allowed input credit, which brings the effective taxation level

down to around 17%, but this is still higher than what the industry can handle at this time. Telecom is an essential service and should ideally come to 5% GST slab.

Media Outreach: Authored articles appeared in the leading financial online portal ETTelecom.com with DG COAI's opinion. The article on GST slabs in ETTelecom.com was digitally amplified on Twitter.

7. Catalysing 5G launch in India

In a bid to create awareness about India's capability to launch 5G technology-based

New policy for 5G connectivity by June this year: Telecom secretary

ENS ECONOMIC BUREAU
@ New Delhi

TELECOM secretary Aruna Sundararajan on Tuesday said that India will be all set to roll-out a new policy for high-speed 5G connectivity by June this year. Sundararajan, who was speaking at an event organised by the Cellular Operators Association of India (COAI), also said that India wants to take a lead position in adopting 5G technology and expanding high-speed systems.

5G, Sundarajan said, was very important in aiding India's large-scale "digitisation and digitalisation" efforts. "The government is working with all stakeholders... A high-level forum on 5G which includes global experts, industry experts, IITs, IISc, has already commenced work and done a fair amount of deliberation. By June, India will have full roadmap ready on this," she said.

The forum is currently deliberating on the vision, goals, and the details of the 5G roadmap, while also looking at several other related areas of spectrum policy, regulatory regime and pilot programmes.

"I wonder whether we are correct in calling 5G as next generation. It represents the next order of capabilities and the capabilities that it will unleash, are transformative," she said.

While India lagged behind in the implementation of the earlier generations of mobile and data networks like 2G, 3G and 4G technology, Sundararajan stated that it does not want to get similarly left behind in 5G and, in fact, would like to push the global momentum around 5G through design capabilities, innovation and ability to build affordable solutions.

services at the same time as the rest of the world, COAI, hosted the meeting of international experts, telecom experts and standardizing authorities. The meeting was aptly themed as 'Catalysing 5G in India'.

Media Outreach: The media coverage appeared in the leading financial dailies such as The Economic Times, Business Standard, The Hindu Business Line, etc as well as in mainline newspapers such as The Indian Express. Additionally, over 150 prominent online news portals covered the news.

The event was backed by robust digital media and online amplification to reach a wider tech savvy audience including influencers and new media. Through the means of engaging bloggers and influencers, we were able to achieve both high reach and engagement with our audience. Throughout the event, live tweets were posted by COAI handle and live videos helped garner traction on Twitter.

8. Financial Health of the Sector

Given the financial health of the sector, COAI through media outreach highlighted how the telecom industry earnings are expected to remain under pressure for

COAI demands action against Sify over use of spectrum

FE BUREAU
New Delhi, April 8

TELECOM OPERATORS' BODY COAI has approached the Department of Telecom (DoT) demanding action against Sify Technologies calming that the internet services provider (ISP) has been using spectrum in the 5 GHz band, which is in violation of the current laws.

The industry body said that it learnt that the Chennai-headquartered company was slapped with an infringement notice by DoT for unauthorised possession and operation of wireless gear on unassigned airwaves in 5 GHz band in gross violation of Indian Telegraph Act, 1885 and Indian Wireless Telegraphy Act, 1933, the sources said.

In a letter to telecom secretary Aruna Sundararajan, COAI said, "We have noticed that despite issuance of the infringement notice by DoT, Sify continues to radiate in the unassigned airwaves in 5 GHz. The same has also been confirmed by the frequency scanning drive conducted by one of our member operator in Patna, Gurgaon and Chennai".

The copy of the letter was seen by *FE*.

In the letter, COAI director general Rajan S Mathews said that use of unauthorised licensed spectrum by Sify in a competitive market puts other licensed players at a disadvantageous position. "We request DoT to take necessary action to stop misuse of unassigned licensed spectrum by Sify," Mathews added.

Hitting back at COAI, a spokesperson for Sify Technologies said that DoT as a licensor has laid down specific guidelines and Sify is in compliance of such guidelines and license conditions like any other operator. "DoT conducts routine comprehensive audit on all the operators including Sify, everyone of which Sify is fully compliant with. Sify views this as a desperate attempt to cause ill will based on a routine audit report which Sify is not aware," he added.

Sify is an integrated ICT solutions and services provider, which offers end-to-end solutions over a common telecom data network infrastructure reaching more than 1,400 cities and towns in India.

DISPUTE

- COAI says Sify has been using spectrum in the 5 GHz band, which is in violation of the current laws
- It says the company was slapped with an infringement notice by DoT for unauthorised possession and operation of wireless gear on unassigned 5 GHz spectrum
- Sify spokesperson says DoT, as a licensor, has laid down specific guidelines and Sify is in compliance of such guidelines and license conditions

3-4 quarters more. It also mentioned that a report by TRAI has noted that the gross revenue of telecom services providers fell 8.1% while the license fee collected by the Government dropped by 16% year-on-year in the quarter ended December 31, 2017.

Media Outreach: Impressions were generated in leading print publications like The Times of India, The Financial Express, etc., additionally, leading online portals like ETTelecom.com, Bloombergquint.com, etc, carried the news.

9. National Digital Communications Policy 2018

DoT introduced the draft National Digital Communications Policy 2018. The policy was expected to bring the much-needed fundamental change required by the Indian telecom sector.

Media Outreach: Prior to the release of the draft policy, COAI undertook extensive media advocacy through editorial meetings, authored articles and statements to emphasis the impact this policy will have on the sector. COAI, being a thought-leader in the telecom segment, shared its views on how this policy is an opportunity to bring about financial stability and higher investments in the sector.

The draft NDCP 2018 released had most of COAI's recommendations such as rationalization of regulatory levies and taxes by 2019, one license concept for services, amongst others. On the release of the policy, COAI

NATIONAL DIGITAL COMMUNICATIONS POLICY 2018

Say Hello to the Connected Future

Rajan S Mathews

Despite tariffs being one of the lowest in the world and taxes and levies being one of the highest, India's telecom sector just about maintains profitability. It even attracts the highest quantum of FDI to the country. But India has always been a little behind when it comes to adopting new technologies.

With the draft of the National Telecom Policy (NTP) 2018 — National Digital Communications Policy (NDCP) 2018 — made public by the department of telecom on Tuesday evening, the country is ready for the next generation of communications technologies such as 5G, artificial intelligence (AI), machine-to-machine communications (M2M), Internet of Things (IoT), Cloud computing, automation, augmented reality and virtual reality (VR). The path to Digital India has now been laid.

Unfortunately, over the last few years, the telecom sector has been experiencing financial distress with debt rising to unmanageable levels, while margins dwindle due to hyper-competition and rising costs. The sector's cumulative debt stands at around ₹7.64 lakh crore, while the overall revenue has fallen to less than ₹2 lakh crore. Sector employment is at an all-time low, with two operators on the verge of the bankruptcy. The time has come for some fundamental changes in the sector. NDCP 2018 gives hope and directive focus to the sector and all its stakeholders.

Traditionally, NTP documents have acted as framework ones, defining the direction for telecom policy to take with the evolving environment. So far, there have been four telecom policies: NTP 1994, NTP 1999, Broadband Policy 2004 and NTP 2012. Each one came at the opportune time and can be considered the reason behind the sector's success over the last 20 years.

FILE PHOTO

The message is loud and clear

For every 10% increase in broadband penetration in the country, GDP increases by 1%. The telecom sector is already contributing 6% to GDP, and NDCP 2018 has set a target of increasing it to 8% in the coming years. The policy has the potential to redefine the way future technologies are deployed and firmly plant India as a major player in the knowledge revolution.

By setting a target of attracting investments to the tune of $100 billion and addressing the critical issue of rationalisation of taxes and levies, GoI has focused on the long-term sustainability of the telecom sector, while also giving it the ability to invest in new technologies and services and ushering in a new era of communications. Currently, India's telcos pay more than 30% of their revenues in taxes, such as GST, and levies, such as spectrum usage charges and licence fees. Globally, this number is close to 10%. GoI is expected to rationalise it to that figure.

If all goes well, 2022 will be a watershed year. NDCP 2018 has set some very high but reasonable targets. If all the targets are achieved, India will no longer be seen as an emerging country. India will have universal broadband coverage at 50 Mbps to every citizen, 10 Gbps to all gram panchayats, 'unique mobile subscriber density' of 65 by 2022 and 10 million public Wi-Fi hotspots by 2022. The promise of creating four million new jobs is also a requisite target.

Then there is the treatment of spectrum. Defining spectrum as a natural resource, toward ensuring adequate availability, efficient usage and a transparent allocation method for service providers — while suggesting the adoption of optimal pricing to ensure sustainable and affordable access to digital communication — has got many in the Indian telecom sector optimistic again.

A notable aspect of the policy is the focus on securing the digital and cyber framework. This aspect is aimed at creating a comprehensive data protection system for digital communications that ensures the safety, privacy, autonomy and choice of citizens and encourages their participation in the global digital economy.

The new policy draft is one that signals that GoI is finally cognisant of the importance of the telecom sector and its contribution to the economy. The telecom sector has informed, educated, spread awareness, created jobs, saved lives, built relationships, nurtured bonds, spread knowledge, attracted investment and even helped develop the economy without taking much in return. Tariffs have always been one of the lowest in the world. The latest policy goes a long way to assure the sector that it can continue to do so.

The writer is director general, Cellular Operators Association of India (COAI)

lauded the Government's efforts towards focusing on the long-term sustainability of the telecom sector. An authored article attributing to Mr. Rajan S Mathews appeared in the Editorial Page of the largest financial daily - The Economic Times, successfully communicating an overall industry perspective on the policy.

COAI conducted ET Webinar on NDCP 2018. ET Webinar was an ideal platform to communicate with the stakeholders as it caters to a large audience base. It not only provided COAI an interactive platform to discuss the impact of policy on the sector. The Economic Times also promoted the Webinar in the ET Telecom newsletter which was shared with over 2oo thousand Industry leaders

10. Advocacy on EMF Emission

There was a need to address the growing public concern over health hazards from telecom towers and dispelling myths around the mobile tower radiation. Editorial meetings helped in ensuring that the influencers are aware of the facts of the matter. Additionally, advocacy through a credible third party was necessary to ensure that the mobile towers are safe.

The chosen third party advocate was Prof. Farhat Basir Khan. He is the senior-most faculty member at the AJK Mass Communication & Research Centre where he served as a Professor on Maulana Abdul Kalam Azad Chair for over half a decade & Professor of Media and Communication for over two years. He has also served as a Professor & founding Director of the Academy for Photographic Excellence. He is also on the Editorial Board of 'Journal of Scientific Temper', NISCAIR, Department of Science & Technology.

Media Outreach: The media activities were aimed towards ensuring that the domain leader's voice out their opinion backed on the current evidence on the issue. Authored articles on the topic explaining the details of the matter were carried in leading regional print publications and major online portals such as Businessworld.com, Livemint.com, etc.

11. Press Releases and Statements

a. COAI launches 5G India Forum:

COAI announced the formation of '5G India Forum', with a view to bolster efforts around use and deployment of the technology and issued a statement on the same. The statement was carried

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Telecom towers affect our health? Busting this myth

It is time, well-informed sections of society help in countering the myths about mobile tower radiation that are impeding India's progress and prosperity

Last Published: Tue, Oct 31 2017. 01:14 AM IST

Farhat Basir Khan

Telecom towers are globally being used for more than just providing telecom services, including disaster management. Photo: Indranil Bhoumik/Mint

As the Indian telecom sector prepares for the next generation of mobile telephony, some legacy issues continue to haunt the sector, making the demanding job of connecting the country even more difficult. The biggest

in 4 wire publications and 22 online portals which included The Economic Times, ET Telecom, Business Standard, Outlook India, etc.

b. Telecom Industry welcomes Kerala State Human Rights Commission's Order:

COAI issued a press release welcoming Kerala State Human Rights Commission's order in Kerala. Coverage was garnered in regional publications in Kochi like Veekshanam, Future Kerala and online coverage was garnered across trade publications like VAR India, Communications Today, etc.

c. Catalysing 5G in India Meet Brings the World Closer to 5G Deployment:

A post event press release was issued regarding the India Meeting of international experts on 'Catalysing 5G in India' on 27th March, 2018 organised by COAI in New Delhi.

d. COAI welcomes relief provided by Telecom Commission:

A press release was issued to welcome the decision by the Telecom Commission, to approve the Inter-Ministerial Committee's recommendations regarding the financial health of the telecom sector. The release was covered in major newswires and the leading financial dailies such as The Economic Times, Business Standard, etc.

e. Telecom sector provides seamless connectivity for FIFA U-17 World Cup 2017:

The Telecom Industry managed to put on-air over 59 critical sites for the tournament in six cities within a record time. Some of these cities also included permanent sites, MBTS, IBS. A press release was issued to disseminate the same information.

f. Monthly GSM Subscribers Report:

COAI shares the GSM subscriber base on a monthly basis with the media and updates the same on the web portal for the audience to access the same easily.

g. Statement on Aadhaar SIM verification:

COAI requested Unique Identification Authority of India (UIDAI) for more time to operationalize new modes like OTP for Aadhaar-based re-verification of mobile subscribers' SIMs. The deadline was December 1, 2017. The statement was covered by major financial and mainlines print publications like The Economic Times, The Financial Express, The Hindu etc.

h. Statement on Reduction of Per Port Transaction Charge:

COAI welcomed the decision of TRAI to reduce the MNP per port transaction charge to Rs. 4 for each successful porting request. The news was carried by major financial dailies such as The Hindu Business Line.

i. Statement on TRAI's consultation paper on the upcoming spectrum auction:

COAI stated that 2019 might be an appropriate time to auction 5G spectrum as there will be better use cases and applications for 5G, for which at least a year, or year and a half down the line is required. This will allow for a better understanding of value of 5G spectrum and the resultant price to bid.

j. Statement on SC's ruling on Right to Privacy:

COAI propagated its view that unless DoT releases clear instructions regarding the Right to Privacy, the historic order will not be powerful or fruitful in its impact.

Submissions 2017/18

1

Reduction of Regulatory levies

COAI requested the Government that SUC to be reduced to 1% to recover administrative cost and USOF to be brought down to 3% with the ultimate objective of doing away with the levy.

2

Right of Way (RoW)

COAI requested the Government that a clarification be issued that right of way charges collected by municipalities/panchayats are exempt from tax. This will also ensure that the tax is realized by the Government in a timely and organised manner without heaping any additional compliance burden on municipalities, panchayats etc.

3

Goods and Services Tax

We made various submissions and representations to the Government at various levels. We requested the Government for centralized registration.

4

National Digital Communications Policy

COAI highlighted several staatements to be added to the NDCP, 2018, on telecom and broadband penetration, licensing adn regulatory levies, spectrum management, and financial health of the industry, among others,.

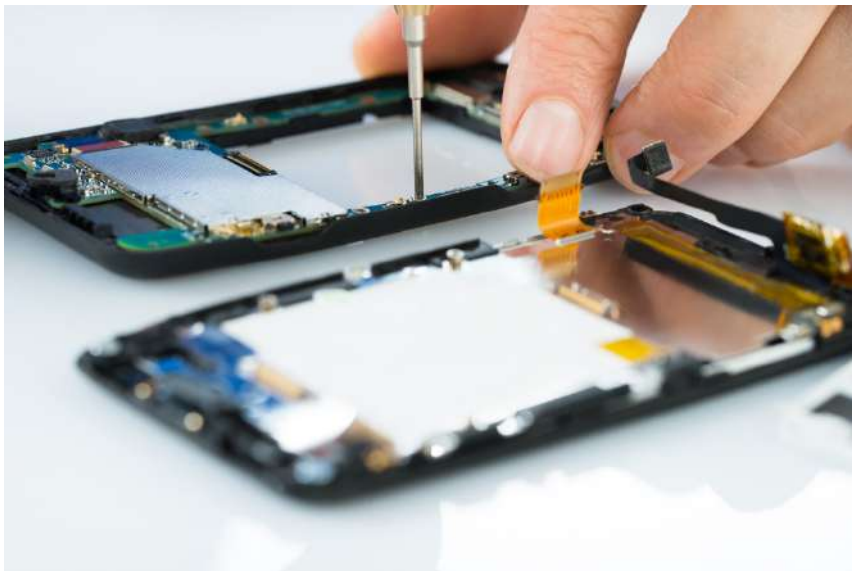
The submission for the year 2017-2018 are as follows:

1. Mandatory Testing of Telecom Equipment

The Government issued Gazette Notification mandating testing of all telecom and ICT equipment from Indian labs beginning from October 1, 2018.

COAI submitted that while the industry is moving towards an optimistic business climate given the uniform improvement in business conditions across the country, the proposed draft guidelines for "Mandatory Testing" of telecom equipment is surely going to adversely affect the entire telecom sector - an ecosystem that is already debt ridden, overburdened with regulatory & policy interventions and multiple government/ sectoral compliances including various other testing requirements. Based on requests from COAI, TEC formed various Committees for different types of Equipment to prepare Essential Requirements of testing for each type.

TEC organized meetings of the Mandatory Testing Consultative Forum (MATCOF) for various divisions for stakeholder inputs. Various meetings were held at TEC and attended by COAI and its members. The Essential Requirements are being finalized and inputs are being provided regularly. The team is working towards minimizing the burden of additional certification. TEC is inclined to accept international certificates for certain categories till March 1, 2019.



2. Re-verification of Mobile Subscribers based on Aadhaar e-KYC

DoT issued guidelines post an Order from the Supreme Court, for re-verification of all the existing subscribers through Aadhaar based e-KYC in one year's time. The TSPs started the process, however, there were many issues faced with UIDAI changing the process mid-way and introducing various features to make the system more robust. TSPs had to continuously work on updating their IT systems to meet the requirements.

DoT issued incremental guidelines including the issuance of e-KYC based re-verification for Foreigners, NRIs, Senior Citizens, Physically Challenged and IVRS based re-verification of subscribers having registered mobile numbers with Aadhaar on December 01, 2017. TSPs have started implementing these systems and the advertisement informing subscribers about the e-KYC re-verification facility was issued in English and Hindi in January this year. The Hon'ble Supreme Court has now extended the timeline for reverification of subscribers through Aadhaar based e-KYC till the pronouncement of the judgement.

3. TRAI Consultation Paper on Data Speed Under Various Wireless Plans dated June 1, 2017

COAI submitted that the concept of "minimum download speed" cannot exist in a multiple access scenario due to the technical problems of clutter, interference, fading, path losses etc. Further, the test results are taken from the controlled environment of a test/FTP server (Part of OPCOs network) by downloading/

uploading a file, whereas the customer accesses the internet/ http server in an entirely uncontrolled environment (No QoS guarantee).

