

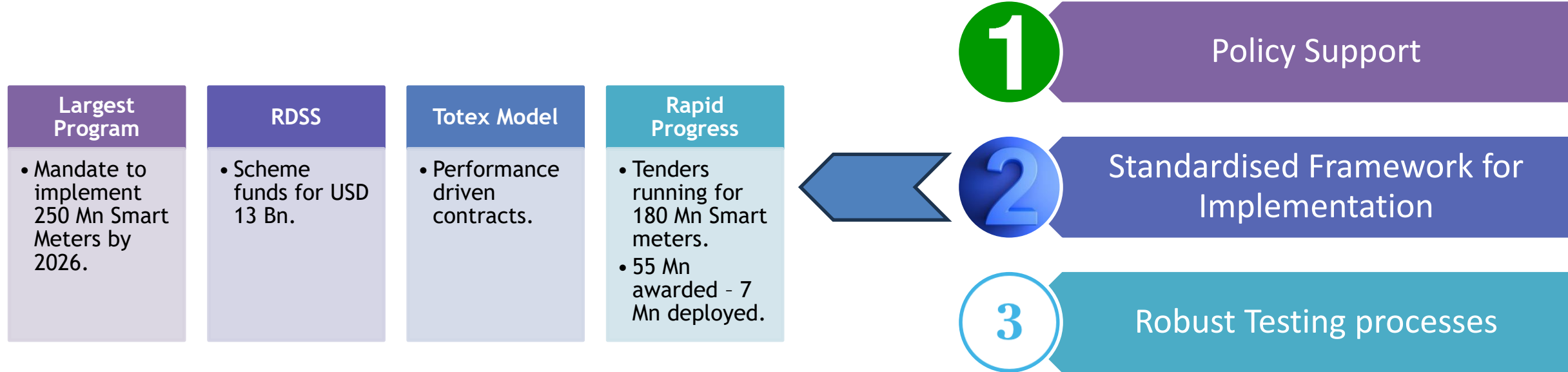


IntelliSmart

A JV of NIIF and EESL

Pioneering digitalisation
in Power Sector

Smart Metering Implementation in India



Potential savings from 2022 to 2031-32 with AMI



About Us

Company Overview

Structure

- NIIF (Gol backed fund directed by Governing Council chaired by Finance Minister, Gol and Secy - DEA, Secy as other member) owns 51% stake
- EESL (promoted by Ministry of Power, Govt. of India) owns balance 49% stake

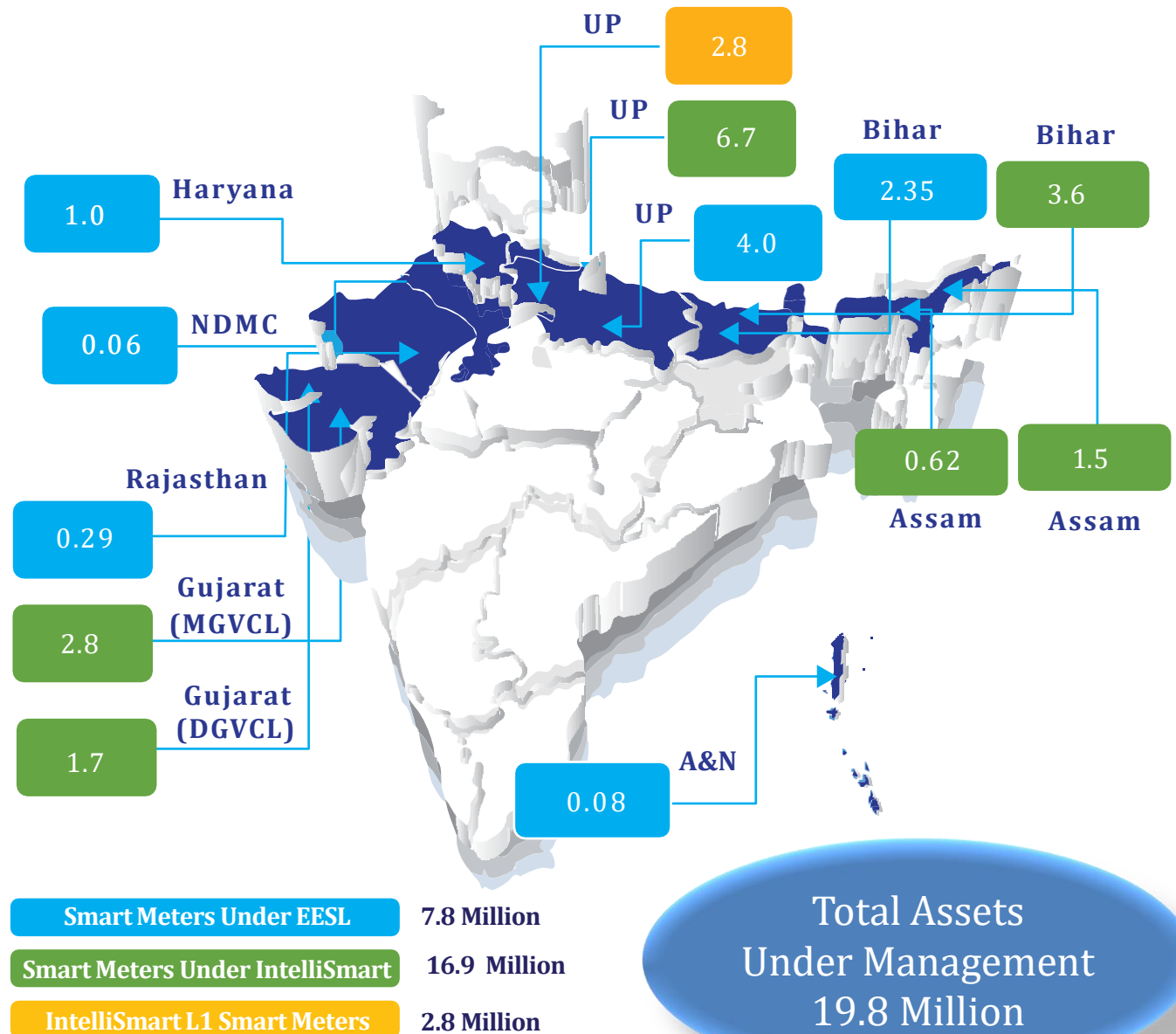
Funding, implementing and maintaining the smart meter infrastructure

