

Digitalization of Utilities and Digitalization Roadmap

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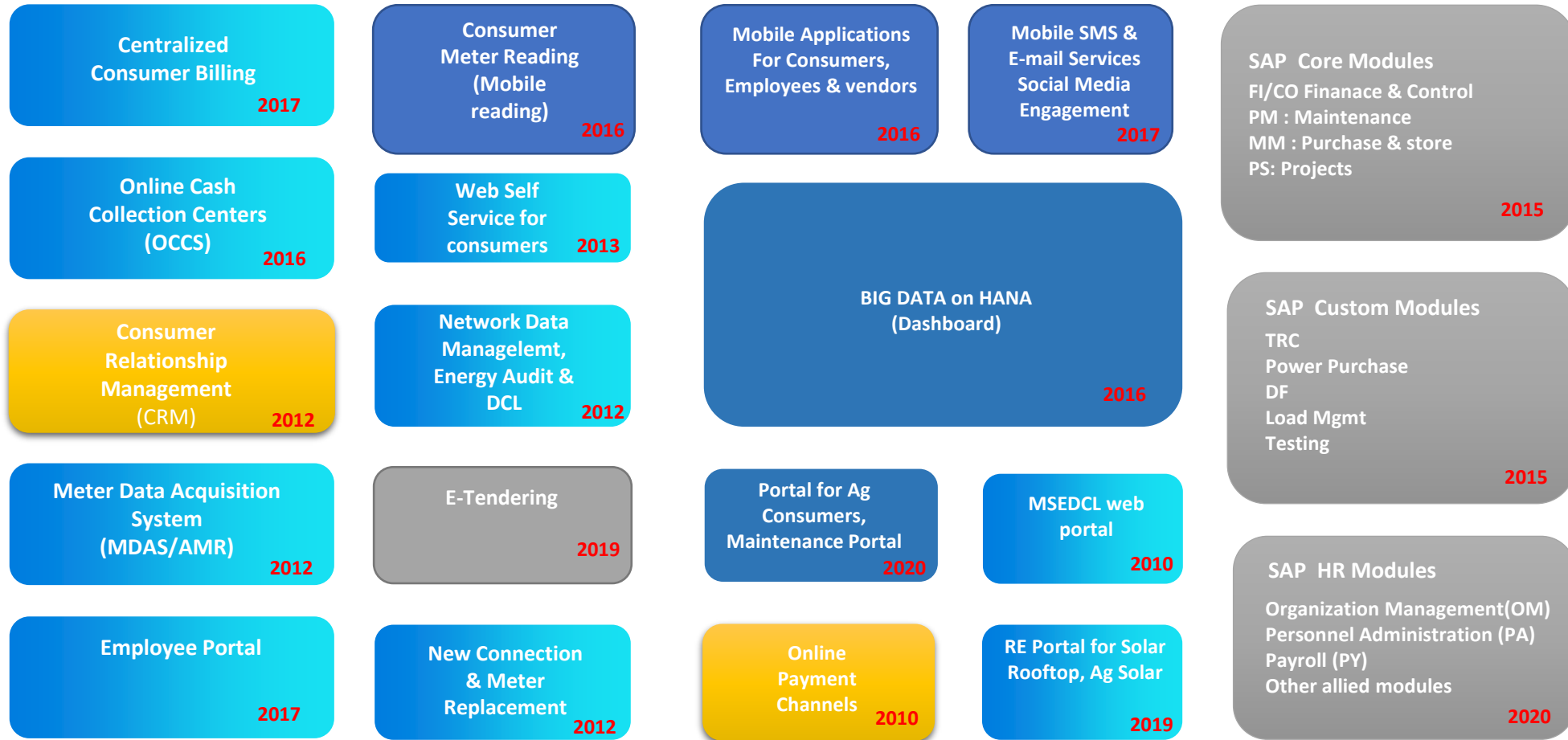
MSEDCL

