India SMART UTILITY Week 2024

10th International Conference and Exhibition on Smart Energy and Smart Mobility

JWIL SUSTAINABLE WATER MANAGEMENT

Utilities of Tomorrow

JWIL BACKGROUND

❖ Incorporated in 2006 as a water management company providing end-to-end solutions in the following areas

Drinking Water: Supply & Distribution Management

- Raw Water Extraction
- Water Treatment Plant
- Pumping Station, Reservoirs
- Pipeline – Distribution & Transmission
- HSC, Metering, Billing
- SCADA
- O&M
- NRW Management

Wastewater: Collection, Treatment & Reuse

- Sewerage Treatment Plant
- Water Reuse & Recycling
- Effluent Treatment Plant
- Network
- Sewerage Pumping Station

Irrigation

- Dams & Barrage
- Lift Irrigation
- Canals
- Micro Irrigation

Process Water

- Raw Water Intake System
- Cooling Water System
- Service Water System
- Auxiliary Water System

❖ Currently, serving 17+ million customers through our projects.

JINDAL SAW OVERVIEW

ABOUT THE GROUP

- Leading pipe manufacturers in India and abroad
- Part of ***$24Bn*** O.P.Jindal Group
- Founded in 1984 with commissioning of 1st and only UOE Pipe Mill at Kosi Kalan in 1986
- Turnover of ***$1.43*** **Bn in FY 2022-23**
- 10000+ Employees globally
- Global Presence with manufacturing setup in USA , Abu Dhabi (UAE) & Europe
- Servicing Industries ranging from Oil & Gas, Power & Water Infrastructure

STRATEGIC BUSINESS DIVISIONS

WELDED LINE PIPES
Capacity~ 2 Million MT PA

DUCTILE IRON PIPES
Capacity~ 2.5 Million MT PA

SEAMLESS PIPES & TUBES

MINING & PELLET DIVISION

REFERENCE OF URBAN WATER SUPPLY & DISTRIBUTION PROJECTS

❖ **Water Supply Project at Raipur**

A. Scope

- Intake well (104 MLD).
- WTP (52 MLD).
- Pipeline (21 Km).
- UGR (29 Nos)
- OHSR (3500 KL Capacity).
- O&M.

B. Client: Naya Raipur Development Authority (NRDA). – (2015)

C. Completed: 2018

D. Project Value: 156 Cr.

JWIL SUSTAINABLE WATER MANAGEMENT

CHALLENGES IN INDIAN URBAN WATER SECTOR

- Intermittent water supply.
- Lack of bulk metering systems.
- Unmetered supplies: Losses often camouflaged as free supply.
- Available data is unreliable.
- Traditional practices & material.
- Billing practices.
- Perception – water is a free service.
- Cross subsidization.

INTERMITTENT SUPPLY – A COMPARATIVE

Intermittent Water Supply	24x7 Water Supply
Peak factor is 4 to 6 resulted in Large sizes of pipes required to meet demand	Peak Factor is 1 to 2 resulted in lesser sizes of pipe required to meet demand
Infrastructure cost is more	Infrastructure cost is less
Life of network is less due water hammer effect	Life of network increases due steady pressure
More manpower to run water supply system	No valve operation & less O&M work
Non- equitable pressure	Maintain equitable pressure
Risk of contamination in non-supply hrs	Reduces contamination level as pipes are always under positive pressure
Large dosage of chlorine/other disinfectants are required	Min dosage of chlorine/other disinfectants are required
Inconvenient supply hours, large storage is required	Continuous water supply, Consumer can manage their time effectively
Water meters go out order resulting into loss of revenue	Life of water meter increases, water billing on Volumetric basis
Result in poor sanitation practices leading to increase in health risk and mortality	High quality and 24x7 water supply boots city's economy, attract more industries and business

BASELINE STUDY – KEY TARGETS

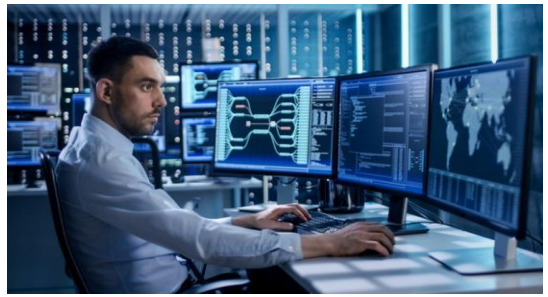
- Bulk Water Meter Installation on inlets & outlets: Volume Input.
- Calculation of current volume billed: Volume distributed.
- Customer survey to identify no. of consumers
- Preparation of base line report.
- Hydraulic study existing system.
- Design of Hydraulic : DMA & sub zoning concept.
- Design the network according to policy.
- Preparation of Rehabilitation Plan.

EXTRACT OF BASELINE STUDY

- Population
- Length of Network
- Mode of water Supply (Hrs/day)
- District Metering Area
- Average Pressure (mtr)
- Authorized water connection
- Water billing
- Input Volume
- Billing Demand
- Losses (NRW/UFW)

