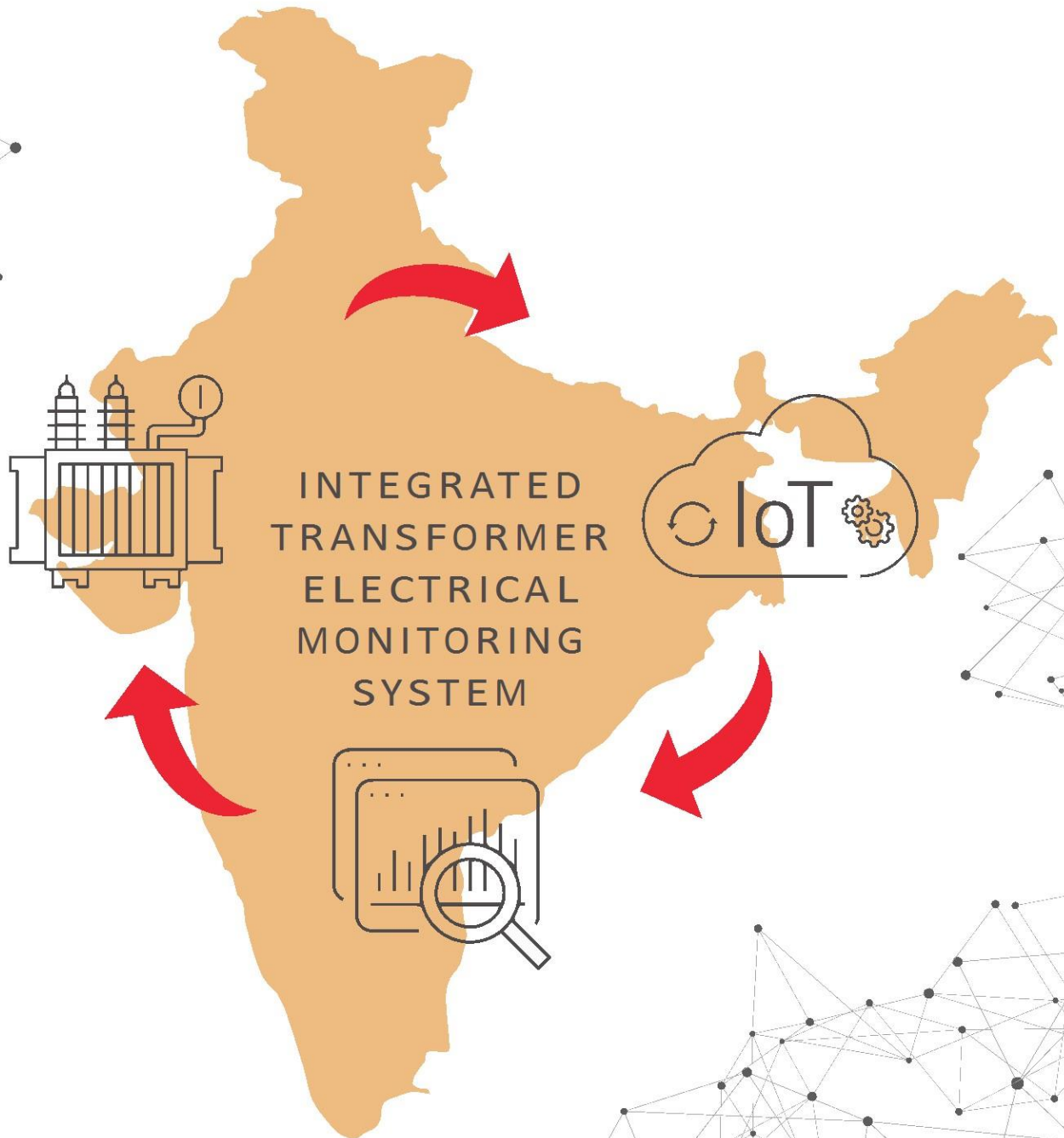
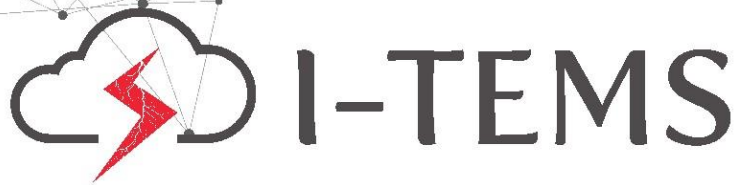




Real-time Remote Monitoring

Transformer Health and Energy Management

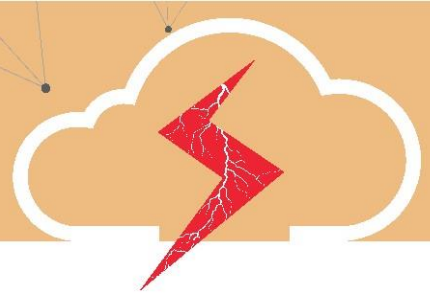
Onsite Correction Services

Spares supply | Maintenance

Infratron India Pvt Ltd

Smart Infra to improve performance reduce cost.

