

# Airtel Empowering the Telecom Sector through GIS Innovation



Geographic Information Systems (GIS) play a crucial role in the telecom industry by enabling efficient planning, deployment, and management of network infrastructure. Telecom companies such as Airtel are using GIS to enhance decision-making, reduce operational costs, and support the development of reliable and high-performance telecom networks. An engaging conversation with **Mr. Ramakrishna Reddy, General Manager, Airtel**, tells us more.

## How has the use of GIS helped Airtel in its 4G and 5G implementations?

GIS has played a significant role in supporting Airtel's 4G and 5G implementations across multiple stages of the network lifecycle. Initially, it helped in network planning by identifying potential locations for tower deployment, such as high-rise buildings, commercial hubs, and priority coverage areas where network demand is high.

This enabled efficient site selection and ensured optimal coverage from the beginning.

After deployment, GIS supports the operationalization of the network by helping manage infrastructure and monitor service performance. It also plays an important role in customer acquisition. For example, with services like AirFiber, GIS is used to check whether a customer location is serviceable, estimate connection feasibility, and determine timelines for installation. Overall, GIS has been instrumental in enabling efficient planning, faster deployment, and improved customer onboarding, which are all critical for successful 4G and 5G network rollouts.



## How has the use of ArcGIS been especially beneficial?

ArcGIS has been especially beneficial because it is a robust platform with strong spatial intelligence capabilities. It provides a wide range of services, including web interfaces, mobile applications, and SDKs that can be integrated into third-party or internally developed applications. This flexibility allows organizations to embed spatial intelligence directly into their business workflows. By leveraging these capabilities, we have been able to build customized solutions that support our operational and decision-making processes. Overall, the strong technical foundation of ArcGIS enables us to efficiently exploit spatial data and enhance business processes across the organization.

## With GIS capabilities getting increased with AI, how is Airtel leveraging that?

We have also been utilizing the AI capabilities of ArcGIS. We are looking at enabling our teams with generative AI. In the future, we want our users to enter basic prompts and get responses to questions related to connectivity, service availability, etc. This will reduce their dependency on others for getting basic information like this.

## How does GIS aid in expanding services to rural or underserved areas?

GIS plays a vital role in expanding telecom services to rural and underserved areas by integrating business analytics with local spatial data. By combining demographic information, terrain details, and development patterns, GIS helps identify locations that may be rural, semi-rural, emerging urban peripheries, or densely populated regions lacking adequate coverage. This integration enables telecom planners to pinpoint priority areas where connectivity demand exists, but infrastructure is limited. As a result, companies can strategically plan tower placements, optimize network expansion, and extend services beyond major urban centers to even the most remote locations. Ultimately, GIS supports inclusive connectivity by ensuring that rural and underserved communities are effectively identified and served.

## Tell us about your experience with Esri India.

The Esri India team has been very supportive, very proactive. I have been interacting with people at all levels. They are very positive and good at resolving any challenge, either on the product side or on the support side.