MSEDCL at a Glance



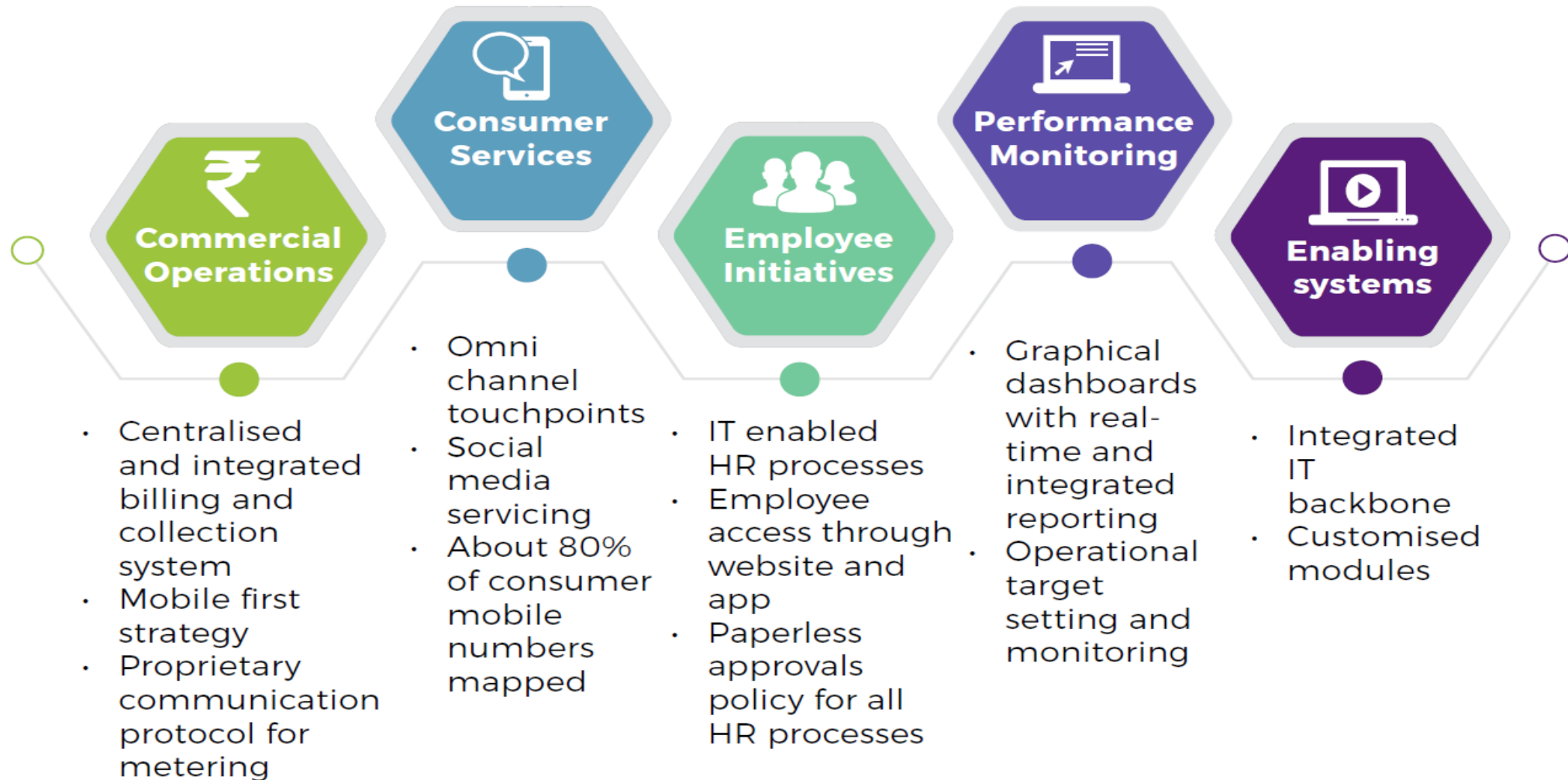
Particulars	Nos.
Area Covered	3.08 Lakh Sq.KM
Towns	457
Villages	41,095
Zones	16
Circle	45
Divisions	147
Sub-Divisions	662
Section Offices	3227
Employees strength	70,810
Nos. of Consumers	2.80 Crs
Annual Sales (19-20)	1,07,866 Mus
Annual Revenue from Sale of Power (19-20)	83606 Cr.
PEAK LOAD	19095 MW

MSEDCL – Digital Landscape



MSEDCL has deployed IT infrastructure on Cloud (Cloud Service Provider : AWS)

Building Blocks of Digital MSEDCL



Digital Initiatives of MSEDCL

- Digital Initiatives for Operational Efficiency

- Metering
 - AMR of Consumer & Feeder Meters
 - Meter Reading of 1 phase R&C consumers through RF DCU & Mobile App
- Billing & Revenue Management
 - Centralised Billing System
 - Online Cash Collection System
 - Mahapowerpay – MSEDCL wallet application
- ERP Implementation
- Performance Monitoring
 - Dashboards for KPI Monitoring
- System Automation
 - Substation Monitoring System

- Digital Initiatives for Consumers

- Centralised Call Center
- Portal & Mobile App for consumers
- Alerts and Notifications through SMS & E-Mail
- Social Media Engagement
- Online Payment services

- IT Enablement of workforce

- Employee Portal
- Employee Apps

- Digital Initiatives for Vendors

- E-Tendering
- Centralised Vendor Payment System
- Maintenance Portal - Empanelment of Vendors for maintenance works

MSEDCL Analytics - Dashboard

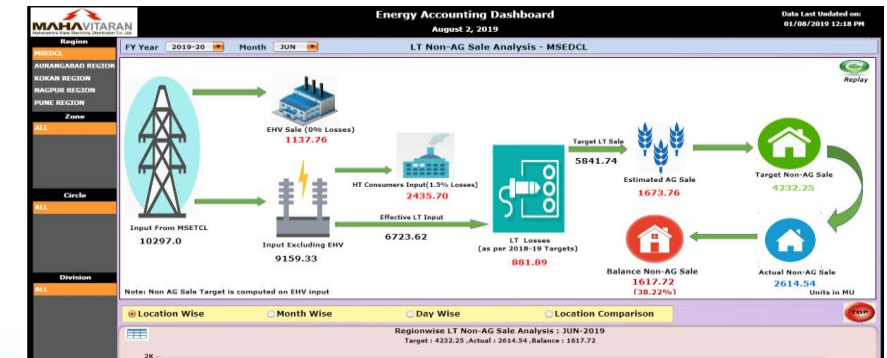
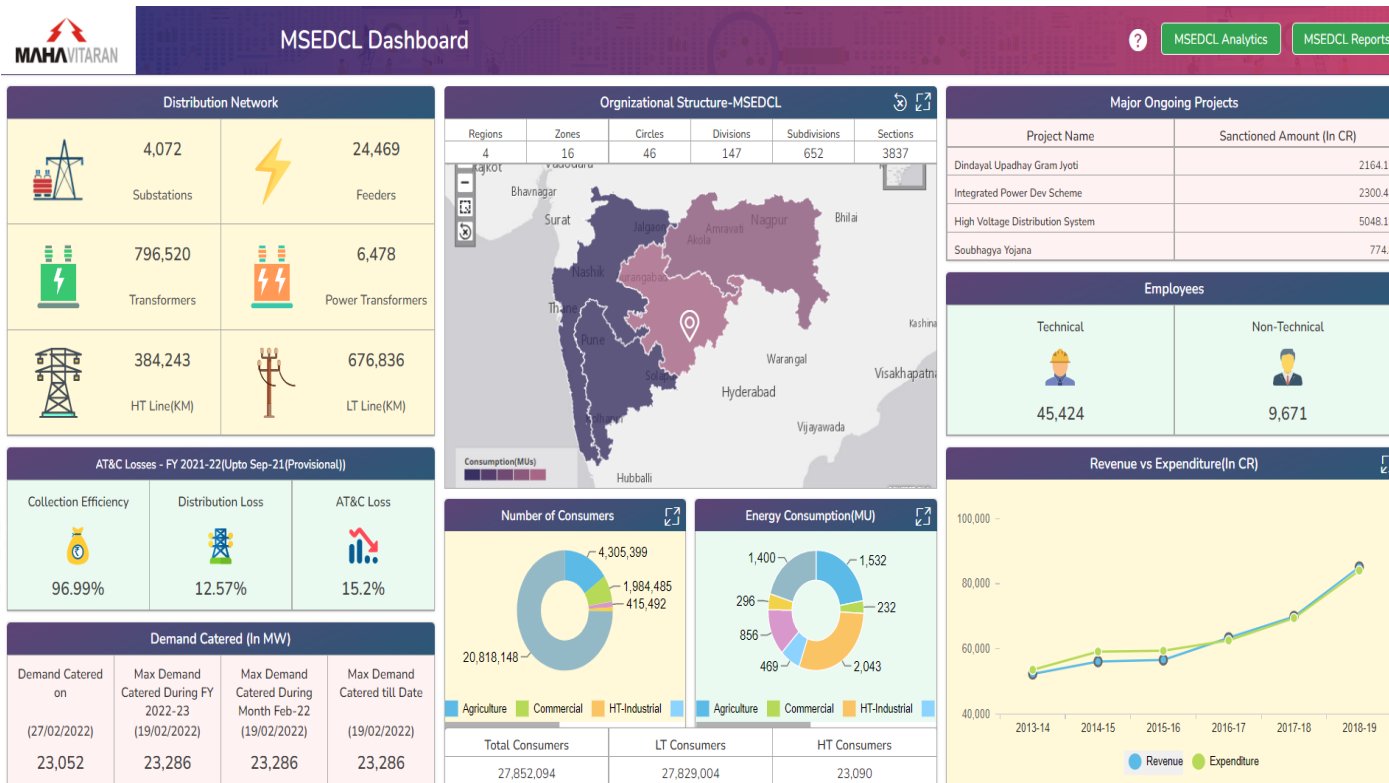
Developed in-house and Launched in 2017 to give access to data and analysis for operation, monitoring & decision making.

Main Features of Dashboard

- Near Real time information
- Graphical visualisation
- Information aggregated geographically
- Drill down analysis upto Subdivision office
- Comparison of KPIs across offices
- Monitoring office wise or consumer wise

KPIs of business functionalities available on dashboard

- Energy Accounting.
- Sale, Demand, Collection and Arrears
- Outage Information
- Consumer Complaints
- Paid Pending Status of New connections
- Project Progress status
- Distribution and ATC losses
- Consumption Analysis
- ABR Monitoring
- Stock Monitoring
- Substation Load Analysis
- Load Profiling



MSEDCL Consumer Engagement Platform

Customer Engagement Platform



DIGITAL MOBILE ENGAGEMENT | SINGLE INTEGRATED PLATFORM | REAL TIME 2- WAY COMMUNICATION | CONFIGURABLE MODULES | DEVICE AGNOSTIC



Citizen Facilitation Centres
For walk in consumers



Social Media
Facebook, Twitter,
Instagram, Youtube



Missed Call
022- 41078500



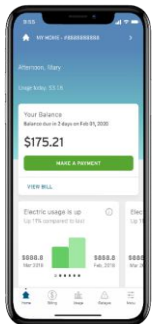
Email
customercare@mahadiscom.in



Consumer Portal
www.mahadiscom.in/consumer



**Central
Call Centre**



Native Mobile App
Android, iOS
English, Marathi

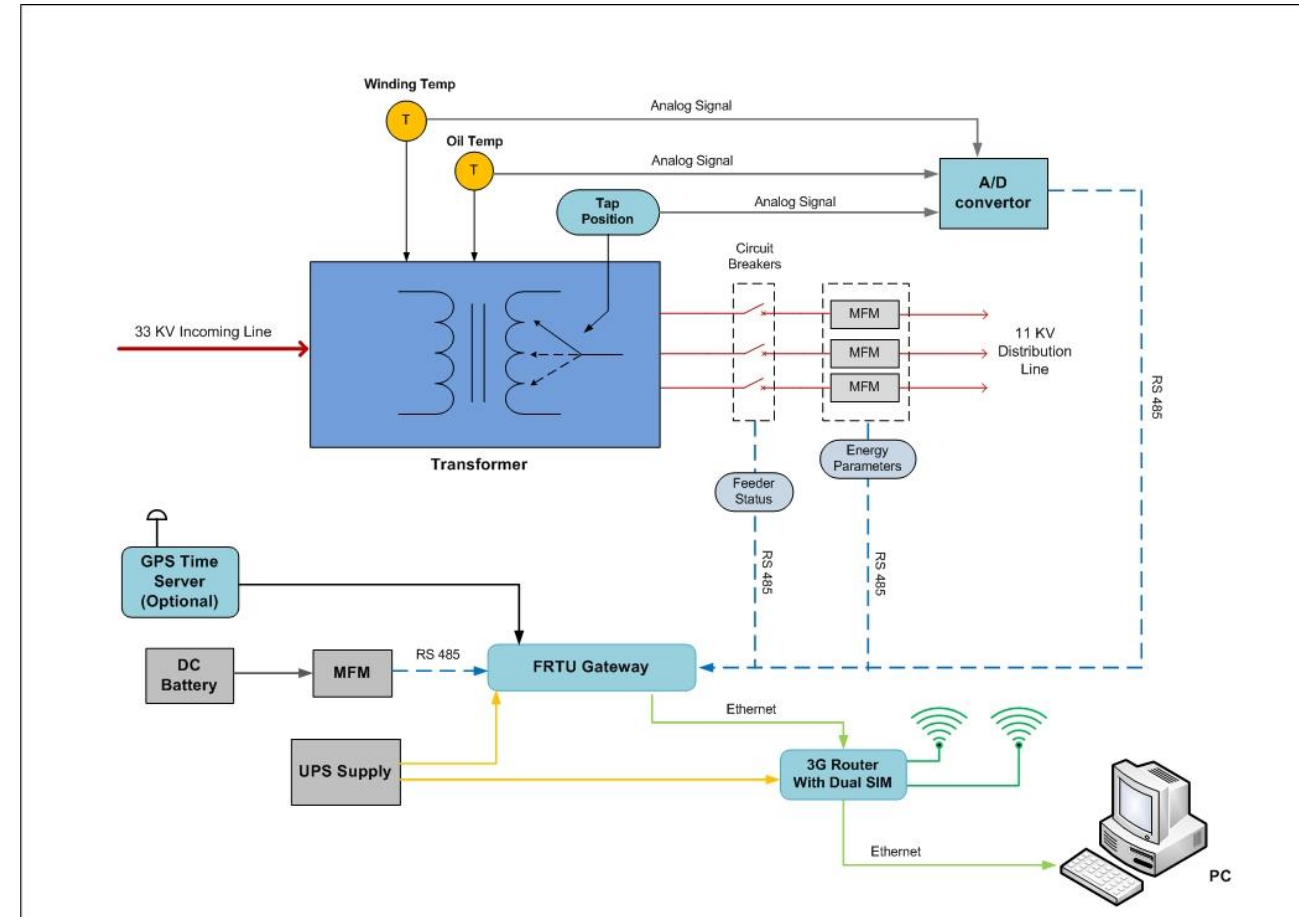


Case Study : Substation Monitoring System

Objectives

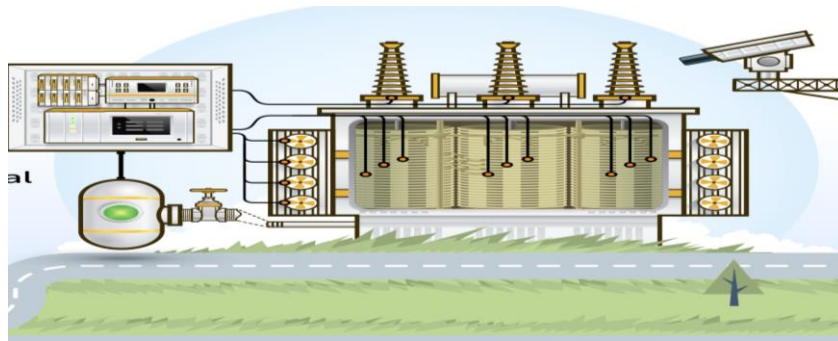
- ✓ Monitor all electrical parameters of feeders, Power Transformers, Circuit Breaker, Relay & Battery status etc.
 - ✓ Substation Equipment Health Monitoring
 - ✓ Energy accounting and theft detection by comparing sanctioned load and real load data
 - ✓ Load forecasting
 - ✓ Load Management, Feeder load balancing
 - ✓ Automated Demand Management – Remote feeder On/ Off
 - ✓ Network planning
 - ✓ Assessment of Ag Load and consumption