Mission

Pioneering digitalisation in the power sector; create a sustainable and efficient energy ecosystem propelled by digital technology and create value for all by reducing inefficiencies and energy losses in the power value chain

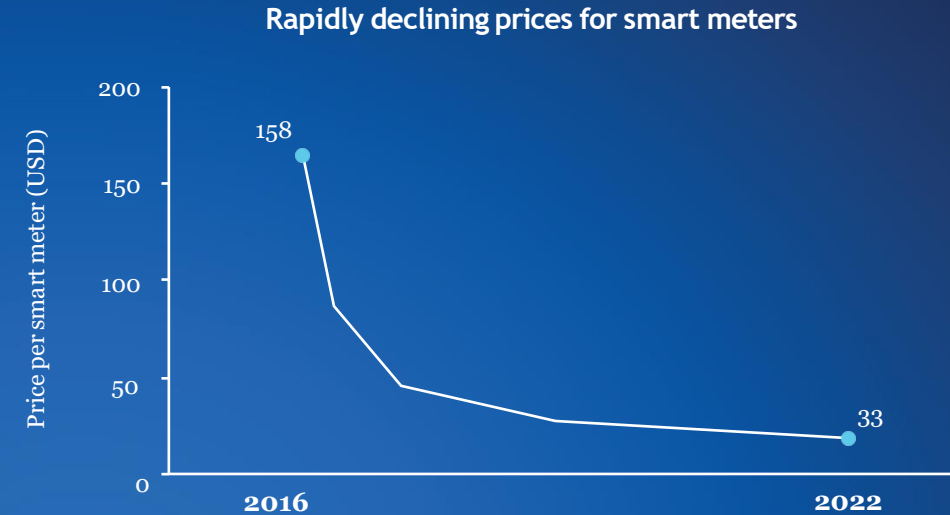
Vision

To be recognised as the most preferred digital partner of the utilities and create a digitalised & resilient power sector through innovative technological solutions



Benefits Realized from Existing Projects in India

Discoms	City	No. of consumers	Consumer Type*	Average monthly revenue (INR per consumer)			
				Before	After	Net Inc.**	Net Inc. (%)
NDMC	New Delhi	59,494	D & ND	32	36	4	11.52%
UP	All discoms except KESCO	10,38,699	D & ND	14	17	3	20.86%
KESCO	Kanpur	1,05,194	D & ND	19	20	1	6.22%
BIHAR	All discoms	1,28,280	D & ND	6	8	2	41.03%
Charges by EESL (USD per meter per month)							1-1.2



Key Benefits Delivered-

- Theft Reduction.
- Load Regularisation.
- No Meter Bypassing.
- Real time data availability.