CHALLENGES | SOLUTIONS



BACKGROUND & CHALLENGES

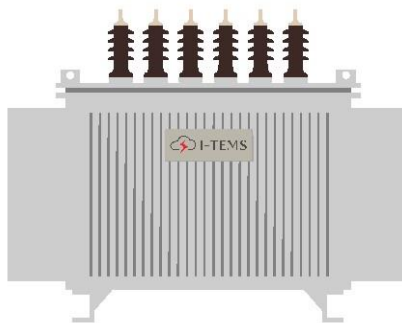
The Transformer is **THE** most critical asset of your power distribution system and any unplanned down-time can drastically impact your factory and office operations resulting in revenue losses and a higher cost of maintenance. It also serves as a point of measurement for the power quality and consumption of your entire operations at any given of point.

In India, ~20% of distribution transformers fail as compared to 3% globally and it is the single largest contributor to repair and maintenance expense of your power transmission assets. Timely monitoring and intervention is essential to control transformer down time and cost.

Transformer Failure Major Factors

Physical Factors

- Lack of timely maintenance
- Oil Leakage
- Moisture Ingress
- Inadequate Cooling system

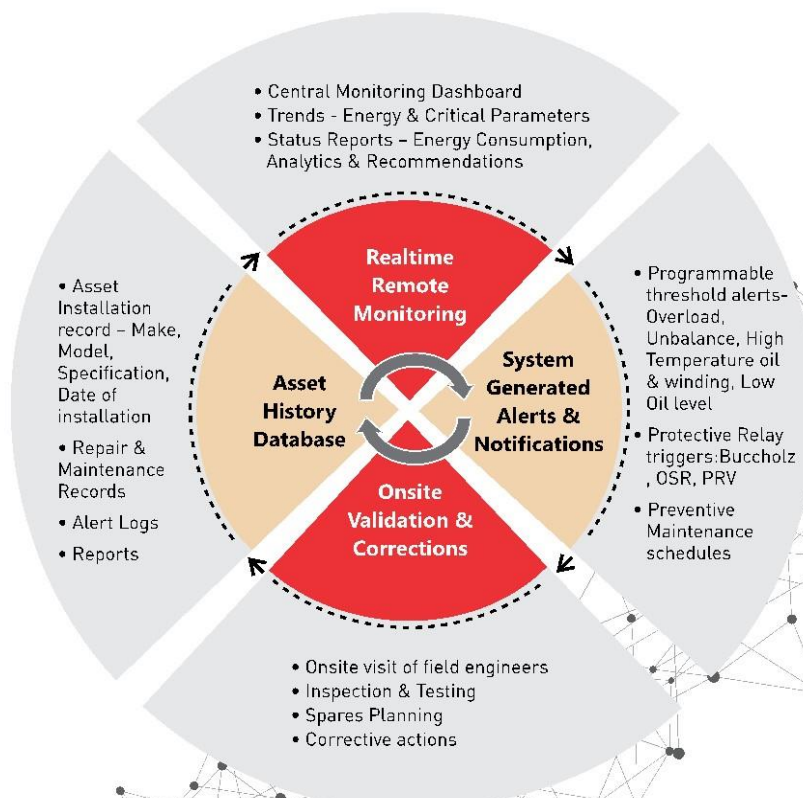


Electrical Factors

- Overloading & Line surges
- Insulation failure
- Protection system
- Arcing

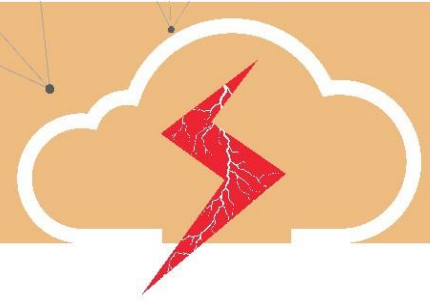
Manual monitoring by the maintenance staff has its own drawbacks where every parameter cannot be monitored, reaching the remote location in time and arriving at data insights to take corrective actions.

OUR SOLUTION - I-TEMS (Integrated Transformer Electrical Monitoring System)
Smart Distribution Transformer Monitoring and Controlling using IoT
CONTROL AND SAFETY IN YOUR HANDS



Realtime | Lower Manpower | Accuracy | Data Analysis | Predictive Monitoring

SYSTEM OVERVIEW | BENEFITS



BENEFITS

Asset Reliability & Uptime

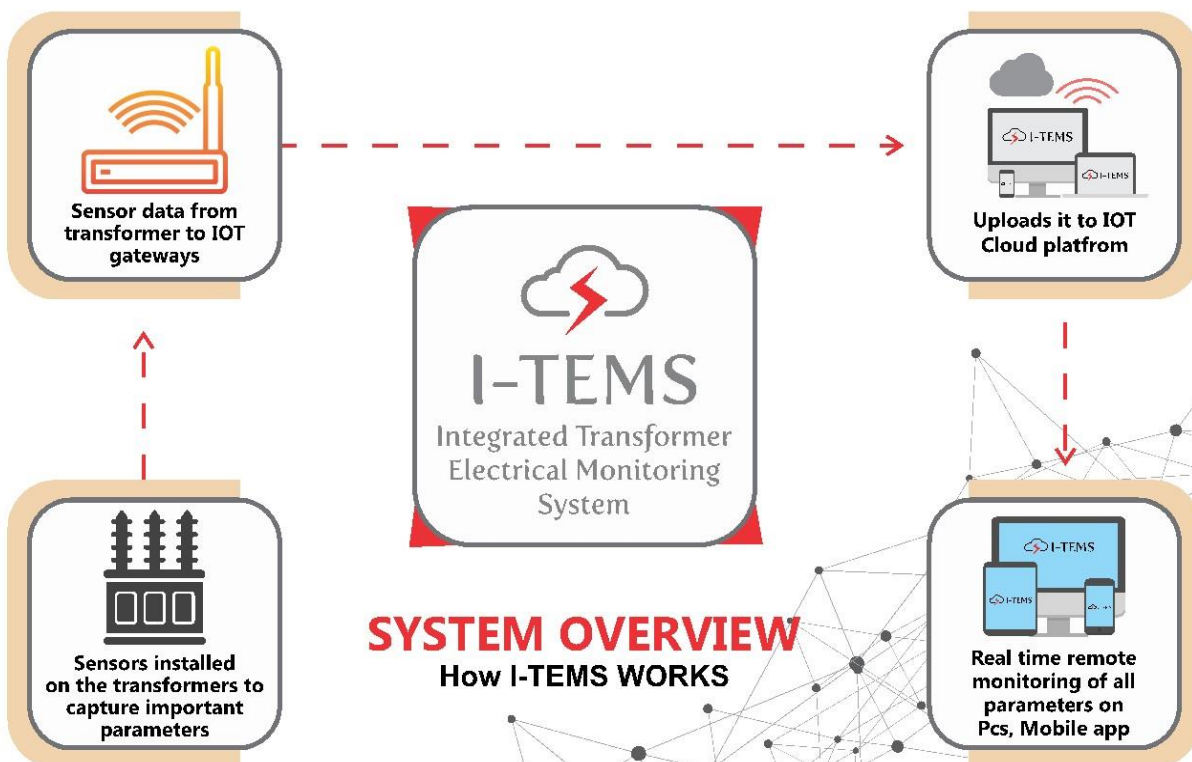
- ✓ Asset Register – Installation date, Maintenance History, Spares consumption
- ✓ Condition Based Maintenance & Predictive analytics
- ✓ Alerts Alarms for – Unbalance (Voltage), Unbalance (Current), Overload, Low PF, High Harmonics, High Oil Temperature, Low Oil Level, High Oil Level, Low Voltage
- ✓ Preventive maintenance schedule status
- ✓ Benchmarking & Recommendations

Energy Cost

- ✓ Load pattern trends & analytics for different time zones
- ✓ Loss analysis: PF, Harmonics, Plan vs Actual Consumption Trends per unit of production
- ✓ Management Reports: Daily, Weekly, Monthly with actionable insights
- ✓ Alarms & Alert notifications for threshold values of consumption & losses
- ✓ Bench marking & Recommendations