Since the user's experience is dependent on mobility and cannot be restricted in a mobile scenario, it is technically not feasible for the TSPs to commit any pre-specified download speed to the customer.

The speed of the packet data is dependent on various factors such as number of subscribers browsing the data services, low coverage area, location of the customer, peak/off-peak time, kind of device being used, transmission bandwidth, external interference, spectrum/ carrier limitation, QOS based bill plan, external factors like availability of link between web server and the telecom network, availability of web server, Website behaviour, etc. These factors are dynamic in nature and service provider does not have any control over them.

TRAI released a White Paper on 'Measurement of Wireless Data Speeds' on February 5, 2018. The paper gives details of the test set up and methodologies adopted by TRAI for their MySpeed App. The key points of conclusion by TRAI are:

a. Measuring broadband speed is a complex process and the outcome depends upon both the test methodology and test conditions.

b. Inferences & interpretation of results of test results are to be done keeping in mind the purpose for which these test processes were designed and developed.

c. Wide variations during the individual test of speed measurement may sometimes be observed because of the state of network and the short time window of measurement. Individual user results in conjunction of results of network performance in areas of concern with tests conducted at the moment may provide a better picture of expected performance of broadband network.

d. For comparing the results from various speed measurement app providers, all such providers need to make available complete details of their methodologies and data processing in the public domain so that various stakeholders including users can better understand and interpret them.

e. Speed measurement at all-India level may need to be presented with spatial and temporal distributions across districts and across different times of the day instead of being presented with a single value.

f. Downloading throughput distribution graphs are highly asymmetric, it may require to be presented by five-point summary as depicted in a box plot instead of single value like mean or median.

4. Simplification of SACFA Procedures

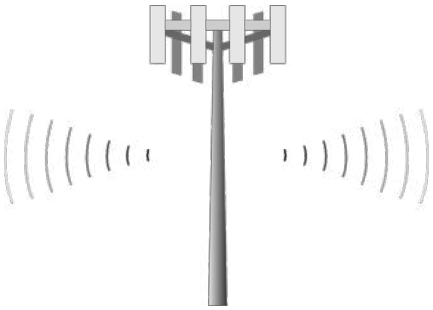
COAI submitted various representations to the Government regarding simplification of SACFA Application and Clearance Processes. It was submitted that although WPC has taken several initiatives in the past to streamline several processes, we are still facing several constraints on account of current SACFA applications and clearance procedures which are causing significant delays in the issuance of SACFA clearances of our telecom sites.

This subsequently hampers the timely operationalization of our telecom network. The representations also highlighted that the existing SACFA clearance processes were released more than a decade ago when the service providers were operating in 900/1800 MHz spectrum band and were providing 2G services only. Even post inception of other spectrum bands i.e. 2100 MHz, 2300 MHz etc. and new technologies i.e. 3G, 4G over the last few years, the same SACFA clearance processes are being followed without any review by WPC.

Also, the existing SACFA clearance procedures do not address the challenges pertaining to the changes in frequency allocations on account of various prevalent issues i.e. harmonization, spectrum trading, fresh spectrum auctions and merger and acquisitions etc.

5. Increase in RF Transmit Power

COAI made various submissions to DoT on the matter that a limitation of 20W in the case of 3G/LTE leads to limited coverage and capacity and, hence, an unsatisfactory user experience. It is, therefore, the need of the hour that the norms of transmit power per sector be revised, which will provide operators with the capability to optimize the network for better experience and lower congestion as well as mitigate the problems currently being faced regarding call drops. Going forward, this



will also help realize the Digital India and Smart Cities initiatives of the Government.

It was submitted that the radiated power from BTSs is already being governed via the EMF guidelines to ensure that radiation is kept well within the permissible limits and requested for the following:

a. For 3G/LTE, please allow a total transmit power of 80W per carrier per sector at the antenna input, irrespective of the number of ports.

b. For both 3G and 4G/LTE, the above-mentioned power shall be per carrier bandwidth of 5 MHz. This will ensure that the power/MHz in case of 3G/LTE is less than GSM (20W/carrier).

c. There shall be no further restrictions of EIRP on power radiated.

d. The transmit power being sought is the 'Peak Transmit' power. The actual power provisioned per site in the network will depend upon the network planning, which is governed by several factors such as traffic loading, clutter type, user distribution, site location, antenna height, etc.

e. The increase in transmit power will enhance the capacity in the 3G/4G networks. Hence, the same is required for optimum user experience and effective utilization of spectrum resources, thereby improving the spectral efficiency of the allocated spectrum.

It was also submitted that with the advancement of technology in future, there will be a need to review the transmit power on a regular basis.

6. TRAI Consultation Paper on Promoting Local Telecom Equipment Manufacturing Issued on September 18, 2017

COAI in its response submitted that making India a manufacturing hub, in the area of particular communications equipment manufacturing, has been a national priority, and one which the industry is fully cognizant and supportive of. Measures taken by the Government in furtherance of this goal have drawn interest and engagement from a major section of the industry.

For India to become a center for telecom equipment manufacturing, there are certain issues that need to be tackled realistically with the intention to make their goals translate to a pragmatic and actionable roadmap. The Government may look at holistically promoting the overall manufacturing ecosystem within the country which can be plugged into the

global supply chain.

It was emphasized that the Government needs to thoroughly analyse and then develop an actionable plan to promote local manufacturing in the country. It is important to note that even countries which are recognized as global manufacturing hubs are not present across the entire value chain. Hence no single country is wholly self-sufficient in such a technologically complex industry, including US, China, Japan, France, etc. Thus, there is a need to review the entire ecosystem and not make policies in silos.

7. TEC Test Procedure for Measurement of EMF from Base Station Antenna: Various industry submissions made to TEC Test Procedure for Measurement of EMF from Base Station Antenna during the DCC (Development Coordination Committee) meetings. Some of the points on which submission was made to TEC are as follows

a. Other Tenant Self-Certificate: There is a requirement of Self-Certificate submission for other TSPs in case of Upgrade by one of the TSPs on that site. This leads to enormous number of submissions on multiple Self-Certificates by each TSP containing same information about the Upgrade. The existing practice of submission of self-certificates by all sharing operators separately, for an upgrade, serves no additional

benefit since with the advent of the EMF Portal, the portal itself takes care of the reporting requirements to TERM Cells.

Therefore, it was submitted to remove this Other Tenant Self-Certificate requirement and submit such upgrade details in a summary on a monthly basis. This will simplify the reporting process and also reduce the immense overall burden on both the TERM Cells and the TSPs.

b. Signage: It has been submitted that there should be only a single signage board - CAUTION at the telecom tower site. The CAUTION signage is to be fixed at the entry point of roof of the building of BTS in case of RTT/RTP or on the tower structure in case of GBT. For BTS installed on self-supporting towers/GBM, the safety signage may be pasted around/install on the tower structure.

8. Submissions to International Telecommunications Union

COAI in its efforts to work with global bodies for advancement of telecom technologies, works closely with the Government to submit Inputs to ITU-R to identify additional spectrum for IMT technologies. As part of the same, COAI worked with the Government to submit Inputs to ITU-R Working Document on Proposal for Harmonization of 3300-3600 MHz Band.

India proposed that WP5D considers a revision to the unpaired frequency arrangement covering the frequency band 3300-3600 MHz so that complete 3300-3600 MHz band is considered as unpaired

frequency arrangement for TDD. This would avoid fragmentation of the band and would be very useful in the deployment of 5G technologies.

India being the second largest telecommunications market in the world also provided details of its mobile deployment in the country through a Working Document on National [approaches, best practices and/or] Experience of some countries in which certain frequency band(s) are allocated to mobile services and identified for IMT systems related to technical, operational and regulatory/ procedural aspects.

India National Experience on IMT deployment is submitted as part of the document mentioning that the spectrum bands for IMT services namely 700 MHz; 800 MHz; 900 MHz, 1800 MHz; 2100 MHz; 2300 MHz, 2500 MHz, 3300-3400 MHz and 3400-3600 MHz are available for telecom services in India.

9. Opening up of E&V Bands

Both E band and V band are understood to be unallocated in India, resulting in a key enabling infrastructural resource that can be used to achieve the vision of Digital India lying unutilized. In interest of maximum benefit to masses and millions of consumers in every nook & corner of India, and efficient usage of spectrum, COAI submitted to the DoT that these frequencies be opened up for allocation immediately.

A detailed proposal seeking allocation of specific blocks to a TSP in an organized manner was submitted to the DoT. The objectives to be achieved through the submitted proposal included Ease of interference management, Allocation based on /linked to holding of liberalized Access Spectrum, Flexibility of giving blocks used by a TSP to ISPs TSPs can't give blocks to ISPs. They can sell to ISPs a part of the capacity created (bandwidth) by their usage of the blocks and Harmonization to ensure contiguity of blocks.

10. TRAI consultation paper on network testing before commercial launch of services was issued on 1st May 2017.

COAI in its response to TRAI made the following submissions:

a. Under the current financial stress being faced by the telecom sector, COAI does not foresee any new player entering the telecom market; in fact COAI believes that the present market condition will result in consolidation, and as such, raising these issues from a future perspective may not be very relevant at this stage.

b. There is no grey area or ambiguity pertaining to the testing that requires clarity by way of this consultation.

c. Enrollment of subscribers is not permitted under license.

d. Testing is confined only to the networks and does not cover/ permit test subscribers.

e. Enrolment of subscribers in the testing phase is not allowed.

f. Only a reasonable number of test cards can be issued during the test phase.

g. On boarding subscribers on a so-called 'test network' may expose them to risks pertaining to inferior QoS, Security and Loss of privacy etc.

h. For any kind of network testing about 60 - 100 SIMs are sufficient.

i. Only 1 or 2 E1s have been and should continue to be sufficient to conduct the testing with other TSPs.

11. TRAI consultation paper on privacy, security and ownership of the data in the Telecom Sector was issued on 9th August 2017.

The key points highlighted by COAI in its response are as below:

a. It is strongly recommended that no exception should be made for any service provider, including the OTT communication service providers, while subjecting them to the rules to meet the national security and privacy norms.
b. Same service same rule should be established for similar service providers.

c. Currently, the other internet ecosystem stakeholders who use data access channel of the TSP to reach to the customer with their services, including similar voice and messaging services,

are not subject to the security restrictions imposed on the Telcos.

d. TSPs already have clauses in their licenses, which they have to abide by for providing access to public networks, which are comprehensive and sufficient for connectivity.

e. Such clauses, or as may be finally decided by the Government, should be applicable to all players in the ecosystem in a uniform manner.

12. TRAI draft telecommunication mobile number portability (seventh amendment) regulations, 2017 issued on 16th August 2017.

COAI in its response to TRAI made following the submissions:

a. At least 6 months will be required to implement the regulations for the member operators due to changes in multiple system applications like (Number Portability Gateway, Billing System, Collection System, Customer Relationship Management, Data Warehousing /MIS).

b. In case there is no actual porting taking place and there is only sharing of the information between the DO, MCH and RO, there should not any Per Port Transaction fee.

c. Per Port Transaction charge paid by the RO to MNPO as a deduction from the Gross Revenue for calculating the AGR for the purpose of the payment of license fee.

d. MNP Per Port Transaction Charge needs to be reduced.

e. SMS-based withdrawal of the porting request, through a short code, should be allowed.

f. MCH need to broadcast the reallocated number series.

g. Date of tele-verification should be considered as the date of activation.

h. Exemption of outstanding amount up to Rs. 50 for raising Non-payment Disconnection (NPD) requests.

13. TRAI "The Standards of service of basic telephone service (wireline) and cellular mobile telephone service (fifth amendment) regulations, 2017" issued on 18th August 2017.

COAI made various representations to TRAI on this issue making following the submissions & requests:

a. Amended QOS Regulations norms are unachievable and do not provide the basis for fixation of percentile values of DCR.

b. Large number of Low Call Volume (LCV) cells will be under the category of non-compliant cells for very few instances of dropped calls.

c. Cell Bouncing Busy Hour instead of Network Busy Hour is very restrictive.

d. Cells which have operated for only a few days in a quarter need to be excluded as part of right sampling exercise on percentile basis.

e. Regulations need to consider relevant factors due to which the call drop occurs.

f. Regulations need to consider dropped calls due to faults attributable to consumers.

COAI's Request:

a. CDR for LCV cells. i.e. having less than 200 calls in a busy hour should be treated as 0% for the complete assessment period.

b. TCBH should be used instead of CBBH for calculating CDR.

c. Cells which have operated for only A few days in a quarter need

to be excluded as part of right sampling exercise on percentile basis.

d. Regulations need to consider relevant factors due to which the call drop occurs, accordingly relaxation should be provided to the TSP w.r.t call drop benchmark.

14. TRAI consultation paper on auction of spectrum in 700 MHz, 800 MHz, 900 MHz, 1800 MHz, 2100 MHz, 2300 MHz, 2500 MHz, 3300-3400 MHz and 3400-3600 MHz bands issued on 28th August 2017.

COAI made the following submissions on the issue:

a. It is important to allocate harmonized spectrum in all bands after the completion of the auction and this exercise should be conducted well in advance so as to ensure timely allocation.

b. It is most desirable to make available contiguous blocks for auction.

c. The issue of interference in 2100 MHz is already in the TDSAT and the hon'ble committee appointed by the Ld. TDSAT has already recommended the swap of frequencies for interfering frequencies. Hence, the first priority has to be the swapping of spectrum for the existing spectrum.

d. Reduction of SUC charge to a uniform 1% of AGR across all Spectrum Bands.

e. With respect to spectrum pricing, the following submissions were made:

- Formulate future roadmap for spectrums.
- Adopt long-term perspective with respect to spectrum pricing i.e. have long term benefits in mind rather than short term benefits in terms of generating revenue from auction.
- Set modest reserve prices and,
- Release spectrum as soon as it is needed.

15. COAI submission to DoT on TRAI recommendations on spectrum, roaming and qos related requirements in machine-to-machine (M2M) communications issued on 5th september 2017.

COAI made the following request to the DoT on the said TRAI recommendations:

a. There is no need to introduce separate authorization within UL for M2M services as this will create market distortion.

b. Licensing is necessary for setting up networks for M2M services. UL (Access - Services) Authorization can be used by all entities to provide M2M Services.

c. If, at all, the Government intends to introduce separate authorization within UL for M2M Services, then it should have similar licensing conditions as that of UL-AS.

d. Spectrum should not be de-licensed, in the name of M2M, for providing the services which can become substitutes for the services being provided using licensed spectrum, to maintain a level playing field.

16. TRAI consultation paper on unsolicited commercial communication (UCC) issued on September 14, 2017.

COAI made the following submissions to TRAI on this subject:

a. TRAI needs to undertake a cost-benefit analysis before coming up with any new regulation on the UCC.

b. Operators have made all the efforts necessary and have considerably reduced their UCC complaints to a very low level and hence should not be penalized for the unwarranted actions of some subscribers. There should not be any financial disincentive levied on the operators.

c. Process of Registration or Change or Deregistration of Preference for UCC needs to be reduced. The following mechanism could be adopted by TRAI:

- TRAI to establish a central registry (NCPR) wherein the subscriber can directly register his/her preference w.r.t to UCC through a short code.
- The request of subscriber to be confirmed by TRAI within 24 hours after verifying the completeness and validity.
- All the TSPs & telemarketers are to be connected with the NCPR through an API,

to have real time update regarding the registration/ change/deregistration of the subscriber preferences.

d. Bulk registration should not be allowed.

e. In case of MNP, the customer preference in the NCPR should be retained i.e. there should not be any de-registration or re-registration of the preference during the time of porting.

f. It would not be technically feasible for segregating the calls into robo-calls, VoIP calls obnoxious, threatening calls etc.

g. The current registration process for telemarketers is sufficient.

h. While registration requirement for aggregators (akin to RTM) may be considered, such registration may not be mandated for content providers working through aggregators or other intermediaries.

i. New systems may be established for the purpose of header registration, execution and management of contract agreements among entities.

j. New system should be implemented comprehensively, from the beginning and it should be mandatory for every entity to participate in this system.

k. TRAI may replicate the process of 'Domain Name Registration', which is a well-established process in the Internet space, for the purpose of 'Header Assignment'.

l. TRAI can allot separate series for voice calls to manage alarming situations such as high transaction value, effective disaster management etc. This would give control to authorized entities and would also facilitate an easy identification by customers.

m. Current timelines for resolving the UCC complaints should be continued.

n. Structured and pre-validated inputs from complaints using mobile apps and web portals may be helpful to reduce the instances of rejection of complaints.

o. TRAI should not allow UCC complaint for non-DND customers, as this will create major junk in the complaint database, which will delay the resolution of complaints made by DND customers.

p. In order to enhance the signature solutions, all the TSPs need to collaborate and share the new patterns that are detected by them, so that the same may be applied by all the TSPs. This can be done through an automated process.

q. Artificial Intelligence (AI)-based solutions can be used to improve the performance of signature solutions.

r. Honeypots, which are dummy numbers but have characteristics of actual working numbers, may be created by the Access Providers in their network.

17. TRAI draft recommendations on ease of doing telecom business in India released on September 19, 2017.

COAI in its response to the TRAI, made the following submissions:

a. The current SACFA application fee and its structure need to be reviewed.

b. The DoT needs to seek periodic reports from telecom operators rather than requiring them to seek separate import licenses for all RF equipment.

c. If TRAI believes that there is need of import license for wireless equipment then we request TRAI to kindly recommend a timeline, e.g. 15 days, within which an import licence should be granted.

d. Validity period for an experimental license should not be more than 6 months i.e. validity period should be for 3 months and should be extendable by another 3 months.

e. The experimental license should be granted only under the following conditions:

- There should not be any interference with licensed frequencies.
- There should not be any commercial use with no test users.
- Also, the license should be taken as per Section 4 of Indian Telegraph Act.

f. TRAI needs to recommend to the DoT to issue a clarification regarding the methodology being followed by service providers to declare the subscriber numbers on the basis of revenue generating subscribers.

g. TSPs should be allowed to dispose of their network equipment on commercial terms to licensed TSPs.

h. Permit national roaming to prepaid customers in J&K.

i. Continuation of prepaid services in the telecom circles of J&K, Assam and North East.

j. Submission of separate board resolutions and power of attorneys.

k. Introduction of M Bill, enabling replacement of hard copy of mobile bill as default option for postpaid subscribers.

l. Simplification under the current process of taking prior approval for Remote Access (RA).

m. Introduction of a system of LFDS.

n. Doing away with multiple audits.

o. Increase in RF transmit power from BTS

p. Authority should be granted to TERM/WMO wings for seizure/ confiscation of illegal Repeaters, Boosters, Jammers and faulty/ leaky cable TV equipment causing interference

q. Restrictions on fiber deployment needs to be removed

18. TRAI consultation paper on in flight connectivity (ifc) issued on 29th september 2017.

COAI made following submissions on this issue:

a. TRAI needs to consider the Air -to- Ground (A2G)-based

solutions for the IFC in addition to the satellite-based solutions as A2G communications is best suited for the continental fleets (within a land mass).

b. A2G communications has a major advantage over the satellite-based IFC as it is more affordable, incurs low equipment cost, has a quick installation time, and offers low cost per Mb, low latency etc.

c. The Government may consider allowing both Internet services and the Mobile Communication services as in-flight services.

d. Global standards of AES/ESIM should be mandated for the provisions of AMSS in the Indian airspace, in case the in-flight connectivity is being provided through satellite communication, while 3GPP Standards to be used for A2G based solutions.

e. MCA should only be allowed to be provided at a minimum of 3000 meters above ground level, in order to address the issue of interference with the terrestrial cellular mobile network.

f. Unified Licensee having authorisation for Access Service should be permitted to provide IFC services in the Indian airspace in airlines registered in India. There is no need for any separate category of IFC service provider under the Unified Licence to be provisioned.

g. IFC solutions should comply with similar quality and security standards as defined for terrestrial mobile services.

h. IFC operations in the domestic & international flights be permitted only through the INSAT system (including foreign satellite system leased through DOS) in the Indian airspace.

i. In case of A2G-based IFC, no such provisions are required as the same is provided by using the bands used for the terrestrial mobile services.

j. IFC services should be allowed over the licensed spectrum bands while maintaining the principles of spectrum and technology neutrality.

19. COAI submission to dot on trai recommendations on regulatory framework for internet telephony issued on 24th October 2017.

COAI made the following submissions and request

to DoT on the said TRAI Recommendations:

a. Allowing unrestricted Internet telephony in an un-tethered manner is not permitted under license and the Indian Telegraph Act, where the underlying network is a key pre-requisite for providing the service.

b. Untethered Internet telephony poses a huge risk to national security on account of the fact that Internet telephony operators have no control over the underlying bearer network.

c. Such a service, besides being legally impermissible, distorts the competition, and poses a threat to huge investments made by the TSPs in their network and spectrum.

d. Any recommendations for making unrestricted Internet telephony, as un-tethered from the underlying access network will not only require an amendment of license but also of the Indian Telegraph Act. Hence, such a consideration needs a detailed deliberation with all stakeholders in order to ensure fair competition in the sector and also to ensure that the existing investments made by the access providers are protected.

e. Thus, TRAI's Recommendations on 'Internet Telephony' should be outrightly rejected by the DoT.

20. TRAI draft "the telecommunication mobile number portability per port transaction charge and dipping charge (amendment) regulations, 2017" issued on 18th December 2017.

COAI made the following submission on the issue:

a. Per Port Transaction charge should be revised to Rs. 2.00 per transaction.

b. The excess recovery of Rs. 155 Cr for the current financial year (FY18) should be used to facilitate the future porting requests free of cost.

c. In case of closure of services where the subscribers of a TSP are forced to opt for MNP, the PPTC should be waived.

d. To allow the Per Port Transaction charge paid by the RO to MNPO as a deduction from the Gross Revenue for calculating the AGR for the purpose of the payment of license fee.

21. TRAI consultation paper on making ict accessible for persons with disabilities issued on 20th December 2017.

COAI made the following submissions to TRAI on this subject:

a. Industry is committed to working with the authority for ensuring that ICT services are easily accessible to Person with Disabilities (PWDs).

b. Other than the ITU-recognised disabilities, there are some other disabilities too which are prevalent in the world today such as invisible disabilities, psychological disorders, spinal cord injuries etc.

c. Various challenges faced by PWDs for accessing telecom services are as below:

- Written health promotion messages with barriers that prevent people with vision impairments from receiving the message.

- Auditory health messages may be inaccessible to people with hearing impairments.

d. The Government should design holistic policy measures in consultation with TSPs, OEMs/ ODMs, DTH operators and other stakeholders for setting up a 'common code' with an objective to offer benefits of ICT services.

e. Cost of allocation of ICT services to the lower section of the PWDs to be reduced in order to increase the access of these services by them. The lower the cost of accessing these services, the more the users.

f. The initiative to PWD to be part of CSR activities under the Companies Act.

g. Telecommunications products are designed to be accessible to individuals with a broad range of disabilities.

h. Third party bill management, enabling a nominated friend or relative to act on behalf of someone who needs help to manage their affairs, is one of the measures suggested by the industry.

i. There is no requirement for mandating accessibility of devices used for watching television provided through cable, satellite/DTH, fibre, etc. to PwDs.

j. Mobile phones should adhere to web accessibility standards such as WCAG 2.0.

k. There is no requirement for mandating international accessibility standards for telecommunication and broadcasting services. Industry is providing accessibility of such devices from time to time in tandem with technological development.

l. People with Disabilities should be provided mobile handsets with features/operating systems which are easily accessible for them. The industry believes in universal design principles.

m. TSPs are utilizing CSR funds for carrying many activities in respect to creating awareness about the use of ICT accessibility tools and all such activities should be a part of CSR activities under the Companies Act. Therefore, the industry believes that there is no need to mandate to fund any campaigns by utilizing CSR funds.

n. TRAI through positive policy change should incentivize manufacturing and development of ICT tools and devices viz. tools for mobile accessibility, TV accessibility or for web accessibility for PWDs.

22. TRAI issued "The telecommunication interconnection regulations, 2018" on 2nd January 2018.

COAI made the following requests to TRAI:

a. Implementation of regulations in respect of capacity utilization and increase (Regulation 8 & 9) be implemented from 1 July 2018.

b. Additional demands of ports and augmentations of the same should be left between the operators and any such regulatory mandate will only cause inefficient use of time and resources of the operators without yielding any fruitful results.

c. Framework for provisioning of ports within 21 days should be restored to the earlier prescribed 90 days period, as per the previous regulation, which was reasonable and took into consideration all the above-mentioned aspects.

d. The present interconnect agreements require the operators to provide a forecast in writing in advance for its requirements of port capacity for the next 6 months to enable the other party to dimension the required capacity in its network. The said provision should remain a part of the mutually agreed interconnect agreements.

23. TRAI consultation paper on "Inputs for formulation of National Digital Communications Policy- 2018" issued on 3rd January 2018.

COAI highlighted the following statements to be added in the NDCP:

a. Telecom and Broadband penetration: Work to enhance broadband penetration in the country to 70% by 2020.

b. Licensing and Regulatory Issues: Simplify the licensing conditions on the lines of harmonized and equal policies for competing technologies, ensure that all the licensed telecom services are provided under a license, and resolution of long pending issues is expedited.

c. Spectrum Management: Long term roadmap for timely allocation of spectrum for cellular technologies (IMT) and for backhaul. No delicensing of spectrum within a band which has already been identified or is being considered for IMT. To ensure spectrum harmonization.

d. Return Industry to Financial Health By:

- Reduction of Spectrum Usage Charge to 1% across all the bands.
- Rationalization of telecom levies such as USOF charge, license fee.
- Alignment of payment schedule for spectrum debt to match time-period of spectrum usage of 20 years and reducing the interest rate charged on the deferred

spectrum payments.

e. Telecom Infrastructure and RoW: Formation and execution of enabling uniform policies for enhancement of telecom infrastructure in the country. Ensure the implementation of these polices by all the state governments.

f. Ease of Doing Business: To promote ease of doing business in the telecom sector by enacting enabling policies.

g. Research and Development to promote manufacturing and IPR: To promote domestic manufacturing by way of enabling polices such as setting up of an enabling ecosystem.

h. Skill Development: To promote skill development in the telecom sector.

i. New Technologies: Create an enabling platform for the adoption of future technologies such as M2M/IoT, 5G etc. while ensuring that licensed telecom services are provided under a license only. Government to maintain technology neutrality.

j. Security: Ensure network security while minimizing compliance and cost burden.

k. Privacy: Ensure privacy of citizens while enabling a digital revolution in the country.

l. OTT Play: To formulate a legal framework for ensuring that all OTT Communication service providers comply with the key security requirements, so as to ensure national security, user security, privacy and confidentiality of user information, support in disaster management and emergency call services and other issues of national and consumer interest

m. Net Neutrality: The core principles of net neutrality should be to promote the investments in the telecom infrastructure and facilitate future applications by giving operators the requisite flexibility to innovate.

n. Consumer Protection: Support the current system of consumer complaint redressal mechanism and aid in making it more robust. Explore the possibility of migrating towards the system of Self-Regulation with respect to QoS standards.

o. Disaster Management: Standard Operating Procedure (SoP) prepared for the Disaster Management by the DoT will be updated based on the recent technological developments. The efforts and contribution of the Industry will be recognized by the Government and the appropriate relief will be provided to the Industry/TSPs.

24. TRAI issued "THE telecommunication interconnection usage charges (fourteenth amendment) regulations, 2018" on 12TH January 2018.

COAI made the following submissions and requests to the TRAI on the Regulation:

a. Reduction in the International Termination Charge (ITC) is neither in the interest of service providers nor in the interest of consumers and it doesn't promote the growth of the sector. Hence, the reduction in the ITC is contrary to the objectives for which TRAI has been established.

b. Reduction in the ITC would adversely impact the profitability of Indian telecom operators as basis the current termination charge, Indian operators' share on the total tariffs charged, for the outbound calls to India in the foreign countries, will just be a miniscule percentage

c. Keeping the Indian ITC at a level far short of that prevailing in other countries effectively means that domestic consumers are subsidizing their foreign counterparts; and this is abundantly clear from the adverse international incoming-outgoing calls ratio.

d. Grey Market Concerns is the wrong argument by TRAI to support the reduction in the ITC.

e. Reduction in the International Termination Charge will put the Indian TSPs at a great disadvantage as they will end up paying even more to the international carriers for outgoing international calls and the country will lose more foreign exchange. This sharp reduction in the ITC is thus also against the national interest.

f. An increase in the International Termination Rate to at least Re.1/- per minute will:

- Help reduce pricing arbitrage currently existing in favour of

foreign operators.
- Enhance foreign exchange earnings of India.
- Higher earnings for the Government exchequer on account of high license fees and other increased government levies.
- Additional funds for the creation of rural infrastructure and an enabler to provide affordable tariffs to Indian subscribers.

Thus, TRAI is requested to increase the ITC from Rs. 0.53 per minute to Rs. 1.00 per minute in the near term and thereafter to Rs. 3-3.50 per minute in a phased manner.

25. Goods and Services tax (GST)

Various representations were sent to the Advisory Group of Law Review Committee, Revenue Secretary and to concerned senior officers of the Ministry of Finance and to DoT on the rate of GST for telecom service and for centralised registration. We highlighted key challenges which are faced in state-wise GST registration framework and again requested for Centralised registration for the Telcom Industry.

We made various submissions and representations to the Government at various levels. Telecom is today one of the most critical infrastructure providing sectors. It acts not only as a communication link across the country but also a backbone for the Digital India campaign. The following two GST related issues are critical for smooth functioning of this important sector of the economy, and we seek GST Law Review Committee's intervention in getting these issues resolved in the ongoing review of GST law.

We informed the Government that the Telecom services are already highly regulated and provide to over a billion customers across 22 licence areas or circles that India is divided into as per the telecom licence rules. Under the GST system, the jurisdictions are as per the geographic state and UTs. This leads to overlaps between states and circles and has resulted in the deployment of additional manpower and significant time taken in remaining compliant with both systems.

There are also a number of tax uncertainties and increased costs that have cropped up due to the multiple assessments and audits and cascading impact of taxes on account of credit blockages without yielding any incremental revenue for the Government; ease of doing business is also badly impacted. The millions of transactions carried by the telcos daily also indicate the requirement for additional IT and filing systems which are also an added expense and are time-consuming investment/initiative. We requested the Government for centralized registration.

While telecom services are essential services, the sector does not receive the benefits of that category. Telecom, being an essential service as per the Essential Services Management Act, has been allotted a higher standard rate of tax of 18% GST – Higher than the current 15%. Singapore has a GST rate of only 7% on Telecom Services, Malaysia of 6% and Australia of 10%. Given the adverse financial health of the sector, we requested the Government to consider lowering the GST for telecom to be same as that of essential services.

We informed that Government that Telecom towers are a necessity for Telecom operators for provision of services. Despite towers being essential for rendering telecom service, GST law seems to bar credit on Telecom towers. This would result in cascading and increased cost of rendering telecom services. Not providing credit for input to an industry where the revenue is fully subject to GST, flies in the face of all rationale. Moreover, credit is being denied on largest part of input cost. We requested the Government that the same be revisited and be made available for Input Tax Credit.

Apart from the rate of tax and the centralised registration, representations were also made with regard to Taxability of Right of Way/Right of Use granted by local bodies and Value of self-supplies etc.

DoT agrees for setting up a committee to look into the issues related to alignment of definition of circles with the states.

26. Extension of time in filing GST returns

In the course of undertaking

the compliance activity, there were challenges that were encountered while filing GSTR-1. Further, these challenges were persisting despite version upgrade made by GSTN.

In this regard, we made various representations to the Government and to the revenue secretary. Our requests were accepted and the timeline for submission of returns were extended by the Government.

27. Right of Way (RoW)

For laying of the optical fibre, TSPs need permission from government departments such as CPWD, railways and local bodies incl. municipal committees, gram panchayats etc. These bodies charge certain fees by way of raising demand note as per the agreed/approved rates, for granting the RoW.

No tax was being discharged by local bodies from the beginning as they considered is the tax to be related to land and buildings on which they have exclusive taxation powers, and that income of state government/local bodies cannot be subject to union taxes. A clarification was/should be issued that right of way charges collected by municipalities/ panchayats are exempt from tax. MoF (Service tax/GST) initiated investigations against a few municipal corporations in different states asking them to pay service tax on right of way charges collected by them.

These local bodies/authorities are approaching TSPs for reimbursing service tax payable over the last five years along with interest and penalty. Earlier TSPs have regularly been requesting the local bodies to pay tax since input tax credits were available to TSPs. However, many local bodies were obstinately sticking to their stand of not paying service tax on these charges.

We requested the Government that a clarification be issued that right of way charges collected by municipalities/panchayats are exempt from tax. This will also ensure that the tax is realized by the Government in a timely and organised manner without heaping any additional compliance burden on municipalities, panchayats etc.

28. Non-applicability of section 206AA of the Income-tax Act, 1961 ('Act') where the deductee furnishes Aadhaar number to the deductor

Section 206AA of the Act provides for levy of higher withholding tax rate of 20% where the deductee does not furnish his PAN to the deductor and causes significant hardship to the deductees, particularly to individuals in low income groups and rural areas, who do not have a PAN. AADHAAR number has been recognised as a valid means of identification and is also being used as an effective means to keep a record of the transactions undertaken by a person.

Representations were made before the Government to amend the provisions of section 206AA of the Act to provide for non-applicability section 206AA of the Act where the deductee furnishes his Aadhaar number to the deductor.

29. Introduction of a scheme for allowing an assessee to furnish a self-declaration to the deductors for tax deduction at source at a lower rate, based on self-estimation of total income.

The Income-tax Act, 1961 ('Act') provides for recovery of income-tax payable by an assessee in respect of total income of a previous year by way of advance tax (paid by the assessee) or tax deduction at source (by the deductor) at the specified rate (ranging from 1% to 10%) on the nature of income/payments covered by the relevant section.

Section 197 of the Act, provides for issuance of a Nil or lower withholding certificate by the Assessing Officer (on an application made by the assessee) authorizing the deductors to deduct tax at source at Nil or lower rate, as specified in such certificates. Additionally, section 197A of the Act also provides for submission of a self-declaration by the assessee (in Form 15G and 15H) to the deductors, basis which the deductors can pay the income/payments, of the nature covered under section 197A of the Act, without deduction of tax at source thereon.

We requested the Government for the introduction of a self-assessment mechanism for determination of the rate by the recipient of income ("assessee")

at which tax may be deducted at source ('TDS') by the payers of such income ("deductor").

Under the proposed mechanism, the assessee shall estimate the TDS rate basis the self-assessment of income and tax liability for the year and furnish a self-declaration to the deductor authorizing him to deduct tax at such rate. The scheme shall reduce administrative burden on the tax department in processing lower withholding applications and also remove the hardship faced by the assessees owing to tax deduction at higher rates. The said mechanism shall also reduce the quantum of refunds claimed by the assessees and interest that becomes payable by the Government to the assessees on such refunds.

30. Pre and Post Budget Recommendations.

Representations made with regard to key issues related to Direct and Indirect Taxes sent to MoF, DoT, CII, FICCI, ASSOCHAM, etc. Certain key points represented are as follows.

a) Reduction of Regulatory levies

Since the value of spectrum is being recovered upfront through auctions, there should be no Spectrum Usage Charge (SUC).

If at all, the SUC is to be levied, it should be a uniform rate of 1% of Adjusted Gross Revenue across all spectrum bands, so as to only recover the administrative costs. USO contribution be immediately brought down to 3%, with an ultimate objective of doing away with the levy in next 2-3 years in line with TRAI recommendations. The interest rate on the spectrum repayment instalment should be reduced.

We requested the Government that SUC to be reduced to 1% to recover administrative cost and USOF to be brought down to 3% with the ultimate objective of doing away with the levy.

b) Formation of TFC and Allow Tax Free bonds

We requested the Government to establish Telecom Finance Corporation /Infrastructure Bank to provide loans at preferred rates to Telecom Companies. Telecom/telecom infrastructure industry should be allowed to issue tax free bonds to reduce the overall cost of capital and mobilize cheaper funds & thereby help achieve the national vision of a connected India. Further, the telecom/ telecom infrastructure industry should also be made eligible for access to long term low cost debt for infrastructure projects to be provided by Infrastructure Debt Funds (IDFs).