During Covid-induced lockdown -

- Smart meter billing was 95% against 71% provisional billing in non-smart areas
- Daily revenue collection of Bihar discoms during lockdown @ USD 6,500 through smart pre-paid meters
- In March-April 2021, revenue collection in Bihar discoms increased 12% in smart meter areas whereas it came down by 30% in non-smart meter areas

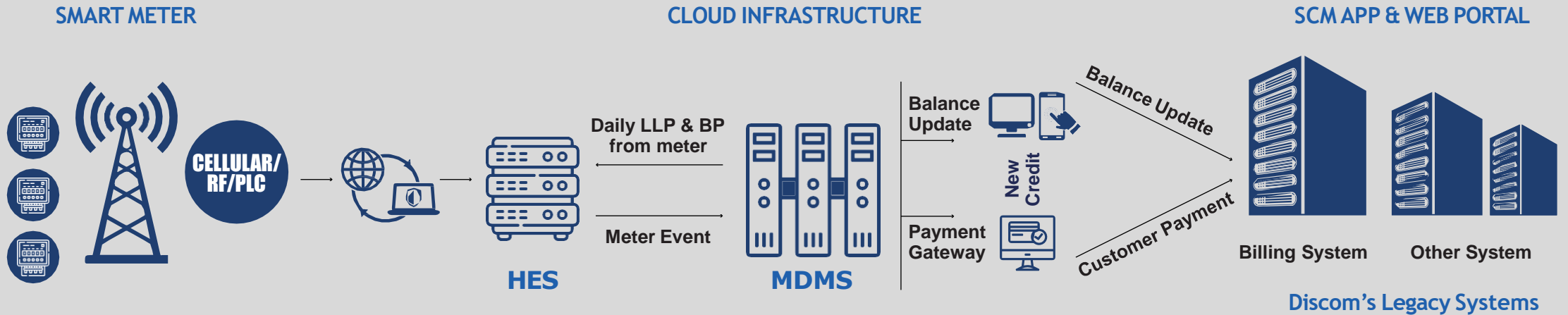
Average monthly gain per meter to the discoms is ~ USD 3, whereas AMISP charges only in the range of USD 1-1.2/month/meter resulting in huge benefits to the discoms

* These are representative numbers based on extrapolation of smaller sample

** The net increase is calculated post neutralising the tariff increase and inherent growth

- D: Domestic / ND: Non-Domestic

Business Model - OPEX (Smart Meter As a Service)



PAYMENT (monthly fee for meters installed)

**BUILT-UP PHASE
1.5 - 3 YEARS**

**O & M PHASE
5 - 6.5 YEARS**



Key Features:

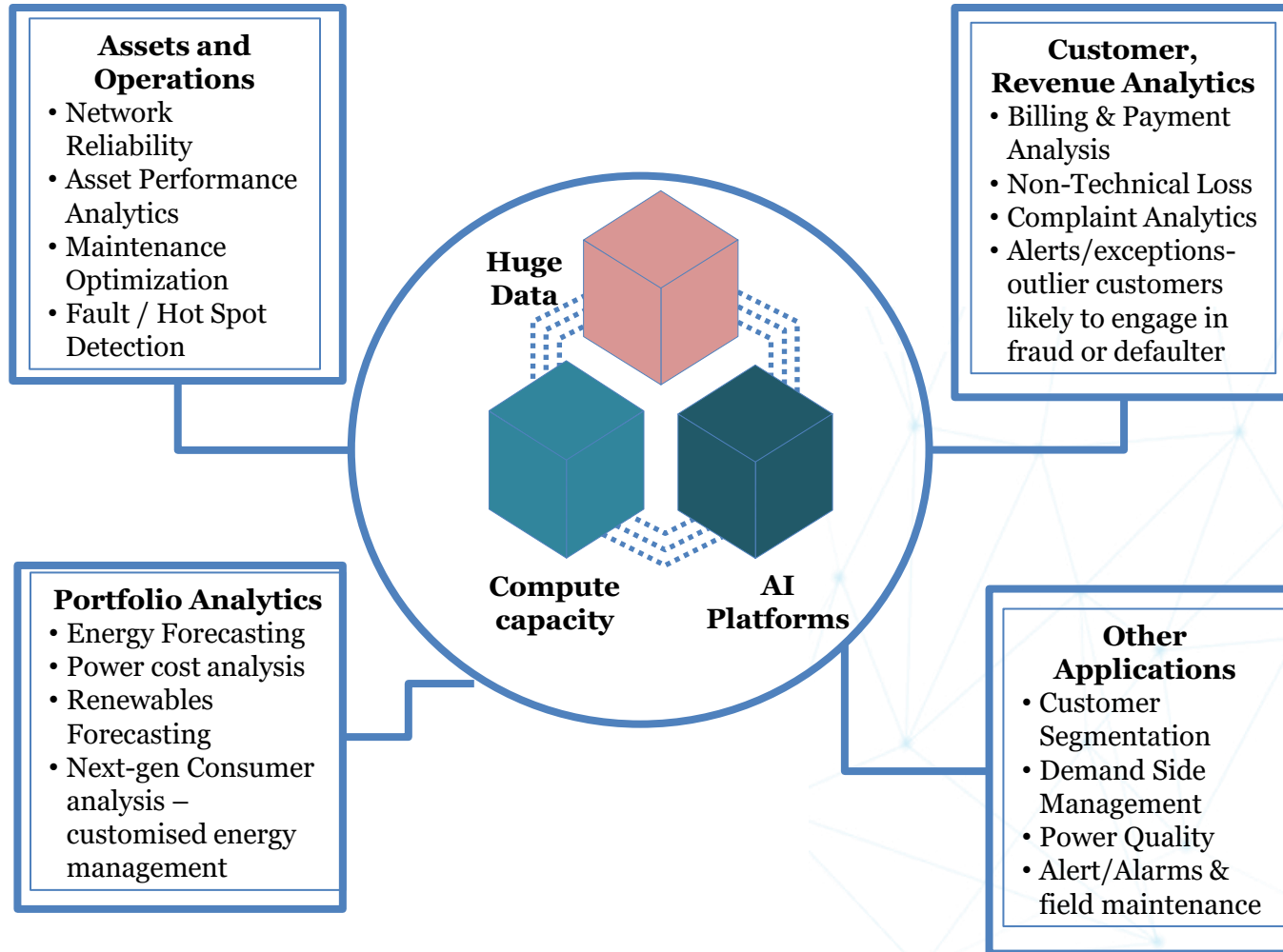
- No upfront CAPEX from utilities
- Cost discovery for value chain through competitive bidding
- Recovery of actual cost along with nominal RoE
- Payment based on SLAs met