JWIL SUSTAINABLE WATER MANAGEMENT

Digitalisation in Water



Bridge

EPC

O&M

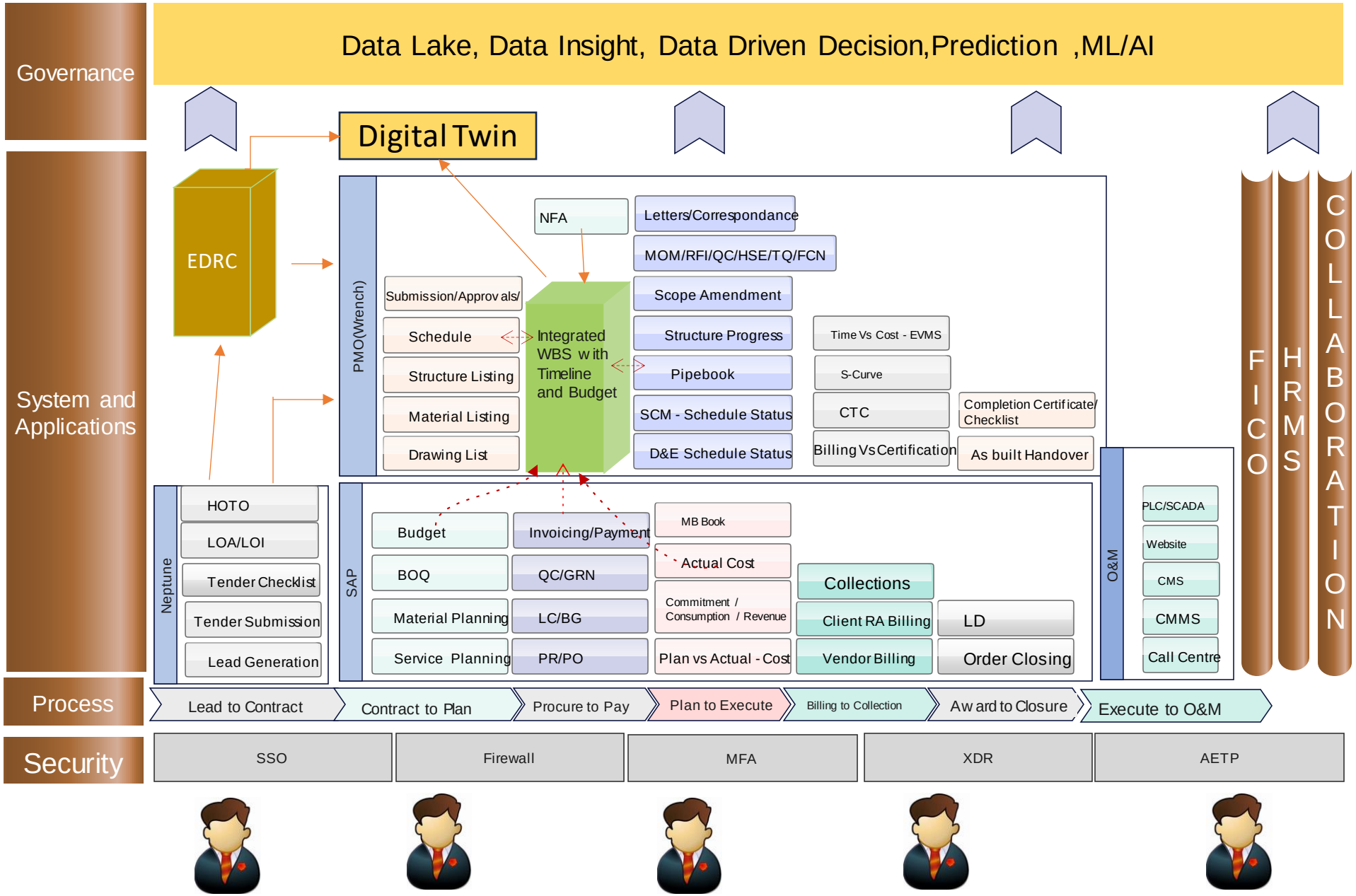
Digital Water Touch Points

- Asset Management
- Operations & Mainenance
- Customer Service
- Corporate Services
- Safety, Quality, Health & Environment
- Strategy & Stakeholkders
- Capital Planning & Delivery
- Business Resillience

Barriers in Digitalisation in Water Sector

- Strategy, Vision & Leadership
  - Clear digital strategy
  - Change management
  - Management Support & participation
- Systems and processes
  - Legacy System
  - Data Limitations
  - Connectivity
  - Data Privacy
- People
  - Culture
  - Skillset
  - Staff resistence
- Technology
  - Lack of professional expertise
  - Technology selection
- Finance
  - Cost
  - Funding & Budget

Architecture



RECENTLY AWARDED PROJECTS

Project: Improvement of Water Supply System including operation & maintenance of Transmission & distribution pipes, pumping stations, service connections and consumer meters with DMA formation and NRW reduction in ***Chandrawal WTP Command Area*** (Package 2: West Zone).

Client: DJB (JICA Funded).

Scope

- Transmission Main (16.8 Km).
- Construction of new UGRs & Rehab of old UGRs.
- Distribution System (Above 300 Kms).
- SCADA system for monitoring & control.
- O&M (12.8 years)

Project Value: 658 Cr.

Delhi Jal Board

JWIL
SUSTAINABLE
WATER MANAGEMENT

DIGITALISATION & AUTOMATION: DJB - CHANDRAWAL

Foreword

WHAT IS
DIGITAL TRANSFORMATION?