We requested the Government to Setup Telecom Finance Corporation Allow issuing of tax free bonds.

c) Customs duty on 4G LTE network equipment and other telecom Equipment

COAI is constantly engaging and raising relevant issues with the Government to work towards a conducive policy environment. This is a critical time which also gives an opportunity to the Government to take some bold steps like the Vajpayee Government through this budget and examine a holistic tax environment for the sector.

The telcos are preparing to roll-out 5G technology-based communications services and need an easier business environment to encourage investment apart from reduced pressure on the balance sheets. One of the most important requests we have made is that the Government re-introduce the customs duty exemption on 4G LTE network equipment import.

The Government has withdrawn customs duty exemptions on telecom equipment at a crucial time when India is all set for the next explosion of growth of telecom, driven by data.

We informed the Government that the telecom sector is the biggest supporter of indigenous manufacturing. However, until quality products at competitive prices are made available, we requested the Government to re-introduce the customs duty exemption on imports of 4G LTE network equipment and other telecom equipment.

d) Lower withholding tax rate to 1% on discount extended to pre-paid distributors from the present rate of 5%

Telecom companies transfer prepaid talk time (in the form of physical vouchers and electronic top-up, representing 'right to receive prepaid

services') to independent distributors at a discount, who further sell the same to retailers and/ or subscribers. Since the distributors do not act as an agent of the telecom companies, such discount does not qualify as 'commission' for the purposes of section 194H of the Income-tax Act 1961 ('IT Act') and therefore this discount should not be subject to TDS. The tax authorities have adopted a contrary position and a clarification may be issued on the same. Also, since the telecom companies do not make any payment/ credit towards the discount allowed to the distributors, section 194H of the Act cannot be applied. These are extremely small vendors with low margins, further in order to promote ease of doing business a lower withholding tax of 1% is requested.

We requested the MoF that a lower withholding tax rate of 1% be prescribed on discount extended by telecom companies to pre-paid distributors (including sub-distributors/ retailers) by introduction of a new section to this effect.

e) Reduction of Basic Customs Duty (BCD) rates as applicable on import of
Telecommunication Equipment
Telecom and Broadband Industry plays a unique role in the Indian economy today. This industry is undergoing extreme financial distress including challenges such as fierce competition and consistent capital influx requirement for technological upgradation. Setting up of telecommunication network requires a variety of high-end technical equipment embedded with the latest technology. Digital India is largely dependent on affordability and ubiquitous availability of the telecom services.

We request the Government to withdraw/reduce BCD on telecom equipment including imported telephones for cellular or wireless networks. The withdrawal/reduction would make telecom services affordable and facilitate fast digitization of the economy as well as the proliferation of telecom services in rural and remote areas to achieve the 'Digital India' mission.

f) Incentivizing Optical Fibre Manufacturing in India

The Optical Fibre industry is an integral part of Digital India. We requested the Government that Fibre Action Task Force be created with inter-ministerial participation. We also recommended that Government should create an Optical Fibre Market Development Fund to incentivise R&D and create a facilitative ecosystem. Key demands included Import Duty Exemption on key raw materials used in manufacturing optical fibre, Optical Fibre cables, and a reduction in the GST rate for OF and OFC to 12% and progressively reduce it to 5%.

g) Clarification regarding applicability of section 32 of the Act to spectrum acquired prior to April 1, 2016; capitalisation of all capital expenditure upto the date of putting to use the acquired spectrum under section 35ABA (for spectrum acquired post March 31, 2016;

Section 35ABA (applicable from FY 2016-17) of the Income Tax Act would apply only to expenditure incurred on acquisition of 'right to use spectrum' acquired on or after April 1, 2016 and expenditure incurred towards 'right to use spectrum', which was acquired on or before 31 March 2016, would continue to be governed by section 32 of the Income Tax Act 1961.

h) Clarification to provide that royalty provisions under section 9(1)(vi) of the Act are not applicable to service agreements and Explanation 5 and 6 to section 9(1)(vi) of the Act cannot be read into the Double Taxation Avoidance Agreements ('DTAAs')

Explanations 5 and 6 to section 9(1)(vi), inserted w.r.e.f. 01.06.1976, intend to bring within the purview of royalty, transmission by satellite, cable, optic fibre, or similar technology; and also, use of equipment irrespective of any actual possession or control by the user.

Payment made for anything which is widely available in the open market to all those willing to pay cannot constitute 'royalty' and is essentially in the nature of business income. Further, use of its own equipment/process by service provider to provide service cannot be viewed as use of such equipment/process by the recipient.

Representations were made before the Government to clarify that the retrospective amendment is not applicable on the transactions which were entered into before the amendment which is in line with the policy of the Government.

31. Assessment of License Fees and simplification of the related access verification process

We had various interactions with the DoT at various levels. Such interactions helped in standardization and simplification in the assessment process. These interactions have allowed the various stakeholders involved in the deduction verification process to share views, brainstorm, in an open and transparent manner which has led to possible solutions which addresses the common concerns of both the parties. These interactions have facilitated the issuance of various important clarifications by DoT HQ which have helped in standardizing the assessment process to a very large extent.

This standardization in the assessment process has allowed the TSPs to align themselves to the requirements of DoT and ensure due compliance. At the same time, it has also provided a framework to the DoT field offices within which they can function while also allowing them the desired flexibility to function.

We have requested DoT to move towards further automation including online submission of documents, etc. We made representations and had various interactions with DoT to discuss the following:

- Eliminate the duplication of efforts at both the ends i.e. the DoT/CCAs and TSPs.

- Improved quality of work and reduction of paper work.

- Reduction in the overall turnaround time taken in the completion of the audit/ verification

32. Online submission of documents with regard to deduction and verification

Although, DoT has allowed for making online payment of LF and SUC, the physical documents are still required to be submitted at the CCA office on or before the due date.
We have requested DoT that this requirement of submission of documents in physical form must be relaxed and the submission of these documents over email or by uploading on a portal should be allowed. On need basis, these documents can also be sent.

33. Uniformity in LF and SUC payouts

As per the existing guidelines, the License Fees is paid at the end of the quarter on the basis of actual revenue earned during the quarter, whereas Spectrum Usage Charge is paid in advance at the beginning of the quarter on the basis of the estimated revenue to be earned during the forthcoming quarter.

Due to this advance payment of SUC, there will always be either an excess or a shortfall while making the payment as compared to the actual Spectrum Usage Charge dues determined at the end of the quarter basis the actual revenue earned by TSPs. This excess/shortfall in payout is then adjusted by TSPs at the time of making the payment for the subsequent quarters. The payment of Spectrum Usage Charge for each quarter comprises of two components; first is the advance for the current quarter and the second is the adjustment made for the previous quarter.

Submissions were made to the DoT for bringing the Uniformity in the LF and SUC payouts highlighting that since the basis of paying the Licence Fee and Spectrum Usage charge is the same i.e. Gross Revenue/ Adjusted Gross Revenue, it would be appropriate that the timing of payment of Spectrum Usage Charge dues are also made at par with the Licence Fee and should be allowed to be made after the end of the quarter once the actual revenue earned is known and determined.

Such a uniform approach will also ease the process of payment, reconciliation and subsequent assessment.


Building a Digital Future
One Connection at a Time

Legal Updates 2016/17

1. COAI SLP Against Rajasthan High Court Judgment On Tower Removal: Supreme Court

Background: Special Leave Petitions were filed by COAI in the Supreme Court against the Rajasthan High Court judgment and order dated 27.11.2012. On January 21, 2013, the Hon'ble Supreme Court extended the time for compliance with respect to hospitals and colleges for a period of three weeks. The Hon'ble Court was pleased to extend the timelines on various subsequent dates.

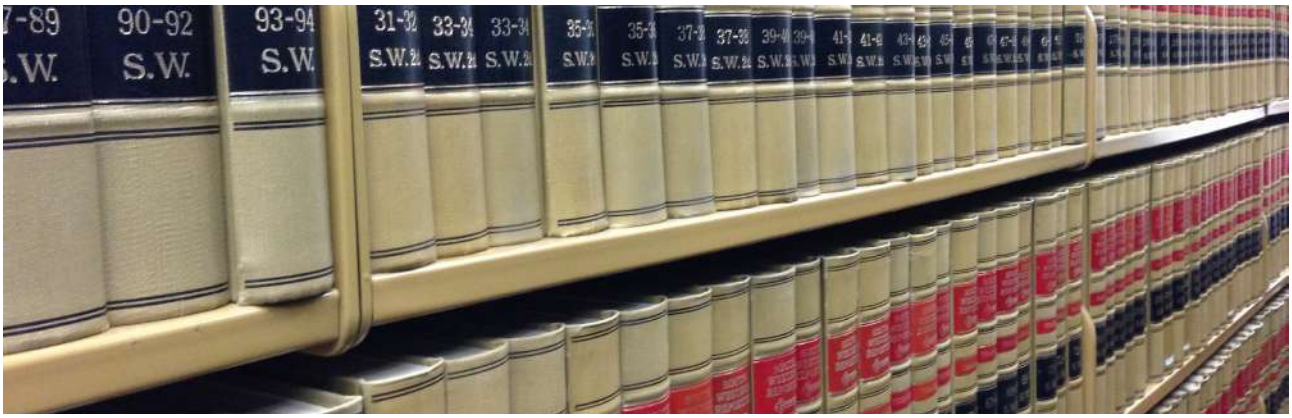
Key Takeaway/s: On May 19, 2017, COAI filed an interim application seeking stay of the Rajasthan State Government Executive Order dated 09.05.2017, directing removal of the cell towers within 500 meters of the jail premises. On May 29, 2017, the Hon'ble Supreme Court restrained the Rajasthan State Government from removing or sealing the cell towers within 500 meters of the jail premises.

2. MCD Tower Petition: Delhi High Court

Background: COAI, AUSPI and MTNL had filed a writ challenging MCD orders and praying inter alia quashing of MCD Office order dated 20.11.2003, circular dated 07.02.2008 and office order dated 08.04.2010, as these impugned office orders and the impugned terms and conditions are lacking in competence, ultra vires the DMC Act, and are unfair, unjust, unreasonable, arbitrary, without power and jurisdiction, unconstitutional and are in violation of petitioners' rights under Article 14, 19(1) (g) and 21 of the Constitution of India.

On January 30, 2017, a mediation settlement agreement with the MCD was signed by Aircel, Airtel, Idea, Vodafone, RJio, Indus, ATC Viom, GTL Infra and Tower Vision.

Key Takeaway/s: On August 28, 2017, the Hon'ble High Court held that the mediation settlement agreement shall be binding on the signatories of the agreement, and accordingly



disposed of the MCD's appeal (LPA No. 572/2011) qua the parties who signed the aforesaid agreement. However, the LPA is pending qua parties who did not participate in the mediation process and will be taken up for consideration on the next date of hearing.

3. Petition On SUC Calculation By CCAs For 5 Mhz Radio Spectrum In 2100 Mhz Band: TDSAT

Background: A petition was filed by COAI challenging the demand letters from CCAs whereby DoT has wrongly rejected the Telecom Service Provider's (TSP) calculation of Spectrum Usage Charges (SUC) for 5 MHz Radio Spectrum in 2100 MHz band, which is incorrect, unreasonable, and in violation of DoT's own letters, NIA conditions dated 25.02.2010, TSPs' contractual rights and their rights under Articles 14, 19 (1) (g) and 21 of the Constitution.

Key Takeaway/s: On November 09, 2017, an application was filed by COAI challenging demands raised by CCA, Gujarat Circle, whereby SUC at the rate of 5% was charged on operators having standalone 3G spectrum in 2100 MHz band. On November 13, 2017, the Hon'ble TDSAT heard the application and directed the DoT to abstain from taking any coercive steps for realization of impugned demands.

4. Petition Challenging Penalty Imposed For Missing North Direction And Missing Measurement Value At Ground Level: TDSAT

Background: A petition was filed challenging the demand notices issued by the DoT, whereby the DoT has wrongly levied penalty on alleged grounds that the "North" direction was not marked in the site layout and calculation of Equivalent Isotropic Radiated Power (Eirpth) and broadband measurement on the ground for Roof Top Towers (RTT) were not calculated, which is unfair, unjust, unreasonable, unwarranted, arbitrary, and in violation of the terms of the Licence Agreement/ contract between the Cellular Operators and the Government and otherwise illegal.

Key Takeaway/s: On February 21, 2018, the Hon'ble TDSAT directed the parties to deposit the penalty amount with respect to missing the measurement values for ground, apart from values on four corners of terrace/roof top within two weeks and granted interim relief qua the demand notices imposing penalty on the missing of the North direction in site layout.

5. Petition challenging BSNL Circulars on Infrastructure Charges

Background: A petition was filed challenging the validity of Circulars by which the BSNL has revised the Infrastructure and Space Charges for Active Links of Licensed Telecom Service Providers. BSNL has sought to bring back the same charges as were sought to be levied by it in terms of its Circular dated 12.06.2012, which was set-aside by the Hon'ble TDSAT by way of its Judgment dated 20.08.2014

Key Takeaway/s: On May 08, 2018, Hon'ble TDSAT directed BSNL not to take any coercive steps for realization of demands raised in terms of BSNL Circular dated 19.02.2018. The Tribunal also directed the parties to complete pleadings in the matter within 2 weeks to expedite final hearing in the matter.

India Mobile Congress

India's biggest, first-ever mobile, telecom and technology conclave and exhibition that brought together industry stalwarts, the policy makers and all other relevant stakeholders under one roof.

01 Mr. Manoj Sinha
Minister of State (Independent Charge) for Communications, Minister of State for Railways Government of India

"We believe the annual IMC event is fast emerging as a "must attend" for global Leaders from Industry, Government and Academia and a great platform to highlight the innovation, investments, and initiatives of companies, both in India and globally."

02 MR. MUKESH AMBANI
CHAIRMAN
RELIANCE INDUSTRIES LTD.

"Today is a proud day for all of us to be at the first India Mobile Congress. An event, I believe, signals that India is one of the biggest telecom and digital markets in the world. The IMC will soon become a must attend global event."

"The first edition of India Mobile Congress brings the global ICT community along with thought leaders, academia, policy makers and emerging businesses under one umbrella. I hope it will provide an opportunity to all stakeholders to create a platform to showcase innovative ideas, skills, technologies and products."

~Ms. Aruna Sundarajan

Secretary (T) & Chairperson, Telecom Commission
Department of Telecommunications
Government of India

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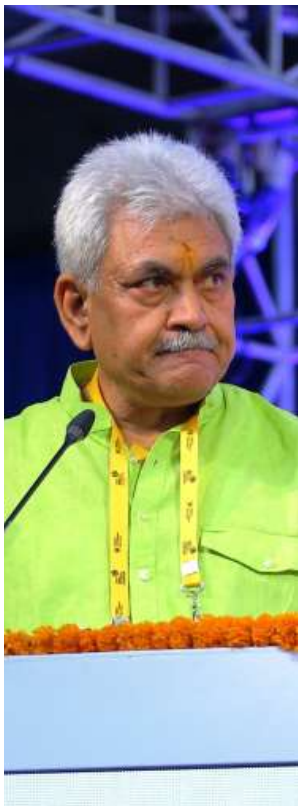


03 MR. SUNIL BHARTI MITTAL CHAIRMAN BHARTI ENTERPRISES

"I am glad that finally, India has its own telecom congress which was long overdue. The first edition that has started today will grow in size and stature to become the world showpiece in the area of mobile & technology."

04 VITTORIO COLAO CHIEF EXECUTIVE OF VODAFONE GROUP PLC

"I am sure you will have good discussions today at the IMC, this will lead to very positive outcomes that will enhance the health and the stature of the industry, which is important for unlocking the potential of the sector"

Mobile phones are the most popular and widespread form of personal technology, with 3.6 billion unique mobile subscribers and 7.2 billion connections globally. Mobile communications profoundly impact every facet of society, from helping people communicate through to providing access to services such as education, healthcare and financial services. The mobile internet is ushering in the next wave of social and economic growth.

It took 22 years to connect two billion people to the internet. Over the next few years, that number will be more than double as the global internet population swells to over four billion. With rapid growth and geographical benefits, India is marking its way towards a digital revolution. With Mobile, Internet and Technology industries contributing a whopping 6.5% to the National GDP and bringing $141.22 billion worth investments and creating 2.2 million jobs, the world is looking at India as a potential market.

To realize the Government's vision of a Digital and Connected India, the Indian Telecom industry will work as an eager and equal partner to develop resources, infrastructure and to boost

quality of service. This would form an imperative agenda to utilize all available resources in order to drive the growth of broadband, eventually leading to connectivity for the next one billion.

The Department of Telecommunications (DoT), Government of India, along with COAI instituted the India Mobile Congress (IMC), a first of its kind, Mobile, Internet and Technology event in India. India Mobile Congress 2017 (IMC 2017) aimed at "Connecting the Next Billion through Mobile, Internet, and Technology". The India Mobile Congress platform comprises of an exhibition, a conference and awards in a single, unique and distinctive global platform in South Asia.

The event was attended by more than 2,000 delegates, 32,000 visitors, 150 Speakers, 100+ Exhibitors and 100 start-ups.

The first IMC was held in New Delhi in September 2017. Hon'ble Minister Shri Manoj Sinha, Ministry of Communication (Department of Telecommunications), inaugurated the event as Chief Guest in the presence of Guest of Honour Shri Ravi Shankar Prasad, Hon'ble Minister of Electronics and Information Technology and Law and Justice, Hon'ble Minister Mr. Dharmendra Pradhan (Minister of Petroleum and Natural Gas) and Mr. Satish Mahana (Minister of Industrial Development), Government of Uttar Pradesh. The senior dignitaries from the Government also included Smt. Aruna Sundararajan, Secretary (T) & Chairperson, Telecom Commission, Department of Telecommunications and Mr. N. Shivasailam, Special Secretary, Department of Telecommunications.

The inauguration ceremony

was graced with the presence of senior industry leaders and key sponsors including Mr. Sunil Bharti Mittal, Founder & Chairman, Bharti Enterprises, Mr. Mukesh Ambani, Chairman, Reliance Industries Limited and Mr. Vittorio Amedeo Colao, Chief Executive Officer, Vodafone Group (joined through video call), Mr. Rajan Anandan, Managing Director, Google India and other industry champions.

IMC 2017 also saw an engaging CEO Conclave, with Mr. Gopal Vittal, CEO & MD, Bharti Airtel India & South Asia; Mr. Himanshu Kapania, MD, Idea Cellular Ltd.; Mr. Sunil Sood, MD & CEO, Vodafone India; Mr. Mathew Oommen, President, Reliance Jio; Mr. Karan Bajwa, Managing Director, IBM India and Mr. Binny Bansal, CEO & Co-Founder, Flipkart.