OPEX versus Capex

Parameters	OPEX	Capex/EPC
Upfront financial burden	● (Red)	● (Green)
Scalability	● (Green)	● (Yellow)
Flexibility	● (Green)	● (Yellow)
Reliability	● (Green)	● (Red)
Accountability	● (Green)	● (Yellow)
Value delivery to Consumer	● (Green)	● (Red)

● High
● Low
● Medium

AI/ML & Applications

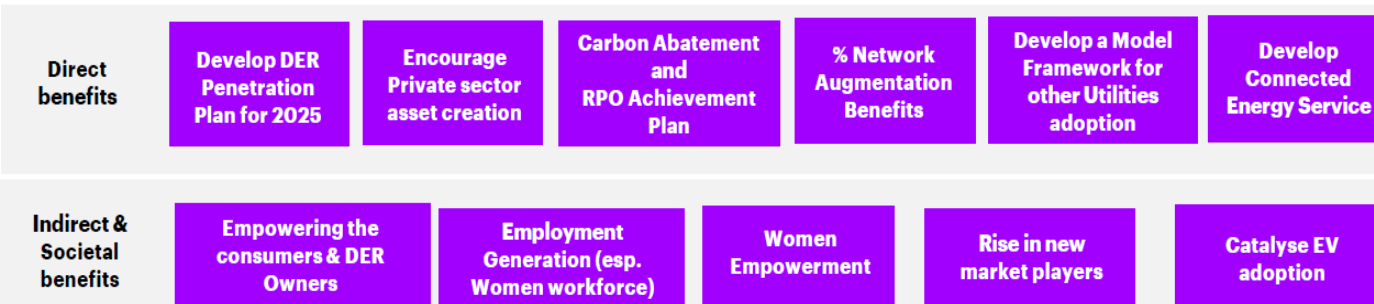
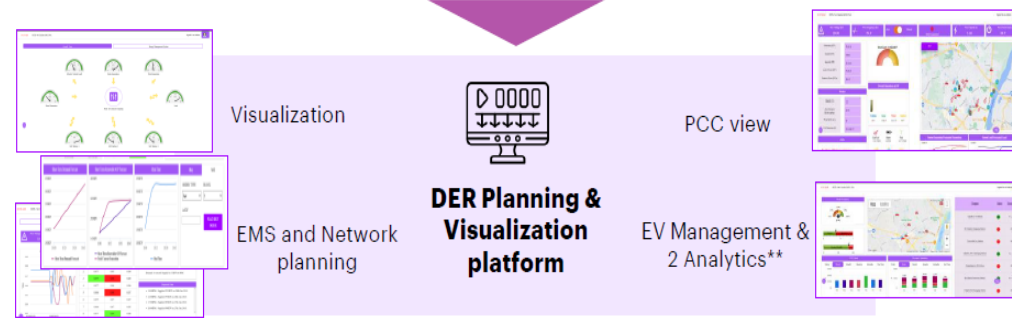


Pilot Conducted in One DISCOM in India

Description	Baseline Sep 2021	Pilot Output
Anomaly/Theft Detection (No. of Accounts)	120	252 High Risk Customers. