

# VIVAAN TELECOM SOLUTIONS

A Perfect Partner In All Your Telecom Tower Construction Need

# **About Us**



We deliver better quality, a superior working experience, and greater lifetime value from our products and services, which enables our partners to think bigger, be bolder, and accomplish more than they ever have.

We operate multiple, highly customized data networks specifically designed and configured for the transmission of transaction-related, timesensitive data. We support a variety of widely accepted communications protocols, designed to be scalable and accessible by multiple methods, from one edge of the network to the other. Vivaan Telecom is providing a wide range of Telecom services in terms of end to end turnkey projects and it specializes in resource provisioning. Vivaan Telecom boasts the most flexible approach to wireless plans on the market. Core competencies include Survey, Installation, Drive Test and Maintenance.







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# **Company Vision**

To provide secure, reliable affordable and high quality converged telecommunication services anytime, anywhere for an accelerated inclusive socio-economic development.

### **Company Mission**

Our mission is to create solutions for our customers. Using our Core Capabilities, we anticipate the customer's needs, react to the challenges that come from a fast evolving industry to deliver for the customer. We ensure that our customer's needs are met by providing superior supply chain knowledge. Thus adding value to our end customers.

### **A Reliable Connection**

We have established a leading global network operating platform with deep visibility into the network, as well as management tools that ensure the highest uptime, extreme security and provision for business continuity, through adoption of the best practices in our industry

# **Safety Culture**

We are certified Drug-Free and SHARP compliant, with a deep cultural commitment to safety and professionalism in the workplace.

# Quality Policy And Solution



# **QUALITY POLICY**

We have developed and implemented an integrated Quality Management System (QMS) to demonstrate its ability to consistently provide logistics solutions that meet customer requirements and to address customer satisfaction through the effective application of the system, including continual improvement, risk analysis, and prevention of nonconformity.

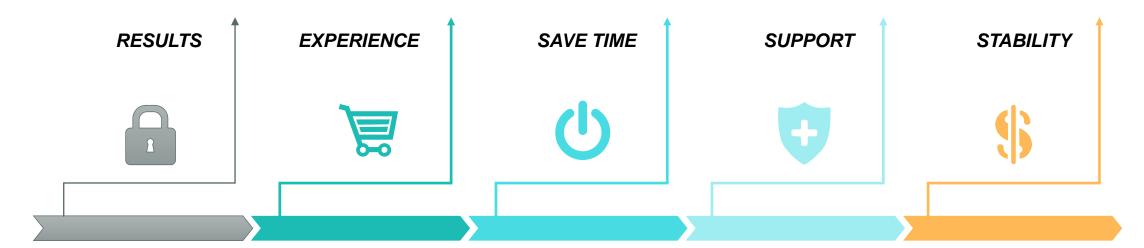
# **SOLUTIONS**

We grew out of the need to create solutions to the problems impacting our clients in the fast paced, ever changing telecommunications industry. We provide our services worldwide to Tele communications industry for network, wireless and wireline equipment and related services. Since inception, we have successfully implemented customized solutions to meet customer's needs.





# Key To Success



### **Results**

We deliver results by allying with leading telecom vendors and ISP, employing trained, licensed, and multi-skilled experts.

### **Experience**

Our seasoned team of technicians and engineers will help you drastically improve your IT capabilities.

### **Save Time**

With one primary vendor, we manage your work scope through an exhaustive tracking system.

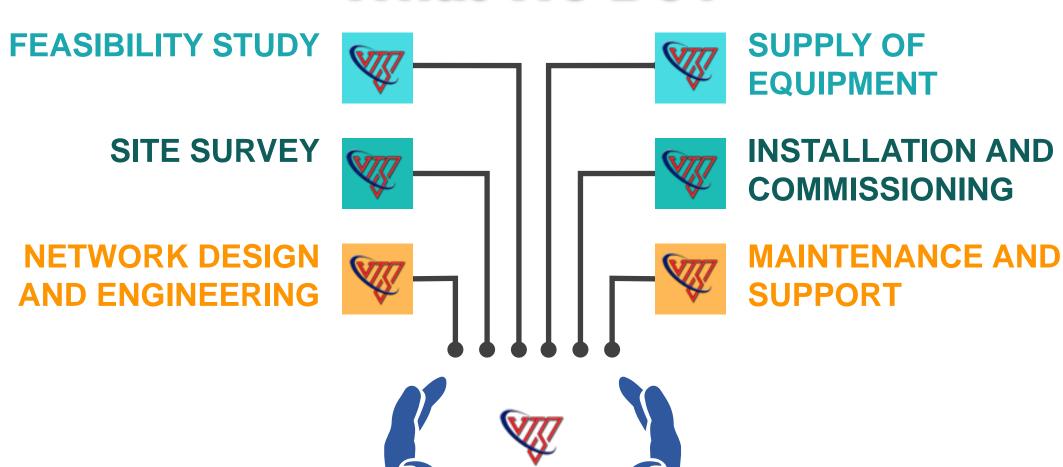
### Support

We're an extension of your team and we support you 24/7/365 through a dedicated expert.

### **Stability**

We're a privatelyowned, profitable company demonstrating consistent yearly growth.

# What We Do?





# What We Do?







#### STRUCTURAL STABILITY ANALYSIS

We provide structural stability analysis for telecommunication towers. We collect the data of existing building during visual inspection & observation for sites.

#### LAYOUT PLANNING AND SOIL TESTING

Our qualified team visits the proposed site and acquire the data regarding existing plot location, approached to site, plot levels, measurement of plot, key location of plot, availability of electricity, verify the site distance from state highway, national highway, railway tracks etc.

#### STRUCTURAL STRENGTHENING

Our technical team visit the telecom sites and acquired the data regarding existing load of antennas on tower, poles, mast, monopole etc., collect the foundation size, existing condition of tower's beam & pedestal etc., and analysis the structure for existing loading condition considering wind pressure at particular site location.

#### **FOUNDATION DESIGN**

We provide foundation design for telecommunications towers and equipments like shelter, D.G. set, O.D etc. for GBT & RTT sites, With help of soil testing report and tower foundation forces for GBT sites our technical team design the tower foundation and provide optimum design.

# Our Services



## Survey

Choose from a range of fast, reliable Internet speeds to fit your needs





- RF Survey
- ✓ LOS Survey
- ✓ RFI Survey
- ✓ EMF Survey

- ✓ ATP-11A (for BTS INSTALLATION )
- ✓ ATP-11B
- ✓ AT FOR MICROWAVES
- ✓ DRIVE TEST For 2G,3G,& 4G/LTE SCFT/DT SURVEY

### **Installation Service**

Choose from a range of fast, reliable Internet speeds to fit your needs





- ✓ 2G Installation / Swapping
- ✓ 3G Installation / Swapping
- 4G Installation
- ✓ 5G Installation

- Microwave Installation
- ✓ ODSC / UBR

### **Tower Installation**

Choose from a range of fast, reliable Internet speeds to fit your needs





- Electrical Wiring
- ✓ Electrical Meter Installation
- ✓ Electrical Control Panel
- Electrical Substation
   Installation

- Electrical Cable Jointing
- ✓ Interior Electrical
- ✓ Electrical Instrumentation
- ✓ Electrical Breakdown Works

# Service offerings



# Network design & Planning.

- •RF Planning &Design.
- Transmission Planning
  - •RF Optimizations.
- •Benchmarking & Auditing.
  •IBS

# **Network Deployment.**

- •TSSR
- Site Implementation.
  - •ATP
  - •As built site documentation
  - Managed services