 - ✓ Reactive Power Management by controlling capacitor bank
 - ✓ Improving Voltage Profile by online tap changers
 - ✓ Data availability for Operational, Managerial & Strategic decisions
- Pilot for 44 sub-stations in Akola District done on OPEX basis since Sept-2018

Architecture



IT/OT Roadmap

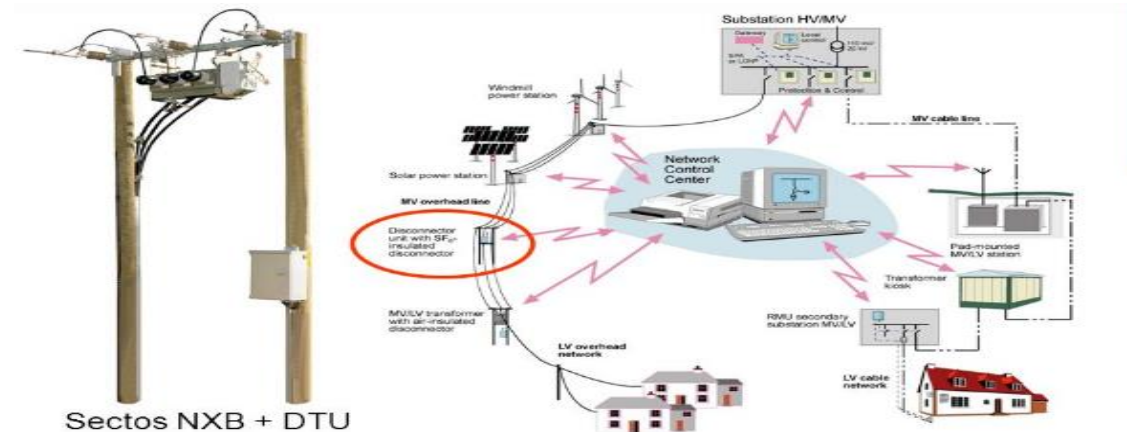
- ✓ IoT is expected to become a major enabling technology in the Power Distribution Automation.
- ✓ IoT projects planned under RDSS scheme



DT Monitoring



Fault Passage Indicator



Sectos NXB + DTU

IT/OT Roadmap

- Smart Metering for all Consumers
- Substation Monitoring System for all substations
- Energy Analytics using AI & ML
- Integrated & Consolidated view of all IT /OT systems at ECCC (Energy Command & Control Center)
- Data driven informed decision making





Thank You

*For discussions/suggestions/queries email: www.indiasmartgrid.org
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