Better User & Customer Experience

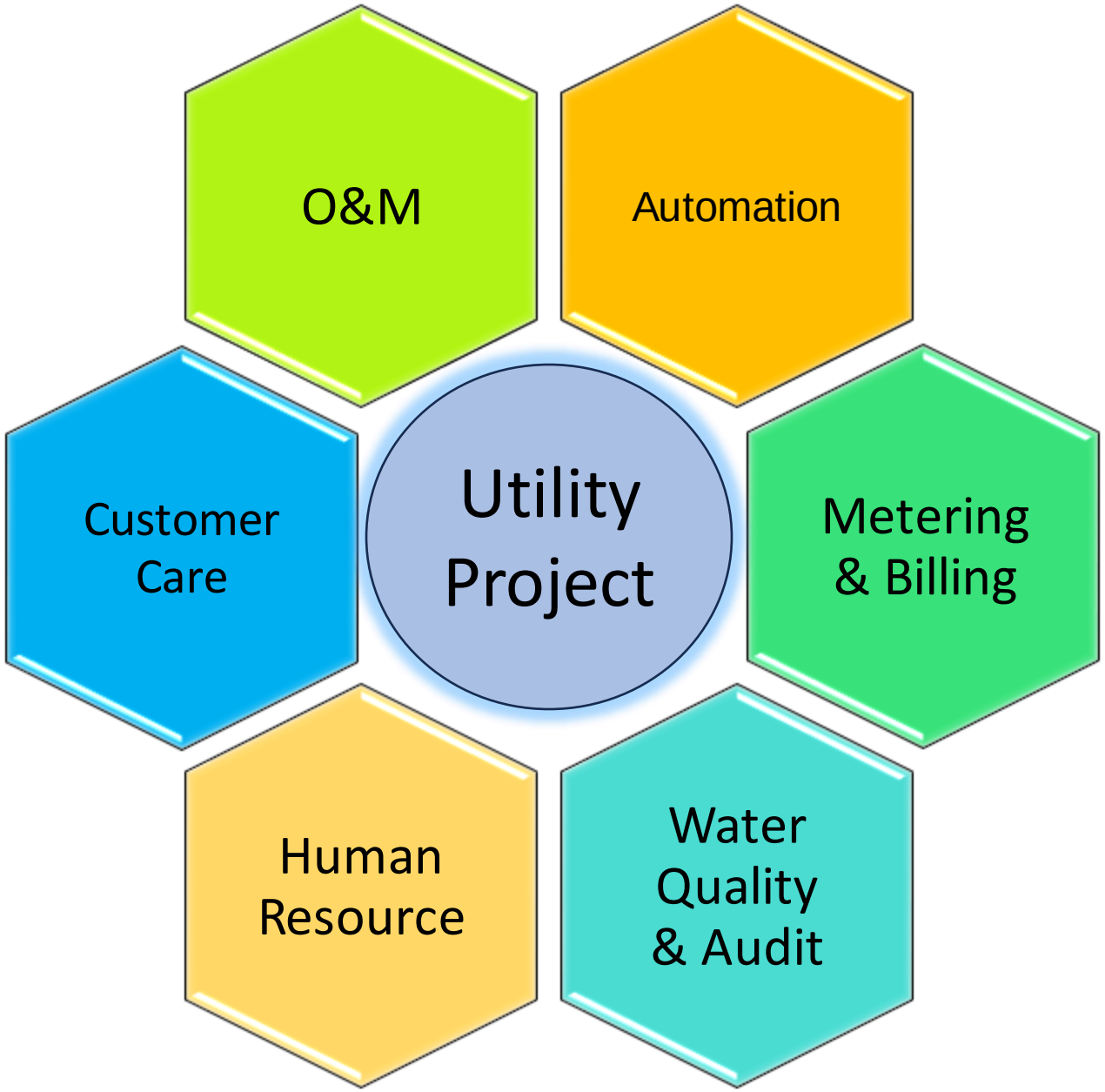
Enhances Management Decision Support System (Business Insights)

Connects isolated and varied data systems (Integration, Availability, confidentiality)

Increase Customer and market base (Higher revenue & profitability)