The 3-day event included a conclave, an exhibition and an awards ceremony, and also had thematic pavilions and innovation zones, spread across 15,000 square meters, featuring

300 exhibitors from ICT, TMT as well as the Government sector, Embassies and States.

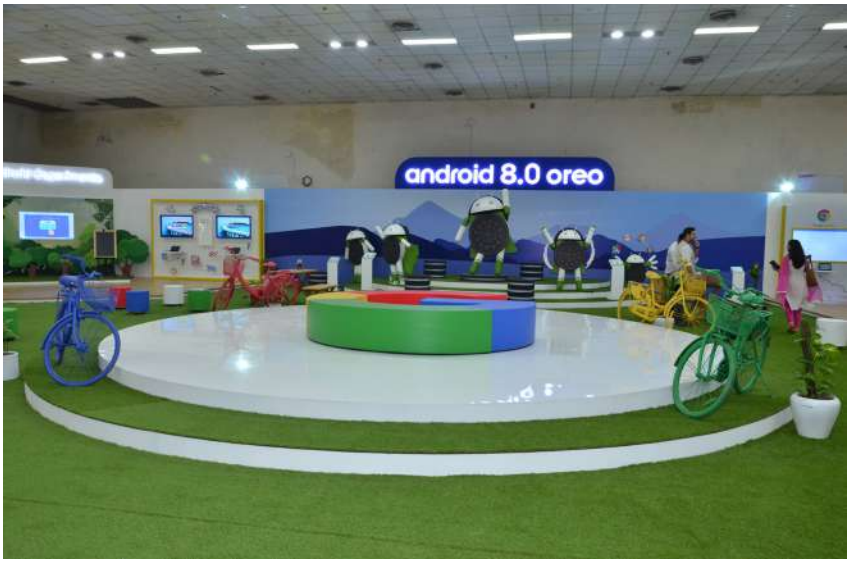
The IMC Conference comprised of over 20 sessions with 152 speakers, and 12 keynotes by industry leaders such as Shri Piyush Goyal, Hon'ble Minister for Railways; Mr. Alex Rogers, EVP, Qualcomm; Mr. Nunizio Mirtilo, SVP, Ericsson; Shri A. S. Kiran Kumar, Chairman, ISRO; Mr. Steve Alexander, Technology Officer, Ciena Networks; Mr. Akhil Gupta, Vice Chairman, Bharti Group; Dr. Alexander Evans, Deputy High Commissioner, UK; Dr. Anand Agarwal, CEO, Sterlite Tech; Mr. Arvind Gupta, Inventor, Digital India Foundation; Mr. Umang Das, Chief Mentor, ATC India and other stalwarts.

The sessions were based on focus areas such as "Digital India", "Internet Governance", "Smart Network: The future of networking", "Digital Identity for Digital World", "Women in Tech", "Emerging Technologies in a 5G Future", "Cloud & Virtualization", "Digital Infrastructure towards the Digital Economy" and many others. The sessions were followed by two startup pitches.

The IMC-Deloitte report was also released at IMC 2017. The report highlighted challenges in connecting the next billion of the Indian population to the worldwide web and an immense opportunity for India. The report also addressed Net Neutrality as a continuous area of debate, and why it is critical for the regulator to take a holistic approach towards it before it defines its approach - principle-based/ prescriptive; ex-ante/ex-post, etc.

Similarly, it is deemed important to define the regulatory guidelines towards new emerging technologies which are giving rise to new use cases, while arguing for a stable regulatory. The report also covered topics such as Smart Cities, smart health, smart money, smart energy and smart agriculture.

The IMC 2017 Exhibition featured more than 100+ exhibitors from ICT, TMT, government sector, emabssies, states etc., who showcased



new innovations, products & services launches, disruptive technologies, experience zones, country pavilions and much more.

The IMC Recognition Awards, powered by Mahindra Comviva and Deloitte as the knowledge partner, were also awarded at IMC 2017, to major organizations, mainly for their exemplary contribution to the TMT & ICT sectors.

The IMC Recognition Awards were categorized into 3 segments. The first category was for Start-ups using technology to connect the next billion. The award was given to Dirghadhi technology, Tagbox Solutions Private Limited and InFeedo Private Limited.

The second award category was in recognition of organisations that have provided the nation with technology to bridge the digital divide and have become tributes to nation building. This was won by Defence Research Development Organization (DRDO), Indian Space Research Organization (ISRO) and Unique Identification Authority of India (UIDAI).

The winner for the Gadget of the Year was Samsung for its Note 8 and Samsung Pen while the App of the year award went to Paytm. The Social Media channel of the Year was given away to Instagram

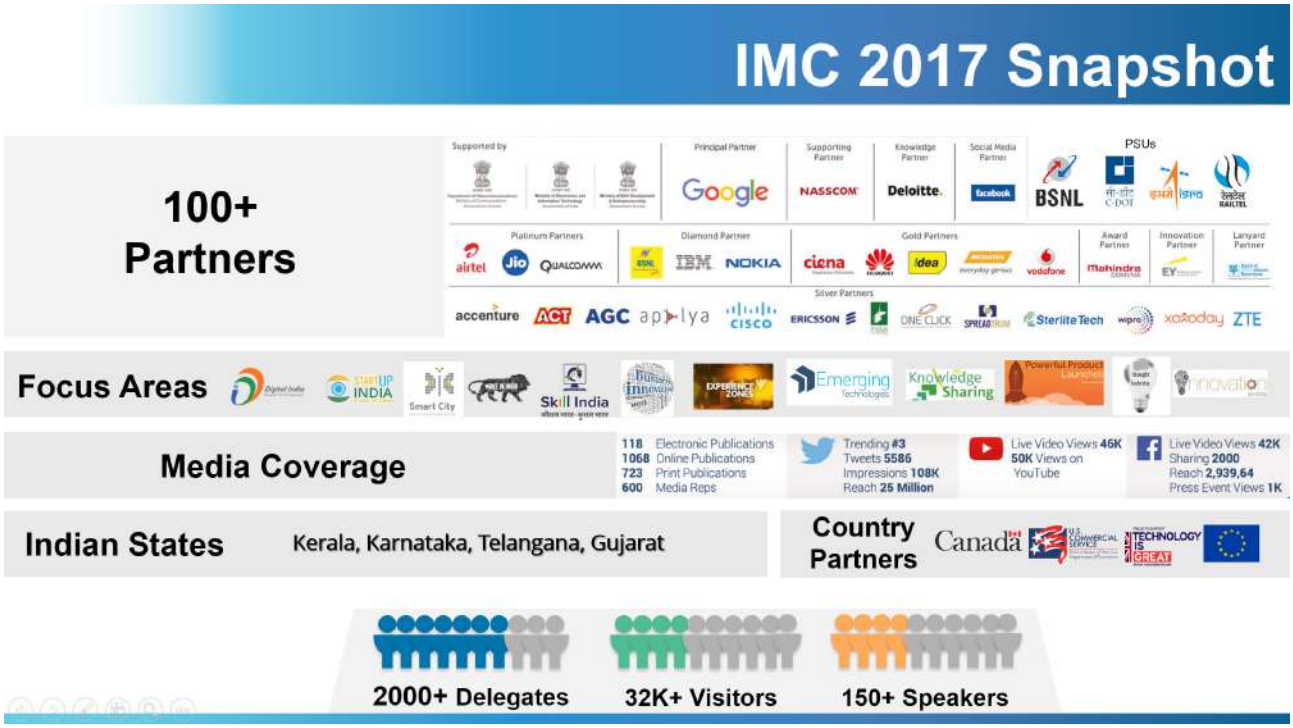
and the Tech innovation of the year award was bagged by HTC Vive and LG OLED.

The Department of Telecommunications (DoT), Government of India along with COAI are pleased to announce the second edition of India Mobile Congress (IMC), to be held on October 25 - 27, 2018 at New Delhi.

IMC 2018, is envisaged to be an even bigger event with its theme "New Digital Horizons Connect, Create, Innovate". It is aimed at forging lasting Industry relationships, showcasing cutting-edge mobile technology & product trends, providing the right platform to present sectoral insights and policy recommendations.

The platform will see a greater International presence with over 10 Partner Countries, 100+ Global Speakers, 300+ Exhibitors, 1,000+ International Media & 100,000+ visitors. Key highlights of IMC 2018, are expected to be the International Telecom Ministerial Conclave with ministers from the ASEAN & BIMSTEC nations; the launch of 1000 apps from the IMC platform and the Global CEOs Conclave.

More information is available at: ***www.indiamobilecongress.com***



Media Advocacy & Stakeholder Outreach

COAI had been making concerted efforts to foster media advocacy to prepare the ground for a stable and all-encompassing regulatory and policy environment that nurtures innovation and investments. COAI's stance on all key policy announcements strengthened its thought leadership position amongst influencers and relevant stakeholders. Regular media outreach programs directed towards establishing COAI as a brand that voices telecom industry's opinion has borne positive results.

In accordance with the EC mandate, COAI's responsibility as the industry thought leader is to engage synergically with ministries, policy legislatures, regulators, financial institutions and technical bodies. COAI's consistent efforts aimed at fortifying the industry' s overarching significance has led it to create grounds for discussions, deliberations and exchange of ideas between the operators, the Government and the consumers, raising issue-specific concerns, making timely interventions and building third party advocates.

The industry body has learly underscored the key concerns, adversely affecting the Telecom sector, especially its financial health. COAI has established its reputation of being an approachable association with expertise in all aspects of telecom and the Internet, which can offer analytical insights about the industry and its myriad ramifications. The media fraternity perceives COAI as the first stop for all queries related to the industry, ranging from new technologies, to issues such as call drops. The industry body's judgement on all sectorial forecasts as well as regulatory policy issues are considered paramount.

Regulations related to call drops,industryconsolidations, 5G and National Digital Communications Policy 2018 were some of the most significant topics covered extensively by the media. The association reached out to all the relevant stakeholders including the

media, the Government and the consumers, educating and updating them through news articles.

The major intercessions were pivoted around the dire need for a level playing field and a well-entrenched policy ecosystem.

Another area that the association proactively talked about over the last year was EMF emissions from mobile towers. COAI addressed this issue by engaging with various stakeholders and played an instrumental role in negating myths pertaining to harmful effects of mobile towers.

Collectively with other stakeholders, COAI reached out to people at the ground level and engaged with the concerned Government departments, media, RWAs, medical professionals, academia and consumer representatives, in order to impart knowledge nd generate awareness regarding the issue.

Such endeavours paved the way in getting important stakeholders to realise that the Government has laid out adequate safety mechanisms on this and how the industry was playing its role as responsible corporate citizens.

Significant Activities Wherein Coai Achieved Widespread Media Attention

Budget Recommendation for the financial year 2018-19

COAI submitted its recommendations for the Union Budget for FY 2018-19 to the Ministry of Finance, Government of India, on behalf of its members. Top demands included reduction in extremely high and unsustainable levies & taxes, reduction in BCD on 4G LTE Equipment, clarity on Right of Way related taxation at the state level, & clarification on lowering the tax rate to 1% on discounts extended to small dealers.

Media Visibility On Year-Ending Stories

As the year was ending, it was imperative to highlight the overall changes in the policy ecosystem and how the year was for the sector. Through opinion pieces and media interactions, COAI was able to highlight the current financial health and the policies directly impacting it. The coverage was garnered in The Economic Times, The New Indian Express, and The Hindu Business Line, among others.

Media Visibility On The Financial Health Of The Telecom Sector

Given the financial health of the sector, COAI through media advocacy highlighted how the telecom industry earnings are expected to remain under pressure for another 3-4 quarters. It also highlighted that a report by the Telecom Regulatory Authority of India (TRAI) noted that the gross revenue of telecom services

providers fell by 8.1%.

Impressions in media were generated in leading publications including The Times of India and The Financial Express, in addition to leading online news portals such as ETTelecom.com and Bloombergquint.com.

Advocacy for GST Rates

The Government has allowed input credit, which brings the effective taxation level down to around 17%, but this is still higher than what the industry can handle at this time.

Telecom is an essential service and should ideally all under the 5% GST slab. COAI through the media engagement on the topic, raised the concern. An authored article appeared in the leading financial online news portal, ETTelecom.com.

Third Party Advocacy on EMF Emission

With the growing concerns over the detrimental effects on health due to the radiation from the telecom towers, there was a need to direct efforts towards mitigating the growing fear by dispelling myths pertaining to the issue.

Editorial meetings helped in ensuring that the influencers were aware of the facts. Additionally, advocacy through a credible third party was necessary to ensure that it was known that the mobile towers are safe.

Advocacy through authored articles by a credible voice in the industry explaining the details of the matter were carried in leading regional print publications and major online portals such as Businessworld.com, Livemint.

com, etc.

Bloggers Meet

COAI organized bloggers meet to share information and clear their doubts on various topics related to telecom sector. The objective of the event was to understand the sentiments of the digital influencers towards telecom and various issues pertaining to the telecom operators. The discussion included the topics like financial health, 4G, roll out plan of 5G and price points of services provided by various telecom operators.

Knowledge Series

The objective of the Knowledge Series was to educate & update media on important and technical issues of the telecom sector. Three rounds of Knowledge Series were conducted by COAI in last one year and the initiative was

well received and deemed a helpful initiative and a positive step by the media. The various topics covered during the Knowledge Series: call drops, financial distress, spectrum allocation, IUC and the National Digital Communications Policy 2018.

On the basis of the information and data shared during the Knowledge Series, stories were done by media in leading publications where COAI's messaging was widely carried.

The regular Knowledge Series has established COAI as a thought leader in the telecom industry and with the Knoweldge Series initiative taking off, several new journalists attended each time.

National Digital Communications Policy 2018

In March, the National Digital Communications Policy 2018 was an eagerly awaited document. COAI, being an industry representative, shared its views on the upcoming policy, and how it was an opportunity to bring about the much needed policy changes.

The first draft of the National Digital Communications Policy 2018, was released on May 01, 2018. Given the impact that this policy will have on the telecom sector, it was imperative that COAI, the industry body for telecom, emerge as a thought-leader and interpret the policy for all stakeholders. To facilitate this, media interactions were conducted with financial and mainline newspapers as well as electronic channels and online portals.

Additionally, an authored article by Mr. Rajan S Mathews, Director General, COAI, appeared in the editorial section of The Economic Times, successfully communicating an overall industry perspective on the National Digital Communications Policy.

Events Participation

1. ITU at Bricks 2017: Mr. Rajan S Mathews, DG COAI attended the event and highlighted the

NATIONAL DIGITAL COMMUNICATIONS POLICY 2018

Say Hello to the Connected Future

Rajan S Mathews

Despite tariffs being one of the lowest in the world and taxes and levies being one of the highest, India's telecom sector just about maintains profitability. It even attracts the highest quantum of FDI to the country. But India has always been a little behind when it comes to adopting new technologies.

With the draft of the National Telecom Policy (NTP) 2018 — National Digital Communications Policy (NDCP) 2018 — made public by the department of telecom on Tuesday evening, the country is ready for the next generation of communications technologies such as 5G, artificial intelligence (AI), machine-to-machine communications (M2M), Internet of Things (IoT), Cloud computing, automation, augmented reality and virtual reality (VR). The path to Digital India has now been laid.

Unfortunately, over the last few years, the telecom sector has been experiencing financial distress with debt rising to unmanageable levels, while margins dwindle due to hyper-competition and rising costs. The sector's cumulative debt stands at around ₹7.64 lakh crore, while the overall revenue has fallen to less than ₹2 lakh crore. Sector employment is at an all-time low, with two operators on the verge of the bankruptcy. The time has come for some fundamental changes in the sector. NDCP 2018 gives hope and directive focus to the sector and all its stakeholders.

Traditionally, NTP documents have acted as framework ones, defining the direction for telecom policy to take with the evolving environment. So far, there have been four telecom policies: NTP 1994, NTP 1999, Broadband Policy 2004 and NTP 2012. Each one came at the opportune time and can be considered the reason behind the sector's success over the last 20 years.

The message is loud and clear

For every 10% increase in broadband penetration in the country, GDP increases by 1%. The telecom sector is already contributing 6% to GDP, and NDCP 2018 has set a target of increasing it to 8% in the coming years. The policy has the potential to redefine the way future technologies are deployed and firmly plant India as a major player in the knowledge revolution.

By setting a target of attracting investments to the tune of $100 billion and addressing the critical issue of rationalisation of taxes and levies, GoI has focused on the long-term sustainability of the telecom sector, while also giving it the ability to invest in new technologies and services and ushering in a new era of communications. Currently, India's telcos pay more than 30% of their revenues in taxes, such as GST, and levies, such as spectrum usage charges and licence fees. Globally, this number is close to 10%. GoI is expected to rationalise it to that figure.

If all goes well, 2022 will be a watershed year. NDCP 2018 has set some very high but reasonable targets. If all the targets are achieved, India will no longer be seen as an emerging country. India will have universal broadband coverage at 50 Mbps to every citizen, 10 Gbps to all gram panchayats, 'unique mobile subscriber density' of 65 by 2022 and 10 million public Wi-Fi hotspots by 2022. The promise of creating four million new jobs is also a requisite target.

Then there is the treatment of spectrum. Defining spectrum as a natural resource, toward ensuring adequate availability, efficient usage and a transparent allocation method for service providers — while suggesting the adoption of optimal pricing to ensure sustainable and affordable access to digital communication — has got many in the Indian telecom sector optimistic again.

A notable aspect of the policy is the focus on securing the digital and cyber framework. This aspect is aimed at creating a comprehensive data protection system for digital communications that ensures the safety, privacy, autonomy and choice of citizens and encourages their participation in the global digital economy.

The new policy draft is one that signals that GoI is finally cognisant of the importance of the telecom sector and its contribution to the economy. The telecom sector has informed, educated, spread awareness, created jobs, saved lives, built relationships, nurtured bonds, spread knowledge, attracted investment and even helped develop the economy without taking much in return. Tariffs have always been one of the lowest in the world. The latest policy goes a long way to assure the sector that it can continue to do so.

The writer is director general, Cellular Operators Association of India (COAI)

NTP-18 TO ADDRESS
PENDING AND
FUTURE ISSUES

continuous and progressive development in the telecom industry. During the event, total reach achieved was 1,65,000 and total impressions generated were 2,80,000.

2. 4th IoT Summit, Bengaluru: The event focused on rapidly changing landscape driven by the emergence of the Internet of Things extending to widely accepted models such as cognitive computing, cloud computing, platforms, big data, analytics and much more. On the sidelines of the event, by executing one-on-one media interactions between

DG COAI and Deccan Herald and Vijay Karnataka, regional outreach was explored. This resulted in both the publications carrying the interviews.

3. India M2M+IoT Forum: The event is the annual national forum on machine-to-machine (M2M) and Internet of Things (IoT) technologies, being developed under the larger information communication technology (ICT) umbrella. It is one of the signature events for marketing 'Brand India' to the entire ICT eco-system across the world. During the India Smart Cities

Forum, COAI was live on Facebook and Twitter. Live amplification helped achieve a total reach of 3,32,000 and total impressions garnered were 12,32,000.

4. Industry Interaction with the Estonian Minister and Entrepreneur: COAI facilitated industry interaction with the ministerial delegation from Estonia, led by Ms. Urve Palo, Minister of Entrepreneurship & IT, Govt. of Estonia, along with select Estonian startups in the Fintech, Mobility, Analytics, IoT, Smart Cities solutions, e-Governance and Cyber Security domains. The meeting helped representatives exchange their skills and expertise for achieving inclusive

technological growth. During the meeting, COAI posted live updates on Facebook and Twitter. Live amplification helped achieve a total reach of 2,40,000 and total impressions garnered were 11,25,000.

5. ET India Mobile Conclave: The annual forum was held to bring together top officials from

the Government and the regulatory authority along with the heads of industry to discuss the paradigm shift and the challenges confronting the sector. This year the focus was on the New Telecom Policy which could facilitate new revenue opportunities and ensure a more consistent regulatory framework. During the event, live updates were posted on Twitter and Facebook.

Live amplification helped achieve a total reach of 6,30,000 and total impressions garnered were 40,00,000.

6. Catalysing 5G launch in India: In a bid to create awareness about India's capability to launch 5G technology-based services at the same time as the rest of the world, COAI, hosted the meeting of international experts, telecom experts and standardizing authorities. The meetings were held in Chennai and Delhi with the theme 'Catalysing 5G in India'. More than 200 impressions were

garnered across traditional media, including print publications, online portals and electronic media. Digital amplification helped achieve a total reach of 13,536 and total impressions garnered were 68,072 as well as the FB Live videos received 700+ views.

7. NDTV Tech Conclave: The event was a congregation of leaders from the technology, mobile and digital industries and witnessed participation from several Indian and global technology giants.

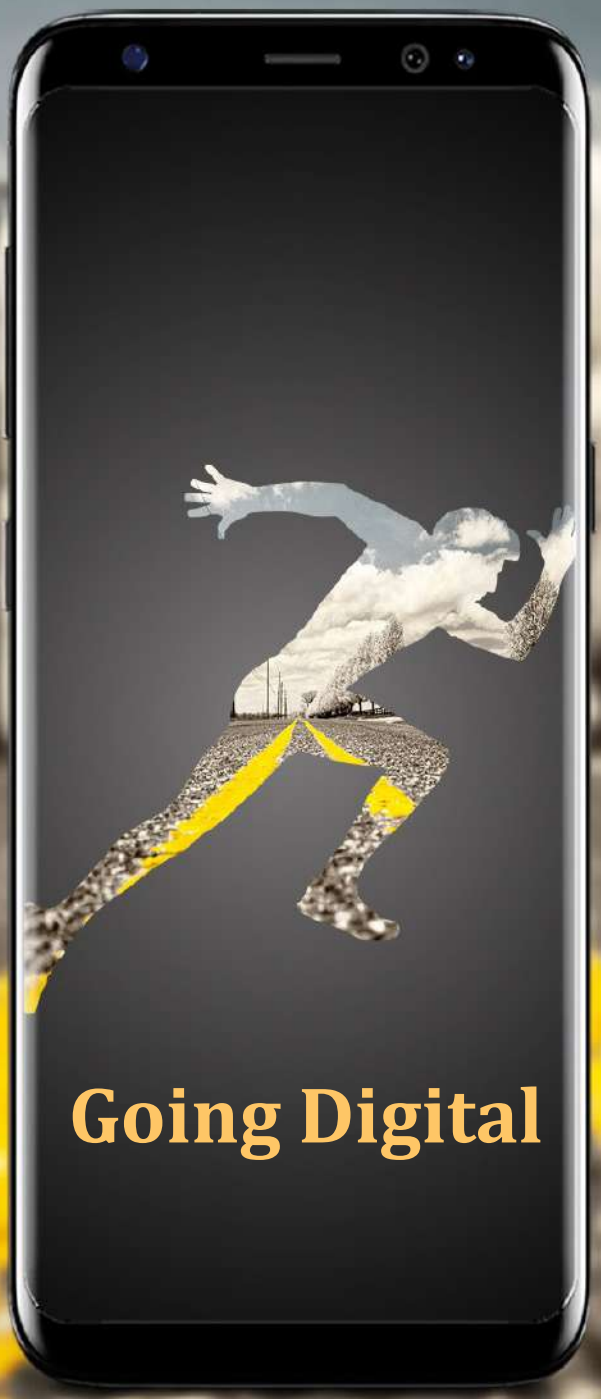
Digital amplification helped achieve a total reach of 24,000 and total impressions garnered were 1,62,000 as well as the FB Live videos received 200+ views.

8. 5G India Congress: The event was a platform for all stakeholders including network operators, the Government & technology providers to come together and discuss 5G development for next generation communications in India. Digital amplification helped achieve a total reach of 7,500 and total impressions garnered were 45,000.

9. Mobile World Congress 2018:

Mobile World Congress, one of the largest events for the mobile industry, incorporated a thought-leadership conference that featured prominent executives representing mobile operators, device manufacturers, technology providers, vendors and content owners from across the world. Representatives from COAI joined the discussion with officials and senior decision makers from both the Government as well as the corporate at the event. The deliberation and action points inferred from the meet were lucrative.

People, Places, Things



Going Digital

Telecom operators are providing India with world class infrastructure, the call drop problem has been managed

Rajan S Mathews

This is in response to the article 'Torrent of call drops makes Digital India sound like a joke. One answer: Segregate voice from data', authored by Sandip Sen (March 29, 2018). The author has wrongly blamed the country's leading telecom service providers as well as tower companies for high incidences of call drops and cited their lack of capital investments. It also offered unscientific and technologically implausible solutions to address this problem.

Telecom operators have, over the last few years, invested a hefty amount of over Rs 9 lakh crore to create a world class telecom infrastructure currently serving 1.15 billion subscribers in the country. In the last three years, the operators have added almost 10 lakh new base transceiver stations to cater to the requirement of subscribers.

Further to this, the sharing of telecom infrastructure is an Indian global best practice that has become a Harvard Business School case study. These companies … towers to provide "shared telecom infrastructure" to wireless telecom operators on a non-discriminatory basis.

The recently published Independent Drive Test Reports of Trai for the cities namely Indore, Nagpur, Mysore, Bhubaneshwar, Bhiwani, Kanpur, Kota, Patna, Raipur, Ranchi, have shown that the operators are in compliance with call drop rates benchmarked by the regulatory authority. This is quite evident from the press release of Trai while publishing these drive test reports.

The sharing of telecom infrastructure is an Indian global best practice that has become a Harvard Business School case study

It is pertinent to mention that all these recent reports of Trai are of the cities outside Delhi-NCR and major metros. This must be juxtaposed against the author's remark that call drop rates are higher outside Delhi-NCR. If that is the case, then call drop rates in …

… must be even better.

The author also opines that increase in data usage – for example with viral videos – affects the network's ability to manage call quality. However, voice traffic is not impacted by increase in messages/ videos sent over the OTT platform, as in the telecom networks there is a provision to ensure that voice traffic is not hampered by data traffic.

Separate channels are allocated to voice and data traffic so as to ensure that data does not impinge upon the quality of voice. Thus the author's comparison between data surges on the telecom network and electricity surges has no basis in fact whatsoever.

Call drop rates are being measured by Trai during the busiest hour of the day when the voice tariff surges and reaches its peak. Still, operators are meeting the benchmark or are close to meet the prescribed benchmark of Trai.

Moreover, load balancing, traffic management and the latest technologies utilising "Self Optimising Networks" (SON) have been deployed by telecom service providers to ensure that networks respond to subscriber demand in an optimal way.

Hence to indicate that towers are "switched off" suggests an inappropriate understanding about how tele…

Further, inadequate quality checks on devices, particularly dual SIM devices are a problem that merits urgent attention.

Telecom operators have been making humongous investments, both in terms of capital and intent, to create a world class telecom infrastructure in the country towards ensuring the country's dream of becoming a $4 billion digital economy by 2022. Despite facing pressing issues such as 'right of way', non-availability of electricity to run the base transceiver stations, myths around the towers emitting dangerous radiation, etc, operators have already demonstrated their ability to make committed and long term investments into the sector.

The article does disservice to an industry which has offered consumers the lowest tariffs in the world and continues to invest in the sector despite debilitating financial health and declining revenues, as many media reports attest. The industry has added over 3,50,000 base transceiver stations last year, taking the total to now over 17,00,000 stations across the country.

The writer is Director General, Cellular Operators Association of …

Telecom crisis needs urgent solutions

The sector's rising debt and falling revenues will impact broadband penetration and act as a drag on growth

RAJAN S MATHEWS

The Indian telecommunications sector can be considered one that has taken the country into the 21st century. In fact, if it wasn't for the post 1995 liberalisation, and the consequent entry of private telecom service providers, India would likely still be witnessing sub 1 per cent GDP growth rates, as opposed to the 6 per cent being witnessed over the last few years.

With more than a billion mobile phone subscribers, 40 per cent of which are accessing the Internet via their phones, this is only expected to go much higher. The sector contributed as much 6.25 per cent to the GDP, a number expected to go up to 8.2 per cent in another three years.

But despite this, the sector is currently facing its worst phase ever and needs the government to step in. The sector is currently finding it increasingly difficult to manage its cumulative debt of almost ₹5 lakh crore, with revenues of less than ₹ 1.8 lakh crore, and steadily falling. Much of the ambitious plans of the government like Digital India and Smart-cities are dependent on the sector and its sound financial health.

This is perhaps why the government formed the Inter-ministerial Group (IMG) to look into the deteriorating health of the telecom sector.

Bold, but not enough

This formation of the IMG was an acknowledgment, from the Government, that they were cognisant of the current crisis. The deliberations which began three months ago, took stock of the situation by meeting all the stakeholders, who recommended a number of short-term and long-term measures. The suggestions included lowering levies such as annual licence fee and spectrum usage charges (SUC) as well as the goods and service tax (GST) to a level apt for an essential service like telecom.

The telecom service providers pay as much as 30 per cent of their revenues in taxes and levies for spectrum and operating licences. Of this, around half was the tax component. Under the Goods and Service Tax regime (GST), this has gone up to 18 per cent, making the services more expensive at a time when it should have been reduced. Essential services have either got a nil GST rate or the lowest slab of 5 per cent.

While it looks like the IMG has made some bold recommendations — reportedly the panel has suggested the deferring of spectrum auction to the next fiscal, more time for payment of auctioned spectrum and a cut in interest rates. However, this may still not be enough.

The fact is these recommendations address only debt issues of the sector, not fundamental concerns. There is an immediate need for relief on licence fees and spectrum usage charges as recommended by the telecom regulator. Unless these issues are not resolved, the industry will continue to struggle financially.

The fact is money made from spectrum auctions should be seen as adequate and the annual charges should just be used to cover administrative expenses.

Green shoots?

Reportedly, the IMG is seeing green shoots of recovery in the sector. This is unfortunately not the case. Ratings agency, ICRA expects that sector revenues will fall 6 per cent this financial year and Ebitda will fall as much as 28 per cent. Debt is estimated to rise by another ₹ 20,000 crore. This, at a time when new 5G mobile technology based services like IoT and M2M are almost ready to be rolled out.

India's telecom tariffs are some of the lowest in the world with average revenues per user at $2.5, compared to Canada's $49.84 or $38.09 in the US or even $8.36 in China. The current hyper competition has left India's telecom service providers unable to raise tariffs. The service providers are also facing significant competition from over-the-top operators like WhatsApp, that don't pay anything to the government — in tax or levies.

Confused outlook Indian telecom needs more innovation and investment

On a sequential basis, the adjusted gross revenue (AGR or revenue after deducting what does not accrue to the telco, like service tax) fell by 11 per cent to ₹ 40,831 crore in January-March 2016-17 compared to ₹45,905 crore in October-December. On a year-on-year basis, the decline is steeper at 15.6 per cent. The industry had reported an AGR of ₹48,379 crore in Q4 FY16. Leaving out the AGR, the latest TRAI data shows that the industry's gross revenues for January-March quarter stood at ₹63,315 crore, a sequential decline of 4.84 per cent and a year-on-year fall of 7.35 per cent.

The fact is that there are enough precedents for the government to change the rules, as the context changes. In the late 90s when the sector was on the brink of collapse, much like today, then Prime Minister, Atal Bihari Vajpayee moved the sector from a fixed license fee model to a revenue share arrangement under the "public policy doctrine". While the changes needed now are not as drastic, there is an immediate and urgent need for them.

The need of the hour is for the government to see the sector as an essential service and not a revenue generator.

The importance of the sector is irrefutable. Deloitte, in a report on the economic impact of mobile phones, estimates that for a given level of mobile penetration, a 10 per cent substitution from 2G to 3G increases GDP per capita growth by 0.15 percentage points.

Similarly, doubling of data use leads to an increase in GDP per capita growth rate of 0.5 percentage points.

And further, a 10 per cent increase in penetration of increases total factor productivity in the long run by 4.2percentage points.

Money matters

Then there's also the fact that telecom is the second highest revenue earner for the government, after income tax.

The sector is expected to contribute as much as 90 per cent of the government's non-tax revenue.

Digital India programme is also almost completely dependent on the telecom sector. The roll-out of broadband and Internet services requires enormous investments to the tune of ₹2.5 lakh crore over the next 3-5 years for spectrum, technology, equipment and fibre-optics backbone.

The financial health of the telecom industry has to be safeguarded. Mobility services have brought significant changes to the lives of people.

Farmers and fishermen are able to get produce to markets better and secure better prices. The sector employs as many as 4 million people, more than half of which are indirectly employed.

What is needed is a regulatory environment which facilitates innovation and investment, and addresses the financial woes of the sector. The Government has to work with the sector rather than squeeze it for everything it's worth, in order to achieve a digitally empowered India.

The writer is the director general of Cellular Operators Association of India

ILLUSTRATION: ROHNIT PHORE

RAJAN S MATHEWS

Director-general, COAI

UNION BUDGET 2018-19

Losing connection with sound policy

High GST rate, withdrawal of customs duty exemptions on telecom equipment, right of way rules, etc, are crippling the already debt-ridden telecom sector. The govt must resolve these issues

THE TELECOM SECTOR CAN easily be considered the most essential sector in the country, as it remains the backbone of almost all other sectors. The sector is behind the increasing empowerment and macroeconomic growth that the country has been witnessing over the last two decades. Connected people means better livelihoods and richer lives. At the same time, the sector has also been left high and dry, largely ignored by the Union budget in the previous year.

Despite the fact that it is experiencing extreme financial distress, and the government has constituted the inter-ministerial group (IMG), little has actually come out of it in the form of substantive relief. Therefore, the budget remains critical for the sector to provide the much-needed urgent relief.

Almost every expert agrees with the GSMA's estimates that for every 10% penetration of telecom, the gross domestic product sees around 1% growth. The government is cognisant of the fact that the telecom sector can create the necessary ethos for the Prime Minister Narendra Modi's 'digital India' programme, which aims to connect every Indian with high-speed broadband and digitally empower them. For the plan to fructify, sound financial health of the sector is essential.

The telecom sector is currently struggling to manage a cumulative debt of almost ₹4.6 lakh crore on revenues that have fallen significantly to less than ₹2 lakh crore

The last few years have been brutal for the Indian telecom sector, which has not had a chance to recover, at all, from the hyper competition. It is currently struggling to manage a cumulative debt of almost ₹4.6 lakh crore on revenues that have fallen significantly to less than ₹2 lakh crore. The next phase of telecom needs significant investment to the tune of ₹3 lakh crore over the next two years, else the country stands to lose the critical momentum to become a global leader in the space and even bridge the digital divide. This is a critical time, which also gives an opportunity to the government to take some bold steps, like the Vajpayee government, through this budget and examine a holistic tax environment for the sector.

The telecom operators are preparing to roll out 5G technology-based communications services and need an easier business environment to encourage investment, apart from reduced pressure on the balance sheets. Most importantly, the government should re-introduce the customs duty exemption on 4G LTE network equipment import. The removal was introduced to promote domestic manufacturing. But the scale and quantity of equipment needed is not yet available, forcing the telcos to still pay the higher amount, without comparable domestic options. The key reason for the fast roll-out of networks, so far, was the customs duty exemption given earlier. The government has withdrawn customs duty exemptions on telecom equipment at a crucial time when India is all set for the next explosion of growth of telecom, driven by data. India cannot afford to lose out in the race of technological upgradation of the entire ecosystem, which is crucial for a robust digital economy. The telecom sector is the biggest supporter of indigenous manufacturing. However, until quality products at a competitive price are available, the government must rethink and review its stand.

Secondly, the right of way (RoW) rules were introduced to ease setting up of telecom infrastructure on public land. The rules lay down processes to be followed, and standardise rates that agencies like municipal bodies and gram panchayats can charge for the land use. These bodies don't pay tax on these charges, as that would amount to taxation of land and buildings on which they have exclusive taxation powers, and the income of state government/local bodies cannot be subjected to union taxes. However, the central government has started investigations against such local bodies to recover service tax on RoW charges and these authorities are, in turn, pressurising telecom companies to pay the tax with interest and penalty. Telecom service providers are getting penalised for no fault of theirs. This not only adds to the financial stress of the telcos, but also leads to increased numbers of cumbersome, lengthy and expensive litigation.

The COAI has also requested the government to look into the withholding tax applicable on SIM cards and prepaid vouchers sales. Currently, operators transfer usage rights of prepaid vouchers and SIM cards to independent distributors at a discount. These independent distributors further sell it to retailers or subscribers. The distributors are not agents of telcos and the discount is not a 'commission' under section 194H of the IT Act. Further, no payment or credit towards the discount allowed to the distributors is made by the telcos. Therefore, the discount extended to the pre-paid distributors does not fall within the ambit of the aforementioned Act, and is not subject to tax withholding. However, revenue authorities have adopted a contrary position. The government should rationalise the tax rate or issue necessary clarifications. Distributors earn low margins,; a lower or minimal withholding tax rate of 1% can be prescribed on the discount.

