By Akanksha Mahajan Marwah

For the longest time, India's telecom narrative has been centred on urban India and its unprecedented data uptake. Rural areas, though home to about three-fourths of the country's population, have always played second fiddle to their urban counterparts, given the poor telecom infrastructure landscape in these areas. Data service uptake in rural areas has typically been low on account of high tariffs, limited access and an unfavourable device ecosystem.

The scenario, however, has undergone a sea change in the past few years. Of the nearly 500 million data users in the country today, close to 40 per cent belong to rural India. People in rural areas are exhibiting a huge appetite for data services owing to declining data tariffs and smartphone prices. Rural users have surpassed their urban counterparts in terms of annual growth in social media usage. They want to consume not just text but increasingly, videos. The smartphone has, on the one hand, emerged as the window to the digital world for rural users and on the other, is helping various stakeholders in unlocking rural opportunities (see box).

Going by forecasts, there is a major digital momentum building up in rural India. According to a recently released report by the Boston Consulting Group, by 2023, 48 per cent (about 650 million) of internet users in the country will come from rural areas. The rural internet penetration is expected to grow to 35-45 per cent from 20 per cent at present (June 30, 2018). This will result in strong economic growth. It is an acknowledged fact that the use cases of broadband in rural areas are far more compelling than those in urban areas. As such, broadband penetration will drive the uptake of healthcare, education and e-governance services amongst rural users.

At the heart of this rural digital metamorphosis lies the government's big push towards digital inclusion, which is re-defining connectivity and digital engagement dynamics in the hinterland. The Digital India programme has provided a vehicle for unleashing latent rural aspirations. The government plans to build on these aspirations to bridge the urban-rural divide.

BharatNet, which aims at broadband-enabling the country's 250,000 gram panchayats (GPs)

through fibre connectivity, is a key project in this regard. As of December 2, 2018, a total of 116,411 GPs have become service-ready while fibre has reached 121,652 GPs. As of June 2018, close to 290,000 community service centres (CSCs) have been established to provide digital services in rural India and have created job opportunities for more than a million people. In mid-2018, the government embarked on a Digital village initiative, called DigiGaon. The programme attempts to connect villages with Wi-Fi as well as promote digital literacy among residents and assist them with entrepreneurship opportunities. The idea is to create connected villages where citizens can avail of various e-services of the central and state governments as well as private players. These digital villages will be equipped with solar lighting in the community centres, LED assembly units, sanitary napkin units and Wi-Fi choupals. They would also have regular CSC services such as banking, healthcare, education and financial services. The government plans to expand the initiative to 700 villages across the country by end-2018.

The recently released National Digital Communications Policy (NDCP), 2018 also identifies rural users as key stakeholders in India's digital growth and gives several pointers for bringing them in the broadband net. To this end, the policy's call for delivering broadband connectivity at 10 Gbps to every village block by 2022 is commendable.

While all this paints a highly optimistic picture of a digitalised rural future, much needs to be done on the ground to make this a reality.

Focus on implementation

The government recently urged the states to use and monetise the rural infrastructure being put in place under the BharatNet project so as to ensure that its benefits reach the masses. The Department of Telecommunications (DoT) has also, reportedly, pulled up Bharat Sanchar Nigam Limited (BSNL) and Bharat Broadband Network Limited for under-utilisation of the BharatNet infrastructure and deficiencies in the maintenance of the network. Under-utilisation of the network has hampered the take-off of several mission mode projects; for instance, the e-Panchayat project, which is yet to take off. Under this project, core common software applications had been developed to address various aspects of panchayat functioning including budgeting, planning, accounting, monitoring, social audit, and delivery of citizen services. However, all this serves no purpose unless network connectivity is established in rural areas. Similarly, while the NDCP 2018 has drawn up a detailed roadmap for digitally uniting India, real change will take place only if all the stakeholders come together for expeditious on-the-ground implementation.

Mainstreaming satcom

Satellite is an ideal technology for extending 4G/long term evolution (LTE) services to remote and rural communities, where rolling out towers and fibre is a challenge owing to difficult terrain and heavy capex needs. According to a study, over 10 GB of bandwidth is wasted from satellites all over India, which can be used to deliver communication services/content to rural households.

Players such as BSNL, Vodafone Idea and Bharti Airtel have been deploying satellite backhaul solutions to some extent, though mostly for 2G and 3G services. Reliance Jio is planning to use satellite backhauling for 4G, a first for the industry. It has taken bulk capacity on two satellites of the Indian Space Research Organisation (ISRO) and is using Hughes Communications India Limited's satellite technology. The telco is reportedly setting up two earth stations in Mumbai and Nagpur, and will set up two mini hubs in Leh and Port Blair for satellite backhaul-based services that will provide connectivity in areas such as the Northeast, Jammu & Kashmir, Uttarakhand, Andaman & Nicobar Islands, and Lakshadweep.

Meanwhile, the recent launch of GSAT-11 from a European spaceport will go a long way in boosting internet services in rural areas over the next 15 years. The large high-throughput satellite (HTS), along with two smaller HTSs, GSAT-19 and GSAT-29, launched earlier by ISRO from Sriharikota, are likely to give a major boost to broadband services in rural and inaccessible gram panchayats under the BharatNet project.

Sector health needs to improve

The telecom industry today faces a huge financial crisis. The sector's cumulative debt stands at Rs 7.64 trillion while the overall revenue has fallen to less than Rs 2 trillion owing to stiff competition. The liquidity crunch has affected operators' capacity to invest in new roll-outs. Meanwhile, the precarious financial situation has had a serious impact on operators' contribution to the government's Universal Service Obligation (USO) Fund. The USO Fund, maintained through the collection of universal access levy from telcos, assists in the creation of telecom infrastructure in rural and remote areas. In recent years, the collection of universal access levies has seen a decline, from Rs 98.35 billion in 2015-16 (pre-Jio era) to Rs 70.19 billion in 2017-18 and to Rs 21.82 billion in 2018-19 (up to October 31, 2018), mainly on account of falling telco revenues. While the NDCP 2018 calls for the rationalisation of multiple taxes and levies (such as licence fees, spectrum usage charges and goods and services tax),

the key is to ensure that these changes are implemented quickly. Taxes and levies cost Indian telecom service providers over 30 per cent of revenues against the global norm of 10 per cent.

Digital literacy and awareness

Rural Indians want to go digital, but the big question is, are they ready? As part of a survey conducted by Accenture Rural Marketing Research, 38 per cent of respondents said that they could be motivated if they were trained to use digital media. To this end, the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) is aimed at imparting digital literacy to rural citizens. Under this programme, people will be trained in the use of computers, smartphones and tablets for sending and receiving emails and browsing the internet. However, much needs to be done to effect an uptick in digital literacy rates, especially in promoting regional and vernacular content. As per industry statistics, only 200 million Indians speak English while over 1 billion do not. Content catering to the latter thus needs to be developed.

Conclusion

Given its vibrant aspirations, rural India is emerging as a hotspot for digital growth. Rural users will infuse new vigour - and hopefully profitability - into the telecom sector. The industry needs to take note of this and plan for bigger investments in developing relevant digital infrastructure (towers, fibre, satcom). Robust digital connectivity is also central to the success of several other ambitious initiatives of the government, such as the financial inclusion programme, the Pradhan Mantri Jan Dhan Yojana, the social health insurance scheme Ayushman Bharat, and the National Skill Development Mission.

As India carves a new digital identity on the global stage, back home, it is crucial that it converges urban India and rural Bharat digitally. It is important that the transformative power of broadband technologies percolates into the hinterland, bringing about a digital inclusion.

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