Agile productive teams

Water Utility: Key Functions

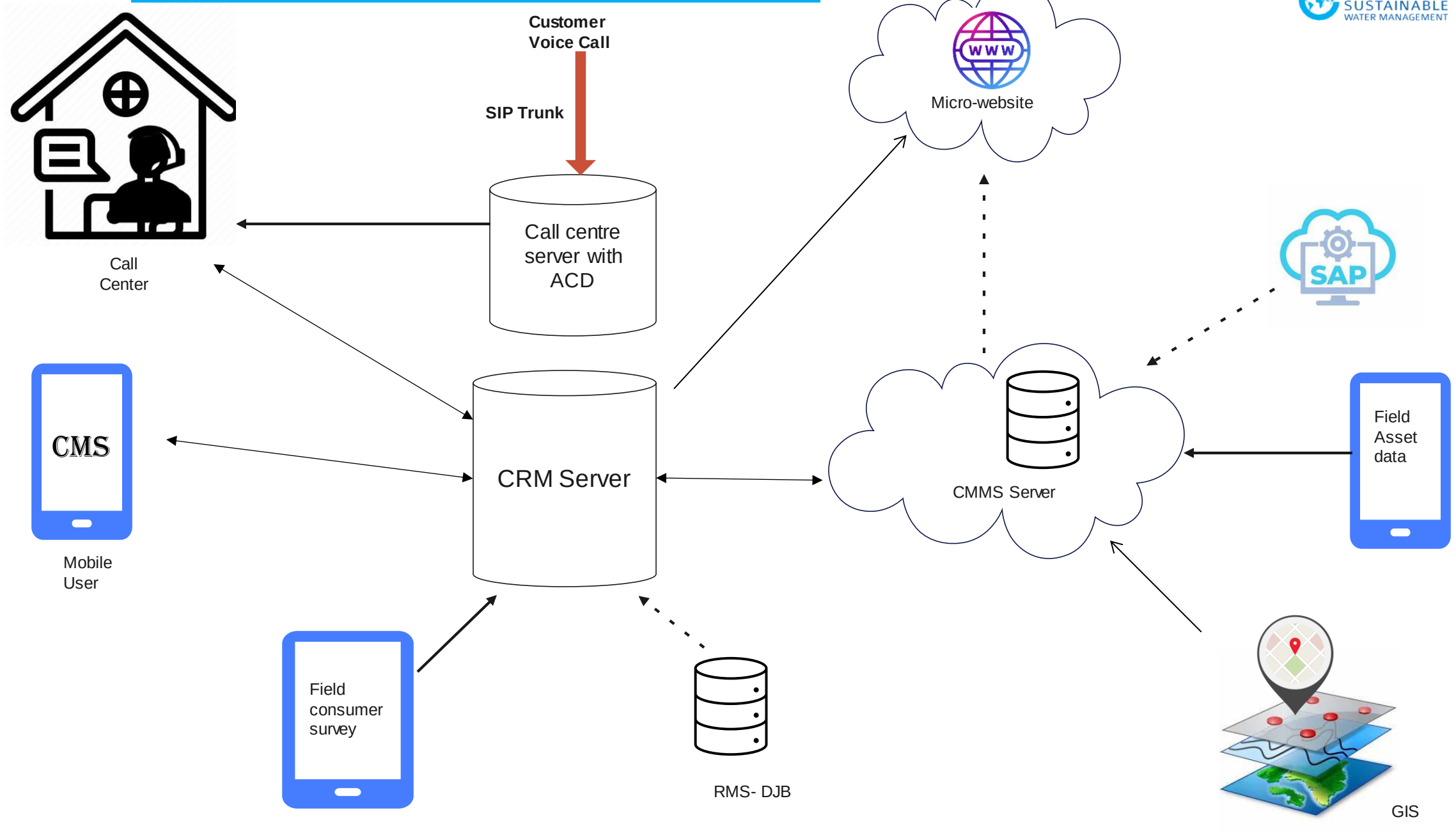


Digital solutions

Customer Care	• Customer contact center • Customer care portal • Self service Bots • Door-step Service
Operations & Maintenance	• CMMS • ERP • GIS / Scanners/ Digital Twins
Automation	• SCADA • IOT & sensors • Audit (quality & leakage)
Meter to Cash	• RMS • Secure Mobility • Smart Meters/AMR
Human Resource	• Attendance • Leave • Shift Management • Productivity

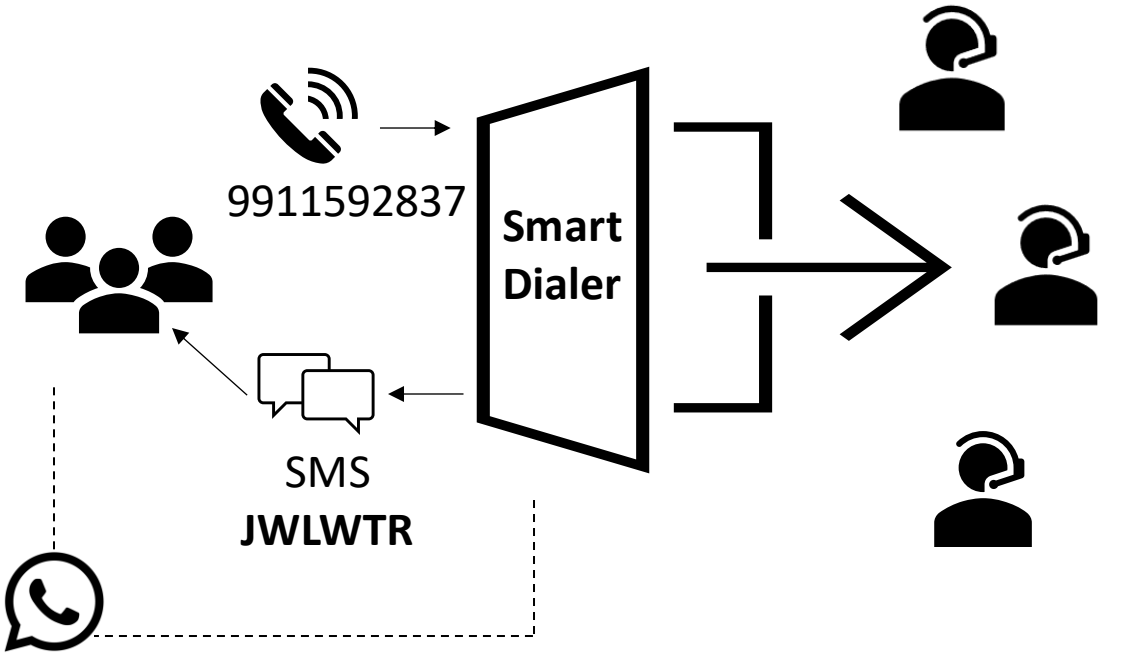
Dashboard

Architecture



Customer Care & Relationship Management

Admin Panel	Smart Dialler	CMS - Web	CMS - Android APP	Micro-website
System Configuration	Call Center	Complaint Registration	Complaint Resolution	Website