FEATURES AND CAPABILITIES

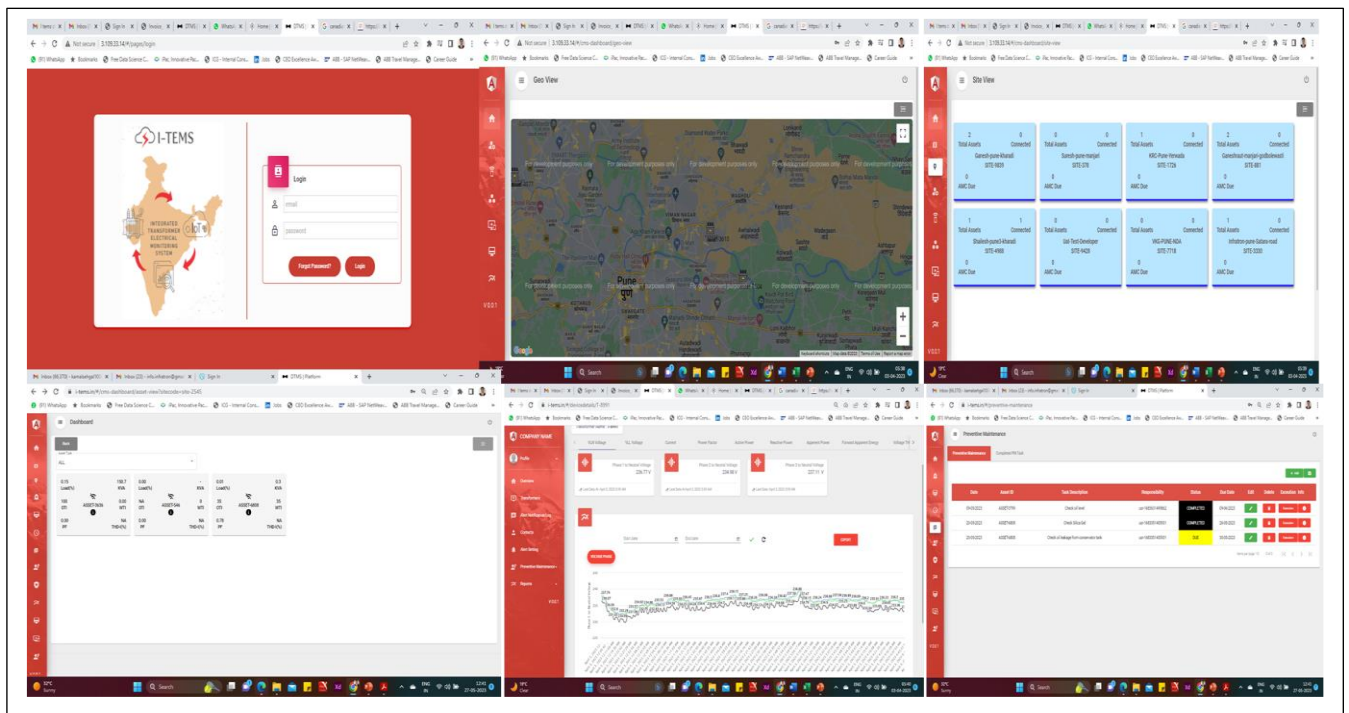
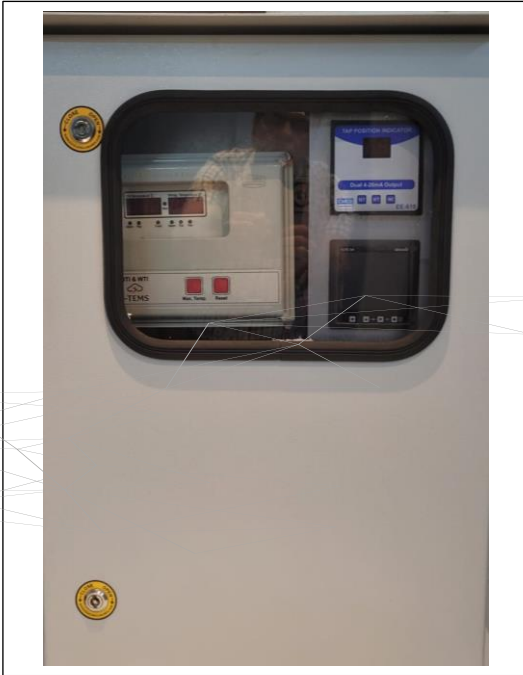
- Real time remote monitoring of 3-Phase Voltage, Current, PF, Energy consumption
- Harmonics (THD% V & I), Oil Temperature, Oil level, Winding temp, Ambient Temp etc
- Alerts on Overload, Unbalance, Low power factor, Low oil level, High Oil temperature, Over/Low voltage etc
- Dashboard, Analytics & Downloadable reports
- Email & SMS notifications
- Additional Capabilities: Buchholz Relay | Oil surge | Relay | PRV Relay | OLTC Stuck



CLOUD PLATFORM & HARDWARE SNAPSHOT



Proprietary easy to install hardware.
Central Monitoring Station - Remotely Accessible
Providing Realtime Status, Alerts & Analytics



Infracron India Pvt Ltd

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