## **Infrastructure**

•Construction and Erection of Telecom Towers

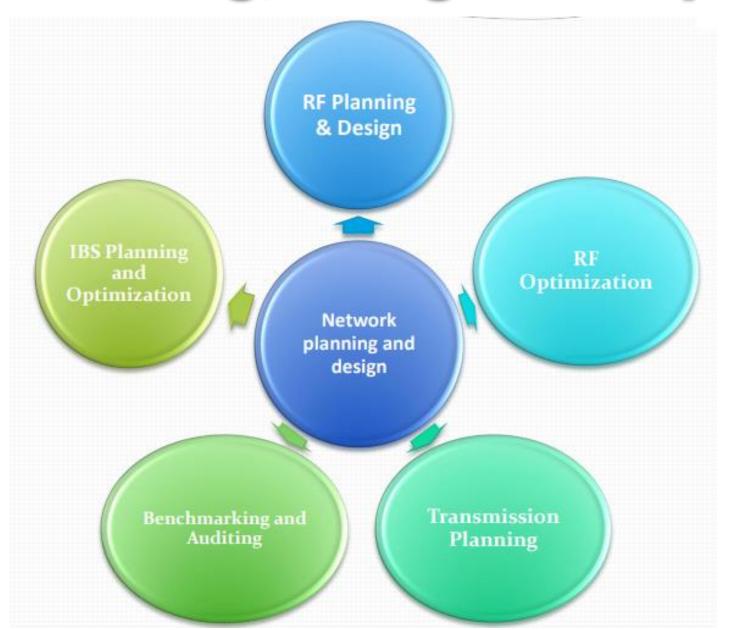
# Network Operation & Management.

- Network monitoring.
- Field Maintenances.
  - Technical support
- Logistics & Vender management.

### Professional Services.

- •Network design Services.
  - Transmission Planning
    - Backend support.
    - NOC Services.
  - Project ManagementServices

# Network Planning, Design and Optimization





# Network Planning, Design and Optimization

# RNO-NP DT Services

- **SFT Of New Sites**
- Cluster Driver
- Cluster Optimizations
- Bench Marking
- Swap Services & Network Scanning
- ❖U900 Implementation
- Frequency Reframing







### **WE CAN HELP YOU CONNECT**

# Services & Products.

- 01. Turnkey Managed ITC Services
- 02. O3B Internet Service
- 03. VSat Services
- 04. Rig Movement Connectivity
- 05. Microwave Lines
- 06. Layer2 Connectivity
- 07. Fiber Optics Connectivity
- 08. Communication Towers Provision and Installaton
- 09. Technical Support & Technology Consulting
- 10. Internet Security, VPN, Firewall & Network Management (Wifi)
- 11. Dedicated Data Centers
- 12. Virtual Office Solutions with E-mail, VoIP, Printing servers
- 13. IVR Tracking Services
- 14. Website Design, E-mail Hosting & Email Archiving
- 15. Dedicated Servers
- 16. Software Integrations & Custom Web Development
- 17. Security & CCTV Systems
- 18. IPTV Camp Services
- 19. ACS system
- 20. Network Infra Structure

# Telecom Implementation, Optimization and Integration



#### 2G/3G/4G RF Services



- RF planning and design
- RF Drive Testing both Pre-Launch & Post-Launch
- RF Optimization
- RF Benchmarking
- RF Planning & Design Consultancy Services

#### Transmission Services



- Design Services
- Nominal Planning
- LOS Survey
- · Path Calculation
- Frequency Planning
- · Interference Analysis
- NMS Design & Implementation

#### **Field Services**



- Pre-Installation Survey
- Installation & Commissioning
- Link Performance Testing & Integration
- As-built reports and

#### **Core Network Services**



- System architecture design
- IP network and IPSec design
- NGN platform Commissioning & integration
- MGW & MSC server commissioning & integration Functional, resilience and connectivity testing
- Migration to R4 Core configuration
- Routing & Switching
- WAN services & MPLS Networks, VPNs
- Network security & Data Centres

#### Backhaul



- Design Assistance
- Assistance in Preparation of BOM
- Implementation
- Integrating
- Testing

# **Network Audit Service**

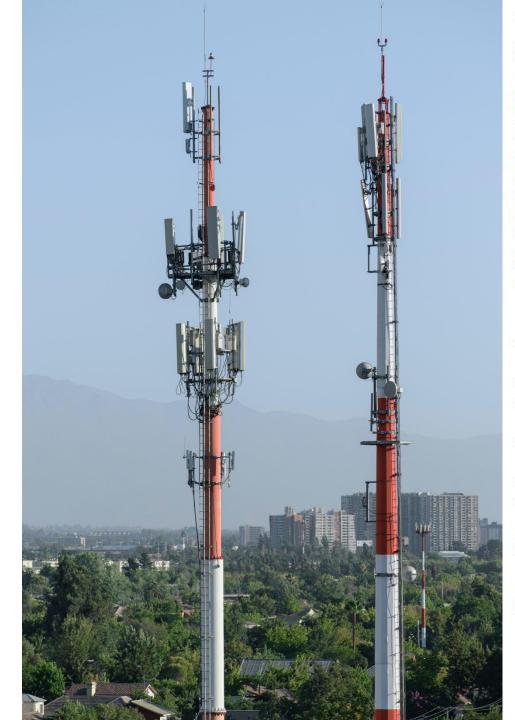




VTS performs end-to-end network audit to evaluate and optimize the performance of network. The audit process addresses technical evaluation as well as identification of KPI's, BoQ's, Quality of work for onsite installed equipment i.e. Radio, Transmission, BSS and Civil works.

### Network Audit includes:

- BSS Audit
- Transmission Audit
- RF Audit

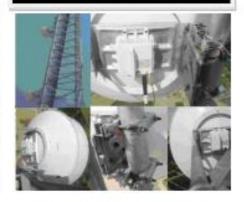


#### **BSS Audit**



- BOQ Verification
- Quality of Installation BOQ's will be required to verify all the equipment installed;
- BTS Antenna and Feeder cable Installation
- BTS Visual Installation check
- BTS Cabinet Checks are Performed.
- Hardware and software alarms are checked
- · Physical capacity of the site.
- The antenna height along with type, tilt etc
- RF coax cable connections, Cable return loss Sector orientations
- Testing of grounding field strength, percent service availability, base-to-mobile and mobile-to-base signal levels

#### Transmission Audit



Audit includes inspection of Quality of Installation along with physical condition of tower and site.

- · Site coordinates
- Site ground level above mean sea level
- Tower height, antenna heights on tower
- Pointing azimuth of each antenna
- Transmission line types and lengths
- Transmitter and receiver nomenclatures
- Number of standby transmitters and receivers
- Tuned frequencies of all operating equipment
- Transmitter power outputs and received input levels

#### RF Audit



- Perform Drive Test and analyze long files with proper solution
- Coverage of service area:
   Urban, suburban, rural and inside building Intra and intercell handover
- Call success rate
- Rx Qual / Rx Lev.
- Checking antenna orientation as per design, end to end connection of feeder cable
- Verifying that the RF implementation matches the RF design sheet
- Readjusting down tilts if incorrect
- Analysis of Block calls, Dropped calls, Handover failure.
- · Coverage problem analysis
- Coverage Hole
- Overshooting cells



# Telecom Managed Services



#### **Network O&M**



- Fault Management & Trouble Shooting Management
- Root Cause Analysis Support
   Reporting
- Upgrade/Capacity Management
- Configuration Management
- KPI Measurement
- Backup management & Recovery support
- Database Management
- Remote Infrastructure Alarm Monitoring and resolution
- Onsite and remote Infrastructure monitoring
- Field Scheduling & Dispatch Management

#### **Network Field Maintenance**

#### PM & CM

### Preventive & Corrective Maintenance of

- Core Network Elements (MSC,BSC,BTS)
   Transmission Systems
- Access Networks like WiMax, FTTH etc
- Fiber Networks
- Electrical Equipments& other Facilities

### **Support Services**

### Technical Support and Process Management:

- Technical Help Desk
- Acceptance Testing
- Type Approval Testing
- Process Management activities

### Logistics & Vendor Management:

- Spares Management
- Warehouse Management
- Repair & Return coordination
- 3rd party Vendor Management



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