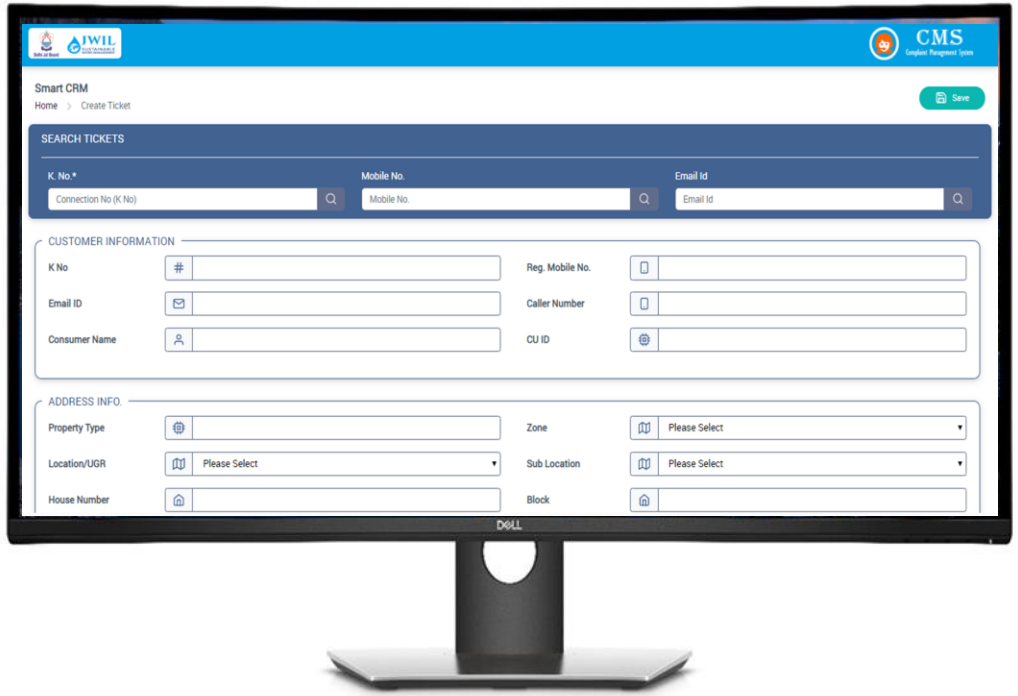


CMS

- Customer Ticket Creation
- Auto Consumer search (Kno. & mobile No.)
- Ticket Source: Call Center, front desk, VIP, others
- Setting ticket priority
- Multiple Complaint type
- Complaint Subtype : Technical, Revenue, House Service
- Complaint subtype: Leakage, No water, Low pressure, meter, bill, illegal connection, etc.
- Reports & Dashboard

