

The world has been taken by storm by the new Coronavirus, Covid-19. With thousands of casualties and hundred thousand infected worldwide, governments and local authorities are taking drastic measures, previously unheard of during peace times. As normal life comes to a halt, telecoms is one of the key pillars holding the world together with higher social distancing regulations, with millions staying and working from home. This brings intriguing challenges like Stressed Network Capacity demands, Bandwidth and Coverage is required at places never planned for. In order to support Operators, OEM's, Enterprise and Governments Tech Mahindra, and its subsidiaries Leadcom and LCC have tuned our Network Services portfolio to cope with these challenges.

## CHALLENGES

### Coverage and Capacity Augmentation

In case of any emergency situation like COVID-19 there is sudden spike in Subscriber Traffic and Operator's deployed Infrastructure comes under stress for these unforeseen circumstances. Also, bandwidth is required at places not planned for.

- Network Coverage and throughput challenges
- Increase demand in homes and change in time-based network demands.
- Managing Capacity Augmentation for Emergency sites.
- First Responder Emergency Support, Traffic Priority.
- Connectivity to Remote Quarantine Center's
- Managing large no. of customer's in some specific areas.

### User Experience

Sudden spikes in Subscriber Data Traffic in given situation, would impact the quality of overall customer experience arising from bandwidth constraints in both the backhaul network's and ISP Connectivity.

- Abnormal traffic condition resulting in deterioration of user experience.
- Further readiness in delivering High priority traffic
- Sessions are longer than in normal scenario creating bottleneck
- Continuous optimization through Manual Configuration interventions is unproductive

### Business Continuity

The need of the hour is 100% Reliable Services to end customer's, governmental and enterprise customers on a 24x7 basis. With the ongoing lockdowns there will be disruption in Operators Network operations

- Unavailability of Resources to work from the designated Network operations Centre.
- Manage the lifecycle of the deployed platform
- Network Availability
- Network Monitoring

## SOLUTIONS

Our Network Coverage and Capacity Augmentation solutions' can cater to the requirements for both additional capacity and coverage on war footing basis and provide network connectivity enhancements.

- mmW Links – Establish mmWave links to overcome lack of fiber connectivity
- Cell on Wheel (COW)– for Disaster Recovery Areas , Special Events and Temporary Sites.
- Rapid Deployment Unit (RDU) – Fast Deployment & Reusable BTS Site for Special Events and Temporary Sites
- NW in a Box – A pre-integrated complete virtualized telco network
- Connectivity to remote Quarantine centers - Enabling access over temporary VSAT, point to point, point to multipoint MW links to create local WIFI access
- 3G /4G Repeater - Provide indoor coverage enhancement for the private sector
- Tetra repeaters - Setting up temporary repeaters to facilitate coverage
- Consulting/ Services / Manpower –Leverage Tech Mahindra's global delivery experience

To address the immediate challenges and provide predictable customer experience to the subscribers. Our Customer Experience solutions control the applications/user behaviors and automatically configure the Network Parameter's on the fly.

- SON – Solution for Traffic Management, Coverage & Capacity Optimization, Policy Governance
- Sectorizing - Planning/Optimization/Drive Test services for sectorizing Omni sites
- NW Optimization - Planning/Optimization services for redirecting antennae towards newly created traffic hotspots
- DPI – DPI based solution to manage NW traffic and prioritize user applications
- Antenna Re-planning to right direction - Planning/Optimization/Drive Test services for redirecting antennae towards newly created traffic hotspots
- Measurement services – Complete measurement services which can typically not possible in regular circumstances
- Location Based Surveillance based on LI data

Help operators mitigate the challenges on Network Operations including using Remote Operations to support activities like Operations, Updates in Network and also Introduction of automation framework to further automate manual task.

- B2B Remote upgrades
- NOC (Emergency Plan) - People by people back-up
- NOC (Take over) – Managing networks from our global NOC's.
- Emergency back-up plan
- Remote monitoring solutions (Towers, POPs, Capacity)
- Remote Provisioning Extending Capacity.
- Refueling Generators.
- Spare Part Management & Logistics.

## TECH MAHINDRA, LEADCOM AND LCC JOINTLY COVER THE GLOBE HAVING LOCAL PRESENCE IN:

**ASIA PACIFIC:** India, China, Hong Kong, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand and Vietnam.

**AMERICAS:** Argentina, Brazil, Canada, Bolivia, Colombia, Costa Rica, Ecuador, Guatemala, Mexico, Panama, Peru, United States of America.

**AFRICA:** Burkina Faso, Chad, Republic of the Congo, Democratic Republic of the Congo, Gabon, Ghana, Ivory Coast, Kenya, Malawi, Nigeria, Rwanda, South Africa, Tanzania, Togo, Uganda and Zambia

**AUSTRALIA:** Australia and New Zealand.

**EUROPE:** Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Romania, Spain, Sweden, Switzerland and UK.

**MIDDLE EAST:** Bahrain, Israel, Kuwait, Oman, Qatar, Saudi Arabia, Turkey and United Arab Emirates.