Further, the goods and service tax reform is one of the most welcome changes. It is an iconic reform since Independence and the days of liberalisation of the 90s. Unfortunately, it has meant an increased 18%, from the 15% tax outgo, for the telecom service providers. The telcos already pay another 15% in levies such as licence fees and spectrum usage charges. For a sector struggling to survive due to the financial difficulties, we have asked the GST Council to relook at the rate applicable to the sector and being it down to 12%, if not 5%.

While the government has shown its cognisance of the state of the telecom sector, it is time for immediate action, and some of these changes will go a long way in ensuring a prosperous nation and a healthy and resplendent sector for a fully connected and digitally empowered nation.

Evolution of 5G ecosystem to take 18-24 more months: Rajan S Mathews

Scant focus on telecom

FINANCE MINISTER Arun Jaitley should be commended on a well thought out, meticulous Budget. Apart from addressing key hurdles across the agricultural and infrastructure value chain, this Budget promises significant empowerment at the grass-roots level.

The COAI is pleased with doubling of allocation towards Digital India and the aim to invest in research, training and skilling in robotics, AI, digital manufacturing, big data, quantum communication and IoT, to be overseen by the DST. This is a sign the government is cognisant of the importance of a resilient cyberspace and welcoming of new technologies. The initiative is timely and also suggests that industry has the full support of the government when it comes to the next generation of technology. The support extended to IIT Chennai for indigenous 5G test bed is welcome, as is the proposal to set up five lakh Wi-Fi hotspots across India.

However, it is disappointing the government has ignored telecom industry's submissions on the fundamental changes that need to be made, when the sector is experiencing financial distress and is in need of help. A lot more needs to be done, if the sector is expected to help achieve the PM's goal of digitally empowering every citizen and ensuring economic growth that improved connectivity guarantees.

The telecom sector is amongst the highest FDI contributors to the economy (₹1.3 lakh crore), and the second-largest investor in infrastructure (₹9.2 lakh crore). It contributes 6.5% to the GDP, paying ₹70,000 crore in FY17 only and employing 40 lakh people directly and indirectly. Telcos have committed to invest ₹74,000 crore to improve infrastructure to address call drops. Yet when the sector needed budgetary intervention, the government chose to ignore. Given that for every 10% penetration, the GDP gets a 4% boost, telecom is one of the essential sectors.

RAJAN S MATHEWS

DIRECTOR GENERAL, CELLULAR OPERATORS ASSOCIATION OF INDIA

The sector is struggling with a cumulative debt of ₹4.6 lakh crore, and revenues are down to ₹2.5 lakh crore. Hyper-competition has left no room for improvement and the sector is out of ideas how to cut costs. Digital India is almost completely dependent on telecom that needs ₹3 lakh crore over few years.

Ours is one of the most taxed sectors. Whereas telcos in Pakistan and China pay 20% and 11% tax, respectively, Indian telcos pay over 32%, including 18% GST and 15% in licence fee and SUC. We urge GST Council to bring it down to 5%.

The key asks included reducing high levies/taxes and BCD on 4G LTE equipment, clarity on RoW related taxation at state level and reduction of tax rate to 1% on discounts extended to small dealers.

While much emphasis was laid on moving to a digital economy, the digital highway — telecom sector — did not feature in the Budget, like the railways, highways and electricity sectors did.

The industry will continue to work towards a fully connected India, fulfilling PM's mission of Digital India. We do hope, though, that in the same way as BharatNet got due support for the critical programme it is, the asks of telecom sector will also be addressed for speedy roll-out of infrastructure across the country that will ensure widespread connectivity and bridge the digital divide between urban India and rural Bharat.

Impact of Supreme Court order on Aadhaar seeding

Deadline for all services that required mandatory Aadhaar linking by March 31 has now been extended until the Supreme Court's Constitution Bench delivers its verdict on the validity of the 12-digit biometric number and the related Act. This means consumers can continue to link their Aadhaar number with services and no deadline looms large in front of them

Telcos: According to the Cellular Operators Association of India, the order will provide adequate time to the consumers as well as the operators to conduct the exercise in an orderly manner. It will await further instructions from DoT in this regard

Permanent Account Number (PAN): The deadline for seeding has been twice extended from December 31, 2017 to March 31, 2018. The Central Board of Direct Taxes is likely to extend it again but no official statement has been issued

Bank accounts: The Finance Ministry had made it mandatory to link bank accounts and all account based relationships with Aadhaar by December 31, which was extended to March 31. A new notification is now expected and a formal statement is awaited

Provident Fund: Aadhaar seeding for accounts under the Employees' Provident Fund and Employees' State Insurance Scheme is encouraged but not mandatory. Officials said the judgment will not impact operations of the two schemes

Atal Pension Yojana and NPS: It was compulsory for APY and NPS subscribers to link their accounts to Aadhaar. Pension regulator PFRDA is still studying the Supreme Court order and a formal statement on the next course of action is awaited

RAJAN S MATHEWS

Director General, Cellular Operators Association of India (COAI). Views are personal

Towards a secure and connected India

As we get more and more connected, networks, infrastructure and devices will be increasingly vulnerable. Data privacy, therefore, is both a major challenge and an opportunity

adoption will be accelerated and the Department of Telecommunications will support the establishment of Indigenous test bed at IIT Chennai. The government also pledged to invest heavily in robotics, Big Data, quantum computing and IoT, doubling its allocation to centres of excellence under the Department of Science and Technology. The industry welcomes these steps and the focus has firmly shifted globally towards creating a safe and secure cyberspace.

As we get more and more connected, networks, infrastructure and devices will be increasingly vulnerable. There are loopholes that cyber criminals are aggressively. Any large dataset stored in a single space is a virtual honey pot for cyber criminals. Globally, governments and other stakeholders, including the industry and civil society, are looking at newer norms of data privacy. Even in countries where the right to privacy is not enshrined in the Constitution, businesses are demanding a stronger, legal framework, but not at the cost of prying and stifling regulation, where governments demand back doors and trap doors, fearing cyber breaches have multiplied many times over, as data is the new oil. Most of these vulnerabilities arise out of inadequate in-house controls and because of citizens' lack of awareness. From conducting transactions to e-banking, we carry our world with us in our mobile phones and this also makes security and privacy real concerns. Most mobile phones come with default PIN and password protection capabilities. However, considering the rising number of smartphone based usages, breaches and misuse of sensitive information, it wouldn't be wrong to conclude that other consumers do not use them or there are loopholes.

India is the world's second-largest telecom market, after China, and has witnessed stellar growth — it has surpassed the US to become the second-largest smartphone market, with over 460 million units shipped in the third quarter of 2017 (3.9% growth). The market is estimated to grow even faster, given the influx of connectivity-dependent technologies. On one hand, the mobile phone market is undergoing consolidation on top of the aggressive 4G roll-out, and on the other the industry is preparing for 5G. In such a scenario, collection and processing of personal data should be allowed with minimal restrictions, provided it is coupled with user transparency, empowerment and control, and organisational accountability.

Data-driven innovation and privacy are compatible; data-driven innovation cannot be scaled without adequate privacy safeguards and gaining users' trust. It is critical to empower the users without over-regulating data collection. Privacy framework should be outcome-driven—legislation alone is not enough unless supported by adequate implementation, including an effective grievance redressal system and user awareness. Instead of a one-size-fits-all law that is weakly enforced, we should aim for a light touch law that is strongly enforced.

Given the volume of transactions happening electronically and considering the multiple players involved in each transaction, it may not be practically possible to create a centralised ex ante compliance system. The policy must take into account the fact that digital economy is thriving in part because it must be business work hard to maintain user trust and confidence. Brand safety is perhaps a motivation that is bigger than fear of regulations. Instead of government monitoring, the legislature should be encouraged to endorse a culture of corporate accountability—it would limit the ex ante enforcement approach to a minimum. This has been the approach of many privacy enforcement authorities who have seen how effective privacy and data protection are better achieved by incentivising com-

Privacy framework should be outcome-driven—legislation alone is not enough unless supported by adequate implementation, including an effective grievance redressal system and user awareness

panies to adopt best practices and demonstrate that they are accountable to their users.

The transition from 3G to 3.5 took more than a decade. However, since then, the industry has made rapid strides and 4G has eclipsed 5G. Now, 5G is on its way. It will deliver data transfer speeds that are up to 100 times faster than 4G. It will make it possible for users to enjoy rich 4K video and even immersive virtual and augmented reality experiences. 5G will seamlessly facilitate data-heavy tasks and streamline everything from IoT and self-driving cars to robotics. The industry has added several lakh base transceiver stations pan-India—now it's number over 1.7 lakh—and is promising over ₹74,000 crore by way of investment.

Last year, globally, millions of people were affected as hackers stole information via phishing emails, watering hole attacks and ransomware. Businesses lost cash, reputation and sensitive information, and individuals suffered due to breaches in bank accounts. Data security and privacy are a growing concern—everyone with a device or on a network is at risk.

Most data breaches can be prevented or at least the impact can be minimised if the industry and end-consumers come together and take corrective measures. Instead of using static passwords, consumers can use two-factor authentication when conducting sensitive online transactions on their mobile devices. Passwords can be guessed, forgotten, stolen or easily cracked, whereas two-factor authentication is more secure. Similarly, it is advisable to use secure Wi-Fi networks. Wireless transactions are not always encrypted. Emails and many applications do not encrypt data that they transmit over the network, making them vulnerable.

Moreover, several mobile devices contain malware, which consumers download unknowingly. These malwares are often disguised as games, security patches, utility or other useful applications. Add to that lack of encryption, and your device and sensitive information it holds are in for unauthorised access. Then there are issues such as lack of legitimate and well-engineered security software, outdated operating systems, lack of consistent security updates, outdated software patches and lack of firewalls.

The government can take steps in terms of rolling out information measures, incentivising businesses and SMEs through policies and regulations that are industry-friendly, creating a mass awareness programme in addition to the National Digital Literacy Mission. An increased investment in R&D for the digital economy and a responsive and nimble legal framework is needed. Deploying more foolproof and advanced security-enabled government infrastructure would also help ensure data privacy. The Cyber Swachhta Kendra is a commendable initiative.

Instead of prescribing privacy practices in the form of administrative requirements like format of notice and other codes of practice, including assessment/audit standards, the privacy framework should define the broad principles and requirements, and allow organisations to design their own privacy programmes in compliance with those principles. The focus should be to improve internal governance mechanisms in organisations without introducing bureaucracy. While organisations should be allowed to self-regulate, they should be held accountable for any violations. In case of any breach or complaint, the onus to prove due diligence should lie with the organisations. A multi-stakeholder consultative model is best suited for a country like India where all stakeholders can work with the government and do their bit for a safe and secure connected India.

NATIONAL DIGITAL COMMUNICATIONS POLICY 2018

Say Hello to the Connected Future

Rajan S Mathews

Despite tariffs being one of the lowest in the world and taxes and levies being one of the highest, India's telecom sector just about maintains profitability. It even attracts the highest quantum of FDI to the country. But India has always been a little behind when it comes to adopting new technologies.

With the draft of the National Telecom Policy (NTP) 2018 — National Digital Communications Policy (NDCP) 2018 — made public by the department of telecom on Tuesday evening, the country is ready for the next generation of communications technologies such as 5G, artificial intelligence (AI), machine-to-machine communications (M2M), Internet of Things (IoT), Cloud computing, automation, augmented reality and virtual reality (VR). The path to Digital India has now been laid.

Unfortunately, over the last few years, the telecom sector has been experiencing financial distress with debt rising to unmanageable levels, while margins dwindle due to hyper-competition and rising costs. The sector's cumulative debt stands at around ₹7.64 lakh crore, while the overall revenue has fallen to less than ₹2 lakh crore. Sector employment is at an all-time low, with two operators on the verge of the bankruptcy. The time has come for some fundamental changes in the sector. NDCP 2018 gives hope and directive focus to the sector and all its stakeholders.

Traditionally, NTP documents have acted as framework ones, defining the direction for telecom policy to take with the evolving environment. So far, there have been four telecom policies: NTP 1994, NTP 1999, Broadband Policy 2004 and NTP 2012. Each one came at the opportune time and can be considered the reason behind the sector's success over the last 20 years.

The message is loud and clear

For every 10% increase in broadband penetration in the country, GDP increases by 1%. The telecom sector is already contributing 6% to GDP, and NDCP 2018 has set a target of increasing it to 8% in the coming years. The policy has the potential to redefine the way future technologies are deployed and firmly plant India as a major player in the knowledge revolution.

By setting a target of attracting investments to the tune of $100 billion and addressing the critical issue of rationalisation of taxes and levies, GoI has focused on the long-term sustainability of the telecom sector, while also giving it the ability to invest in new technologies and services and ushering in a new era of communications. Currently, India's telcos pay more than 30% of their revenues in taxes, such as GST, and levies, such as spectrum usage charges and licence fees. Globally, this number is close to 10%. GoI is expected to rationalise it to that figure.

If all goes well, 2022 will be a watershed year. NDCP 2018 has set some very high but reasonable targets. If all the targets are achieved, India will no longer be seen as an emerging country. India will have universal broadband coverage at 50 Mbps to every citizen, 10 Gbps to all gram panchayats, 'unique mobile subscriber density' of 65 by 2022 and 10 million public Wi-Fi hotspots by 2022. The promise of creating four million new jobs is also a requisite target.

Then there is the treatment of spectrum. Defining spectrum as a natural resource, toward ensuring adequate availability, efficient usage and a transparent allocation method for service providers — while suggesting the adoption of optimal pricing to ensure sustainable and affordable access to digital communication — has got many in the Indian telecom sector optimistic again.

A notable aspect of the policy is the focus on securing the digital and cyber framework. This aspect is aimed at creating a comprehensive data protection system for digital communications that ensures the safety, privacy, autonomy and choice of citizens and encourages their participation in the global digital economy.

The new policy draft is one that signals that GoI is finally cognisant of the importance of the telecom sector and its contribution to the economy. The telecom sector has informed, educated, spread awareness, created jobs, saved lives, built relationships, nurtured bonds, spread knowledge, attracted investment and even helped develop the economy without taking much in return. Tariffs have always been one of the lowest in the world. The latest policy goes a long way to assure the sector that it can continue to do so.

The writer is director general, Cellular Operators Association of India (COAI)

Telcos spent ₹34,677 crore in 2017 to prevent call drop: COAI

OUR BUREAU

New Delhi, February 16

Telecom operators in India have added 3,46,778 mobile towers at an investment of around ₹34,677 crore between January 1, 2017 and January 1, 2018 in an effort to improve call drops, the Cellular Operators Association of India (COAI) said on Friday.

The industry body said the operators have done their best to improve call quality despite the financial crunch faced by them after the September 2016 entry of Reliance Jio.

"The new TRAI (Telecom Regulatory Authority of India) rules on call drops are very stringent and the implementation of the new rules will require major changes in existing systems and processes and alignment with concerned stakeholders/ vendors," Rajan S Mathews, Director General, COAI, told reporters here.

He further said the implementation of the revised measurement methodology as outlined by the government in the Budget, will add much-needed fillip to the telecommunications industry in the near future. Telecom has always been the trackbone of India's economic growth and, given the dynamics, it will continue to be so as we trend further into the future, protecting the industry is no longer a matter of choice.

In the Budget, the finance minister committed that all railway stations and trains will have Wi-Fi connectivity. BOTI Aayog will establish a national programme to direct efforts in AI, Artificial Intelligence will be given further boost. 5G

Rajan S Mathews, Director General of COAI

will also require the building of new systems and software development, and hence COAI had sought more time from TRAI.

"However, the same was not granted by TRAI. We will continue to work with the Authority on this issue and we remain committed to delivering the best possible services to our consumers. We hold our view that penalty or financial disincentive should not be there," he said.

The call drop rate is well within the prescribed limits as prescribed by TRAI, he said. "However, operators' efforts to create additional capacity to meet growing demand have hit roadblocks due to the non-availability of sufficient spectrum, sealing/shutdown of existing sites and inability to acquire new sites in many areas," Mathews said.

Right of way issues

Several hurdles remain in getting right of way (RoW) in local areas, even though there has been a clear mandate from the Centre, Mathews said. The local authorities have their own rules and operators can't get any help to lay their cables or erect towers because of that, he explained.

This apart, there is continued site optimisations with deployment of new networks and technologies and there is also positive collaboration with TRAI on drive test methodology and publication of results.

Meanwhile, last month, telcos including Bharti Airtel and Reliance Jio committed to invest over ₹74,000 crore to upgrade and expand their infrastructure to address the issue of call drops this fiscal.

No 'ease of doing business' in telecom sector: COAI

*Telecom subscribers in India reach 1.19 bn in December 2017: Trai

*Jio led the growth in mobile segment by adding over 8 million new customers — three-fold more than it closest competitor Idea

*Idea was followed by Vodafone which added 1.5 million new mobile subscribers, Airtel 576,575 and BSNL added 421,836 subscribers

PRESS TRUST OF INDIA

New Delhi, 16 February

Telecom operators body COAI said on Friday it does not see 'ease of doing business' in the sector as rules framed by the Centre are not getting implemented at local level for network roll-out.

"Law of the land should work as indicated, but ease of business is not there when we get down to local levels," COAI Director General Rajan S Mathews told reporters while discussing issues around call drops.

He said the municipal bodies and panchayats are not following the rules framed by the Centre and obstruct rolling out of telecom network.

During the BRICS summit 2016 held in Goa, the telecom minister, secretary and other top officials from Centre went to the state to get mobile towers installed to handle traffic load but still telecom companies failed to get adequate permission from local bodies, Mathews said.

"In Bangalore, we are asked to pay price equivalent to the market for digging an area for laying optical fibre cable. The amount of money demanded is so huge that it leaves no business case for us," Mathews said.

He said some states have aligned their policy for rolling out telecom networks with that of the Centre, but there is problem in other states.

As per a presentation by the COAI, Odisha, Haryana and Rajasthan have notified policy as per the rules notified by the Department of Telecom and expect Uttar Pradesh and Assam to soon notify them.

"Telecom operators have been investing huge amount to prevent call drops. In last 12 months, telecom companies have invested ₹346 billion to instal 3,46,778 base stations. Just two operators, Airtel and Jio have committed to invest ₹740 billion in one year to address the problem. We are making best effort to check call drops," Mathews said.

He said telecom networks are not the only factor responsible for call drops and the regulations do not consider other factors. According to the COAI, call drops may occur because of interference of signals, congestion on cell sites, weather conditions, faulty handsets and call transfer from one tower to the another. It said that most of the factors on customer side have not been considered under Trai regulations.

Mathews said that problem of call drop is more in data based networks like voice over LTE (VoLTE) than the technology used for 2G and 3G. He said the average spectrum holding, required for transmitting mobile signals, is very low in India and operators can buy additional spectrum only if it is reasonably priced.

Telcos Fear Govt Relief may Come too Late

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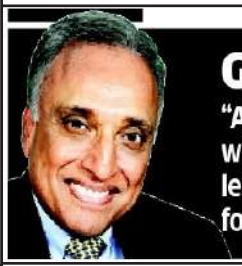
Kolkata: Telecom companies fear a Cabinet decision after March on relief measures for the telecom industry will be way too late as financial stress levels of the sector, which is saddled with ₹7-lakh crore debt and is in the throes of brutal price wars, are rising by the day.

The companies were pinning their hopes on an early decision, especially since the February 1 Budget totally ignored the industry's call for a reduction in high telecom levies such as licence fees, spectrum usage charge (SUC), Universal Service Obligation Fund (USOF) and a re-definition of a telco's adjusted gross revenue (AGR), the revenue stemming from licensed telecom services.

Hefty telecom levies have been a major turn off for India's phone companies as nearly 33% of every ₹100 earned is paid to the government as taxes. A cut in these levies is considered critical to provide immediate relief to financially stressed telcos, which have seen a sharp erosion in revenues and profits amid continuing price wars following Reliance Jio Infocomm's entry in September 2016.

"The telecom industry was deeply disappointed when the Budget disregarded its proposals and an early Cabinet decision paving the way for some financial relief would have been helpful to arrest the steep revenue decline, and any further delay beyond March will only exacerbate the sector's financial struggles," Rajan Mathews, director general of Cellular Operators Association of India (COAI), told ET.



GETTING IN SYNC FOR GST

"All operators have been working in all earnest to comply with the July 1 deadline, but are faced with genuine challenges, primarily IT compatibility and circle alignment going forward" RAJAN MATHEWS *Director-General, COAI*

Indian Friends of 3GPP

The Indian Friends of 3GPP (IF3) is a collaborative activity amongst member companies having a 3GPP based business in India. It has been formed to collectively host 3GPP meetings of relevance to India, within India, and to do so in a manner that is cost effective, efficient, and which meets with the expectations of the 3GPP community.

By seeking to arrange and fund meetings in accessible locations with the support of the active members of 3GPP in India, the Indian Friends of 3GPP has been created to reduce the financial and administrative burdens on individual companies, thereby enabling more organizations to contribute and ensuring a broader representation.

COAI, a Market Representation Partner (MRP) of 3GPP, hosts the secretariat of this collaboration activity. Their prime responsibility lies in assisting IF3 members pursue their purpose by administratively supporting the activity.

Membership

IF3 membership is open to all companies/ organizations which are registered in India, participating in 3GPP meetings, and are interested in collaboratively hosting 3GPP meetings in India.

The current members of IF3 are listed in alphabetical order.

The IF3 activities also receive the support of following COAI operator members.

IF3 is a collaborative activity supported by **COAI.**

5G India Forum

Adoption of 5G will require substantial investment in more downstream innovation than previous generations of communications systems. New business ecosystems are expected to emerge in which a multiplicity of players will meet, compete and work together.

This will open opportunities to start-ups and smaller ecosystem players, which will eventually profit from the innovation capabilities offered by networks providing open interfaces to develop network "apps" and services.

Thus, the 5G India Forum will serve as a strategic national initiative which concerns all stakeholders, private and public, small and large, to meet the challenge of making 5G a reality in India, at timelines aligning with the rest of world.

This forum aims to become the leading force in the development of next generation communications and will enable synergizing national efforts and will play a significant role in shaping the strategic, commercial and regulatory development of the 5G ecosystem in India.

Terms of reference

Develop national policy on 5G along with DoT Develop consensus within India on 5G systems / infrastructures / services, and prepare a vision document on priority.

Identify vertical application domains which would benefit from 5G and associated challenges.

Identify the societal, economic, environmental, business and technological benefits obtainable by an early adoption of 5G.

Collect and evaluate publicly available visions and major technical trends from industry, research community and available information from other regions.

Identify commonalities, bottlenecks and differences in visions and technical trends.

Prepare input documents for facilitating dialogues on standardization, technology development, spectrum availability and international engagements.

Support the creation of a venture like program to encourage eco-system players develop 5G services.

Collaborate with various international forums working on 5G.

Structure/Membership

- 5G India Forum shall be a collaborative body under the aegis of COAI.
- 5G India Forum will work through various Committees including:

1. 5G Spectrum Committee
2. 5G Equipment & Devices Committee
3. 5G Policy and Regulatory Committee

- The 5G India Forum Membership will be Free of Cost and will be based on Approval.

> 5G India Forum is a collaborative body under the aegis of COAI.

About COAI

COAI was constituted in 1995 as a registered, non-governmental society. The Association is dedicated to the advancement of modern communication through the establishment of world-class mobile infrastructure, products and services and to delivering the benefits of innovative and affordable mobile communication services to the people of India.

Industry Policy

COAI has emerged as the official voice of the Indian telecom industry that interacts directly with ministries, policy makers, regulators, financial institutions and technical bodies. It provides a forum for discussion and exchange of ideas between these bodies and the service providers, who share a common interest in the development of mobile telephony in the country.

Telecom Issues

COAI collaborates with other industry associations such as CII, FICCI, ASSOCHAM, GSMA, ISPAI, ICA, etc., with the objective of presenting an industry consensus to the Government on crucial issues related to the growth and development of the Indian telecom industry.

New Technologies

COAI is determined to encourage the confluence of technologies to facilitate the move towards complete convergence in communications as this could greatly help India mitigate the problems of low fixed line penetration and help realize country's vision of becoming an Information Society.

Thought Leadership

COAI aims to dispense information and spread awareness among the national and international entities and consumers on issues pertaining to service quality and other value-added services provided by the operators to their subscribers.

Area of Work Key Focus

Policy Advocacy

COAI has emerged as the official voice for the Indian telecom industry

Industry Issues

Provides a forum for discussion & exchange of ideas for members.

Regulatory Inputs

Interacts directly with ministries, regulators, and financial institutions for enabling condusive regulations for the sector.

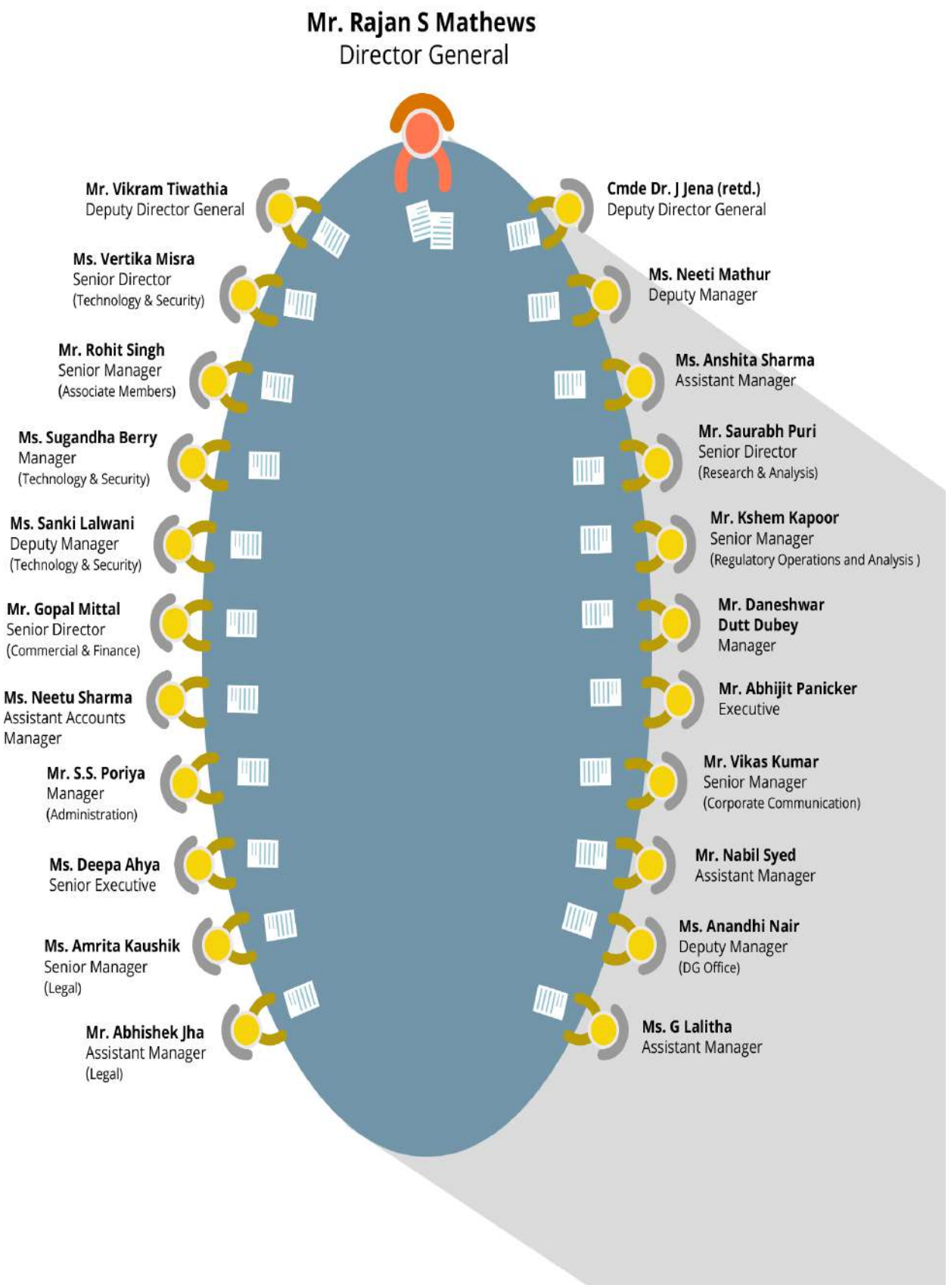
Skills Development

Design and development of skills specific to the sector to boost employability & job creation

International Standards

Works with embassies and interacts with GSMA, ITU, APT, ITIC, etc. for promoting mutual understanding of sectoral issues.

COAI Secretariat



Management

The COAI secretariat comprises of a Director General at the helm with two Deputy Director Generals to support him. There are 6 departments or teams in the association that ensure that COAI is one of the most credible and reputed Industry bodies, solely dedicated towards advancement of mobile communication.

There are currently 23 people working on the COAI secretariat bringing talent and skills from various areas of work, such as finance, legal, regulatory, public affairs, technology and infrastructure.

GOPAL VITTAL

Chairman

Gopal Vittal is the Managing Director & Chief Executive Officer (India & South Asia) of Bharti Airtel Limited. In his role as MD & CEO of the country's largest privately integrated telecom operator, he is responsible for defining and delivering the business strategy and providing overall leadership for Airtel's India & South Asia operations.

SUNIL SOOD

Vice Chairman

Sunil Sood is the Managing Director and CEO for Vodafone India with effect from April 1, 2015. Prior to this new role, Sunil was the Chief Operating Officer (COO) for Vodafone India.

RAJAN S. MATHEWS

Director General

Prior to joining COAI as DG, Rajan served as COO of US Operations and Corp. CFO and VP of Telargo Inc. (a Joint Venture of NTT DoCoMo), overseeing all of the company's Strategic Planning, Business Development, Financial, Treasury, Accounting, Tax, Administrative and Human Resource functions.

Team COAI

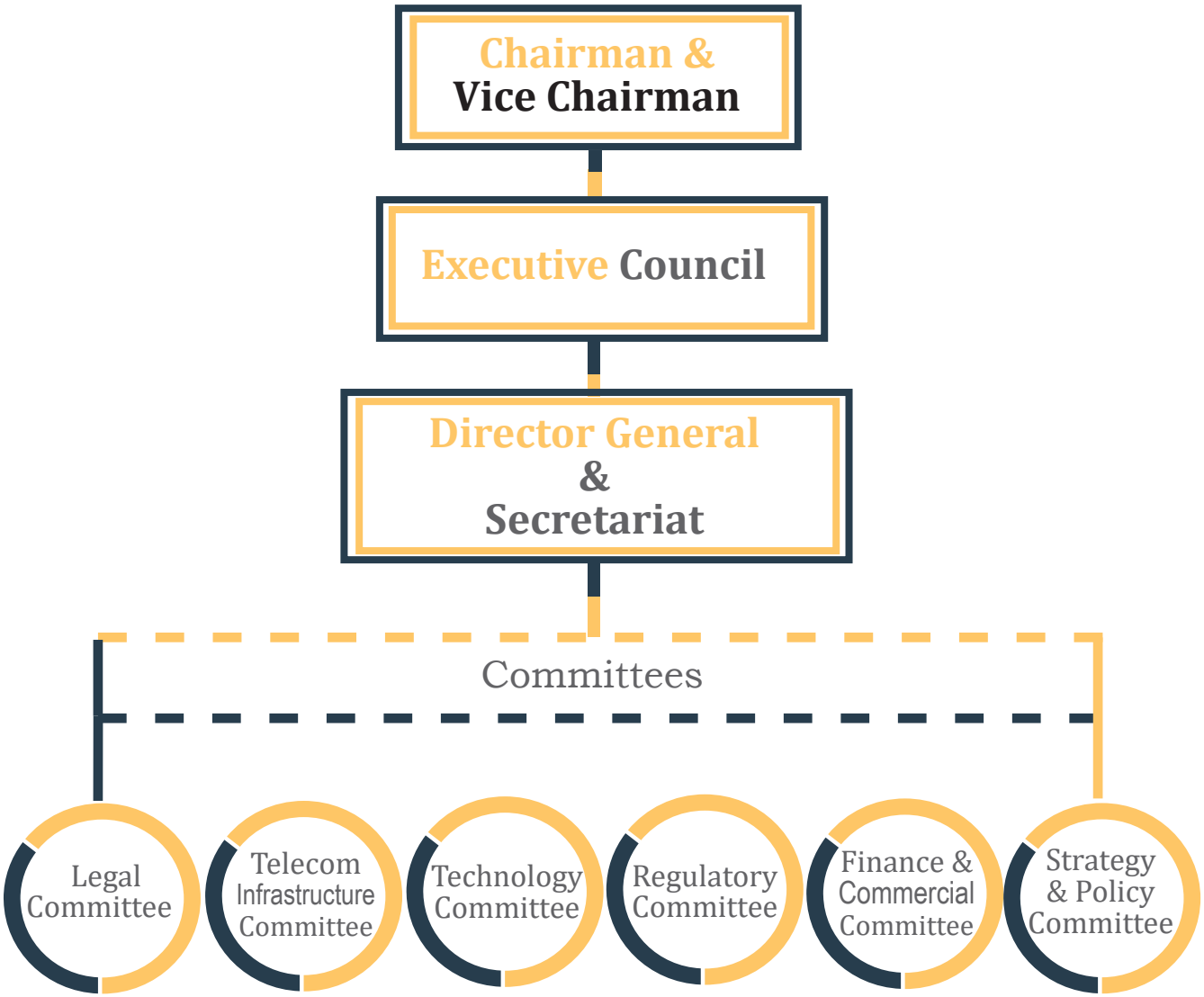
The COAI team includes dynamic, experienced and highly skilled professionals with a must-do attitude and remarkable proficiency in their respective verticals. Lean and yet highly competent, the Secretariat is committed towards the successful implementation of every activity undertaken towards the cause of the industry.

Regular coordination with the Government, the regulator, relevant state government departments, and other stakeholders, have established appreciation and recognition of the Secretariat's efficiency and professional prowess, both within, and outside the industry.

This year, a number of industry professionals joined COAI, Mr. Nabil Syed, Assistant Manager – Corporate Communications, Mr. Rohit Singh, Senior Manager – Associate Members, and Daneshwar Dutt Dubey, Manager, adding to the Secretariat's strength.

The Secretariat is thankful to all its members and highly appreciates their valuable guidance, mentoring and constant support towards its efficient functioning and productivity.

COAI Structure



Working Groups

ACT
Apex Advisory Council for Telecom in India

EMF
Portal Working Group

COAI Core Members

COAI Associate Members

What's New at IMC this year?

INDIA MOBILE CONGRESS 2018
25 - 27 October
NEW DELHI

Inauguration
The Opening Ceremony of IMC 2018, with the Prime Minister*, Ministers, Senior Government Officials and Industry leaders. A highlight of the inauguration will be the simultaneous launch of 1000 Apps at IMC 2018

Global CEOs Conclave
A forum for the biggest names in global tech to come together to deliberate on the future of technology and how it will shape our world.

ASEAN & BIMSTEC Ministerial Conclave
The program will focus on bringing together telecom ministers and other relevant stakeholders to deliberate upon various policies and innovative models practiced around the globe. The discussions will help push adoption of newer technologies into the ecosystem.

The Digital Village
An Exclusive area with experience zones, and a showcase for TMT / ICT initiatives that have driven connectivity across the world, and impacted lives

Awards @ IMC 2018
The IMC Awards are becoming highly coveted recognition features with the best in the business vying for the top spot. With an eminent jury comprising of technology experts and sectoral doyens, the Awards this year promise to be a spectacular show of the latest and the best of the ICT and TMT industry.

Nominations will open soon. For the latest updates, please visit www.indiamobilecongress.com.

*Invited; TBC

Startups @ IMC 2018

As the ICT and TMT sectors in India become more consumer driven and market focused, innovative services and solutions are becoming the key drivers of growth. IMC 2018 will be the perfect platform to bring together the industry stalwarts and enterprising innovators to explore collaborations for mutual growth.

Key Highlights

- Interactive Walkthrough Showcase
- Startup Bootcamp
- Startup Speed Dating
- Dedicated Startup Track

- **Startup Tunnel** showcasing the Apps to be launched.
- **Launch of 1000 Apps** on an App Marketplace Platform with the push of a button by the Chief Guest.

Themes for the Online Challenge

- Empowerment / Access to Services
- Smart Cities / Smart Enterprises
- FinTech / Artificial Intelligence
- Enhancing the User Experience
- Networks of the Future

COAI

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