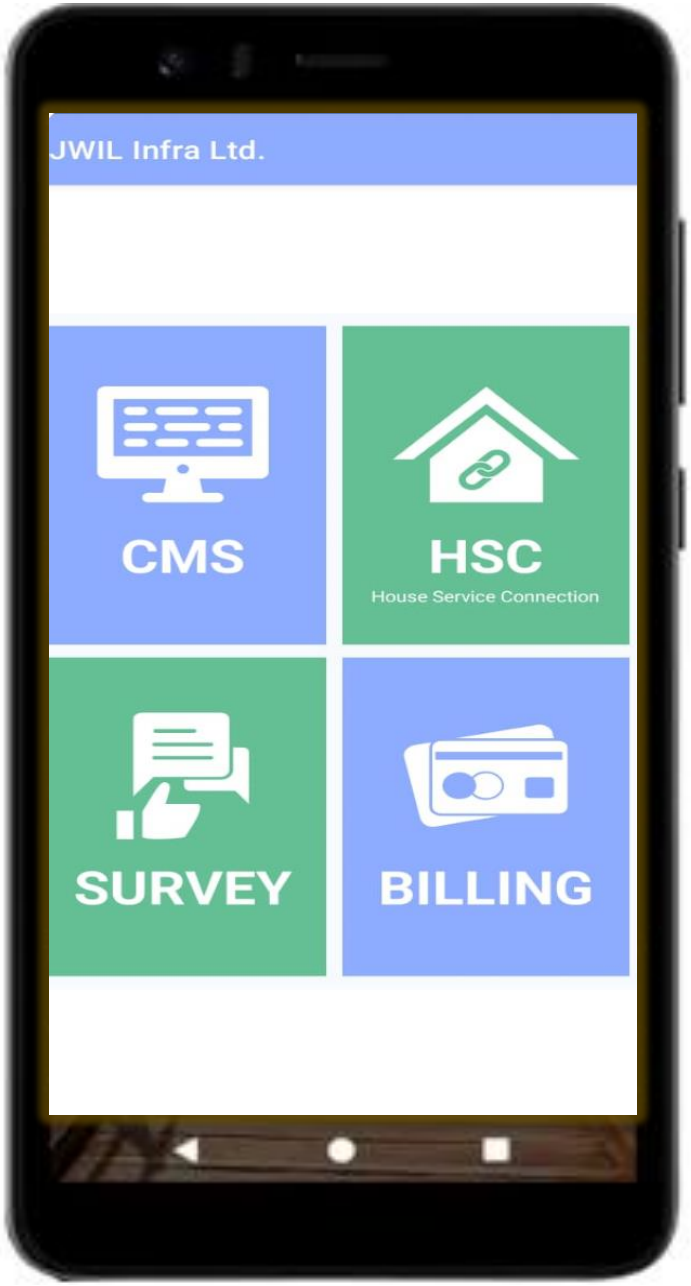
JWIL SUSTAINABLE WATER MANAGEMENT

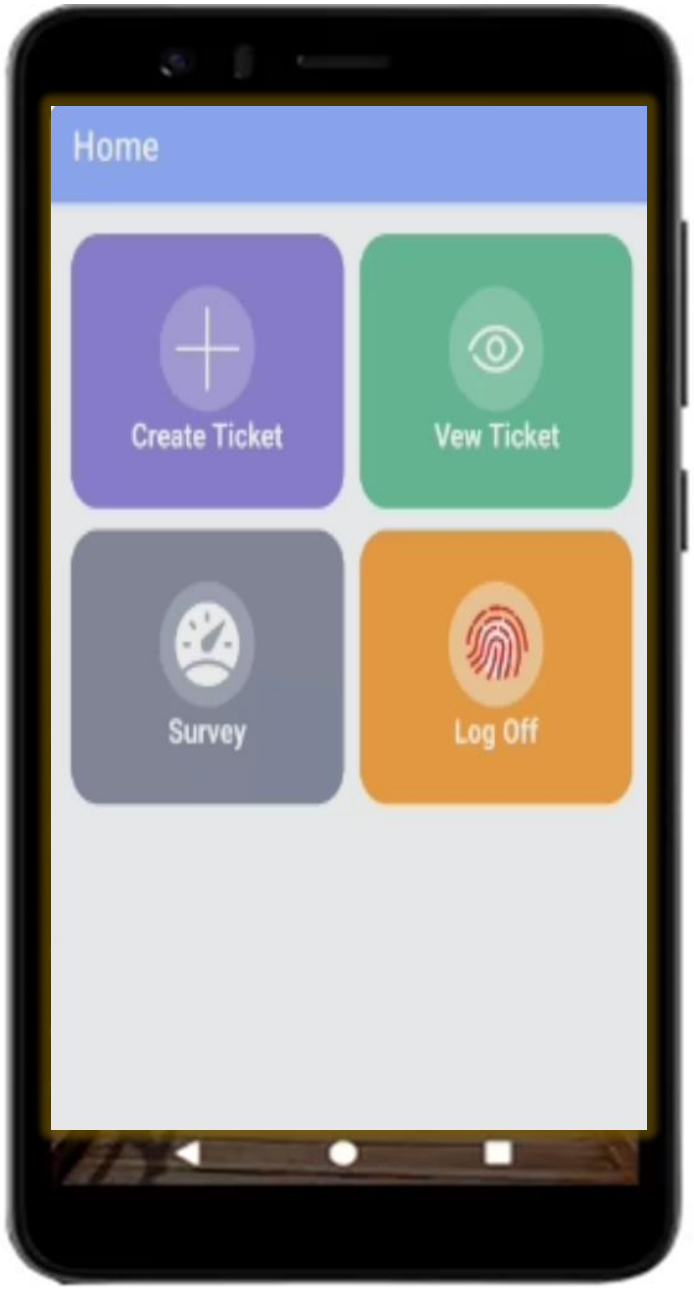

SMART DIAL
CAMPAIGN MANAGEMENT
Campaign
CRM Configuration
Campaign Queue
Mapping
Campaign Transfer mapping
Callback - Re schedule
Email Template
SMS Template
File Category
Music On Hold
User Mapping to DID
SMS Disp Mapping
LEAD MANAGEMENT
Import Lead
Assign Lead
Lead Manager
CRM Data
Callback Assign
OTHER MANAGEMENT
Free Agent
Email Inbox
jwilwaterservices
14 Selected
7 all selected!
13 all selected!
ONCALL 1 RINGING 0 IDLE 0 ERROR 0 OTHER 1 TOTAL 2
JWILWATERSERVICES
CALLBACK: Agents(0),Others(0)
ACTIVE LEAD 0 DIAL NUMBER 0
nishaverma
sumit
Break
Auto
ONCALL
BREAK

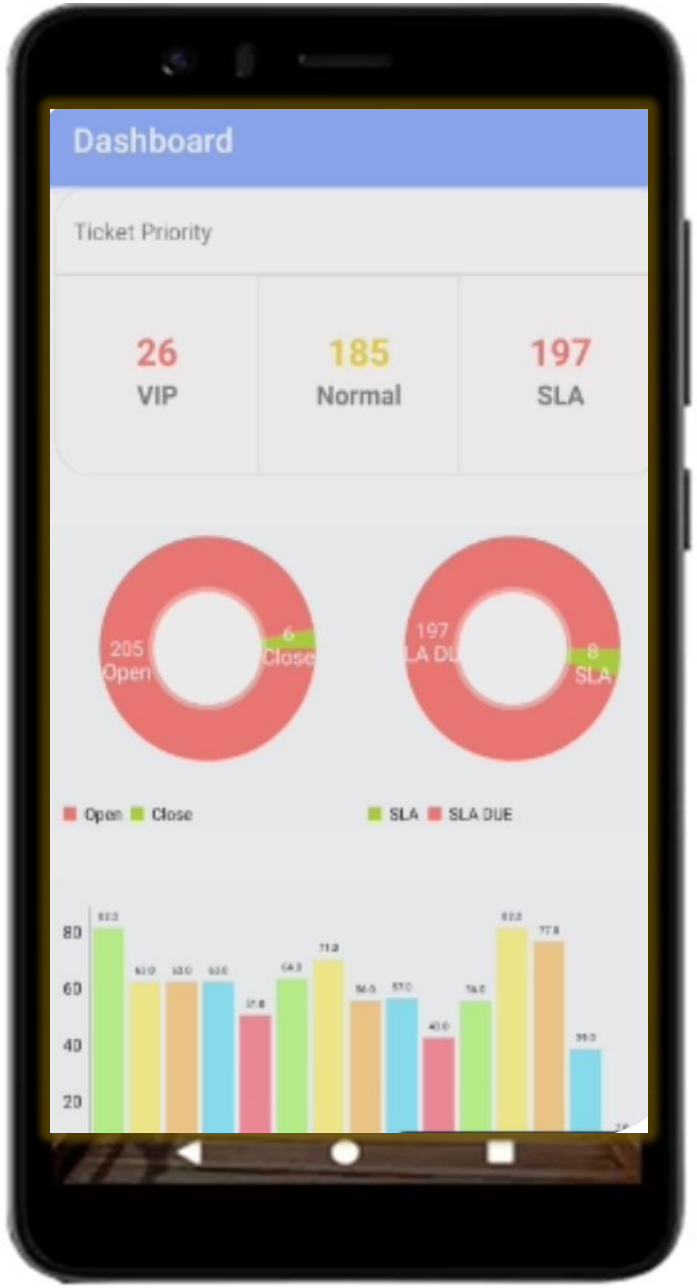

JWIL
CMS
Smart CRM
Home > Create Ticket
Save
SEARCH TICKETS
K. No.*
Connection No (K No)
Mobile No.
Mobile No.
Email Id
Email Id
CUSTOMER INFORMATION
K No
Reg. Mobile No.
Email ID
Caller Number
Consumer Name
CU ID
ADDRESS INFO.
Property Type
Zone
Please Select
Location/UGR
Please Select
Sub Location
Please Select
House Number
Block
DELL


Ticket Opened/Closed in last 30 Days
Line
Bar
Open
Closed
Ticket Opened/Closed in last 30 Days
Line
Bar
Open
Closed


customer.care@jwil.in
JWIL
9911592837
Home
About Us
Consumer Corner
Water Utility
Career
Contact Us
Complaint Registration
View complaint status
Know Your KNO.
Water Charges & Tariff
Feedback/Queries
Welcome to the Delhi
24x7 Supply of Potable Water.


JWIL Infra Ltd.
CMS
HSC
House Service Connection
SURVEY
BILLING


Home
Create Ticket
Vew Ticket
Survey
Log Off


Dashboard
Ticket Priority
26
VIP
185
Normal
197
SLA
205
Open
6
Close
197
8
SLA
Open
Close
SLA
SLA DUE
80
60
40
20

O&M: CMMS

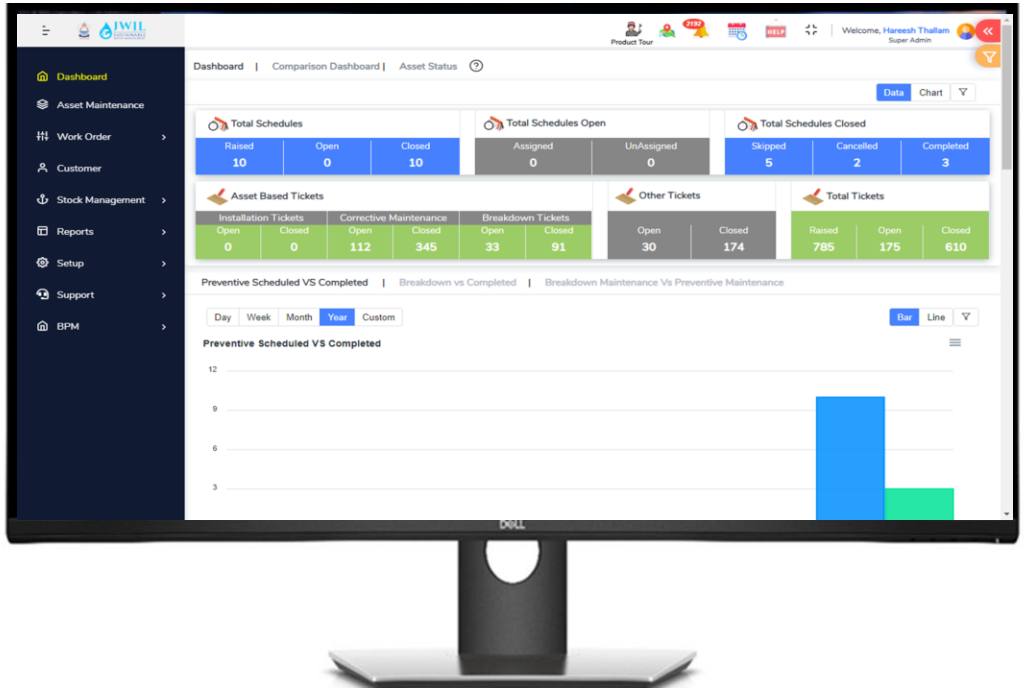
Asset Management

Preventive Maintenance

Breakdown Maintenance

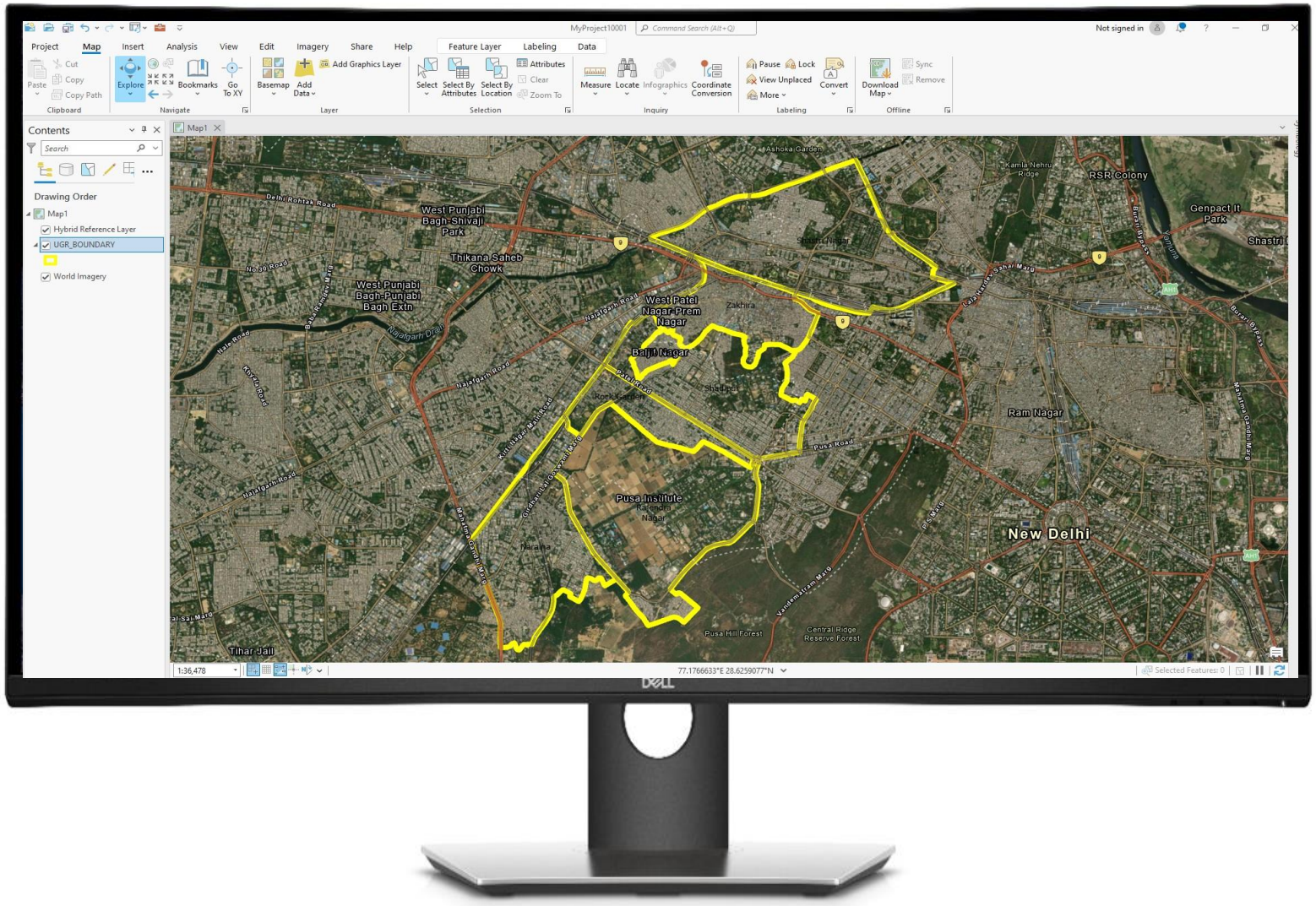
Ticket Assignment

Asset Health Monitoring



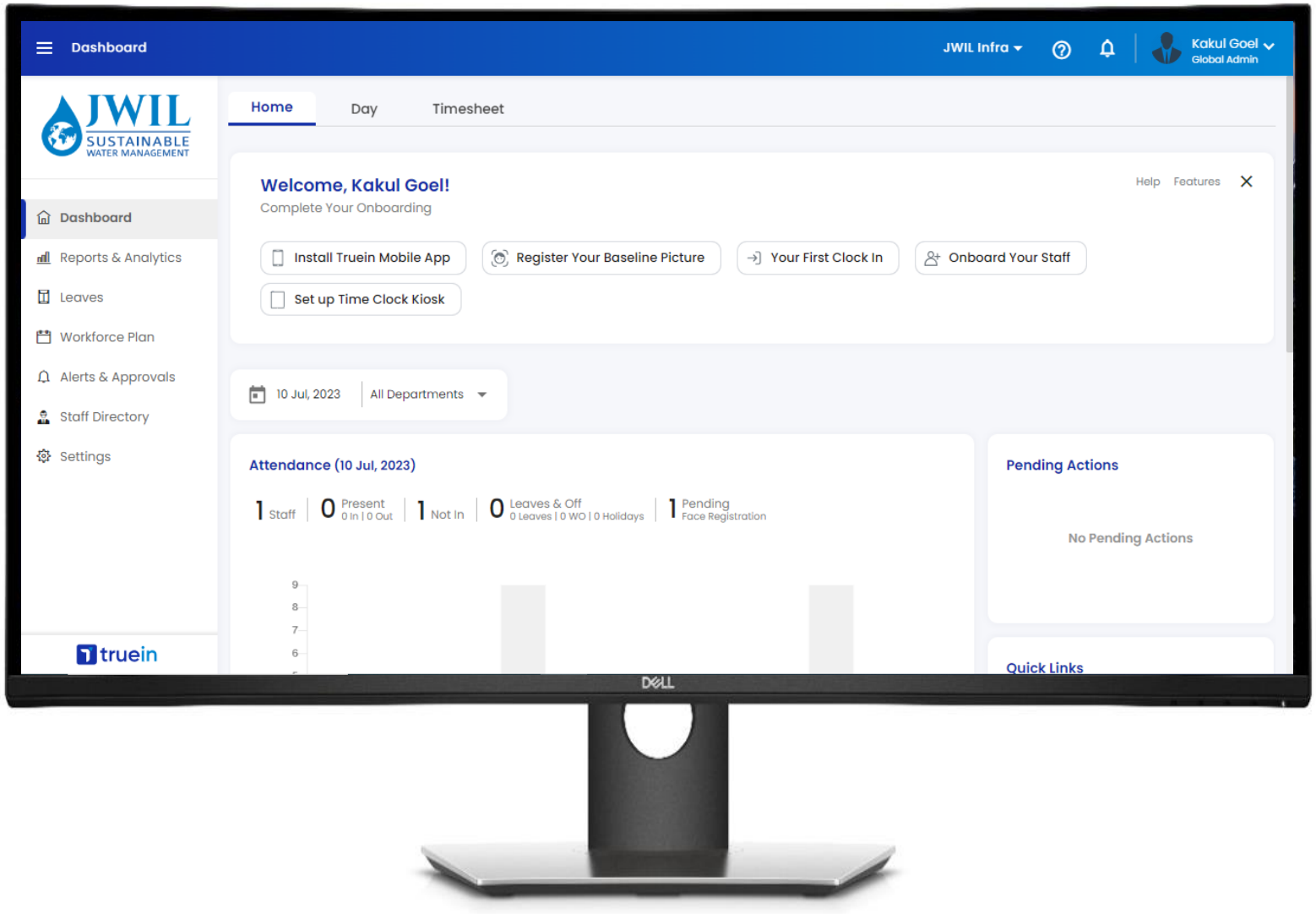
GIS

- Spatial Database Management
- Map & OGC Services
- GIS based analytics
- Mobility with field Survey & Asset Mapping
- Web GIS portal for visualisation of water network and assets.



Human Resource

- Onboarding
- Attendance (geofencing & facial)
- Leave Management
- Shift Management
- Dashboards & Reports



Recognition

IDG Recognition : Oscars of IT Projects

Thank You

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