



## OUR SERVICES

We provide two main services, namely regular preventive maintenance and field corrective solution for mobile operator sites. The services are applied both for active infrastructure (base station, microwave link, antenna) and passive infrastructure. This services include spare part management, site security management, refueling services and remotely managed day-to-day operation by Integrated Operation Center (IOC).

## SITE MAINTENANCE

### Preventive Maintenance

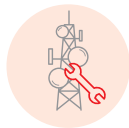
We provide regular maintenance service to anticipate problems on the devices and to keep the devices function normally during its operation.

### Corrective Maintenance

We provide corrective maintenance to repair, replace, fix or adjust significant equipment and network element defects and failures.



#### Site Maintenance



Field Services Maintenance



Radio Access Network Maintenance



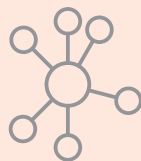
Power System Maintenance



System Monitoring

## NETWORK ENGINEERING

### Network Planning



Considering that optimizing CAPEX of mobile operator is imperative, it is very important for us to have an excellent network planning, such as determining the precise site location, great coverage planning as well as network capacity as required.

We have strong and global-wide capabilities to deliver value-added services in network planning, supported by our highly-skilled professionals and a complete portfolio of services, tools, and technology (2G/3G/LTE). Therefore, we offer end to end network planning as follows:

- Coverage Planning
- Capacity Planning
- Site Survey
- Frequency Planning
- Network Parameter Planning

## Network Roll out



The market for roll-out services will continue to be driven by growth in mobile subscriptions and data traffic in the future. The increase in data traffic puts also a demand for transforming the existing backhaul and transport networks. So, we offer the solution for network rollout, including:

- **Hardware Installation**
- **Testing & Commissioning**
- **Quality Acceptance**
- **Project Management for Network Deployment**

## Network Optimization



As network expands and traffic increases, the performance will typically degrades. Optimization is required to return network performance to initial levels, and possibly beyond. We are committed to optimize the network configuration in order to maximize the performance by offering two primary categories of network optimization, namely:

- **Regular Optimization Services**
- **Strategic Optimization Services**

## Service Optimization



Currently, mobile operators use similar vendor and technology. The distinction between one operator to another is the type and quality of services to end users. Therefore, it is very important for mobile operators to improve their services. In supporting this, we focus on providing solutions and develop methodologies to improve service performances. Our method is combining the network level with service level Measurement, for:

- **Customer Experience Testing & Monitoring**
- **End to End Service Performance Improvement**

## Network Audit and Benchmarking



We provide an assessment of Network Configuration, performance and working methodologies, i.e. by comparing to best practice, competitor, and international standard to achieve operational excellence.

- **Transport Network Audit**
- **Benchmarking Drive test**
- **Transport Audit Consultancy**

# PROJECT REFERENCES

Site Maintenance Total 16.844 sites



## OUR EXPERIENCE



- Network Planning
- Network Roll out
- Network Strategic and Regular Optimization for RAN, Core Network and Transport
- Service Performance Optimization
- Network Audit and Benchmarking
- Manage Service Network Maintenance
- Consulting Services
- Customer Experience Test Tool
- Dashboard and Reporting for Network Quality
- Event Management

- The biggest mobile operator in Indonesia
- Subscriber 15mil. Mid 2016
- 38K 2G BTS
- 40K 3G NodeB
- 3K LTE eNodeB



- Network Performance Optimization

- 21.1K 2G BTS
- 21.8K 3G NodeB
- 1.7K LTE eNodeB



- Network Performance Optimization

- 8K 2G BTS
- 8.5K 3G NodeB
- 0.6K LTE eNodeB



- Network Performance Optimization

- 5.58K 2G BTS
- 6K 3G NodeB
- 0.4K LTE eNodeB



- Network Performance Optimization

- 3.4K 2G BTS
- 3.8K 3G NodeB
- 0.3K LTE eNodeB

## OUR CUSTOMERS



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live smart



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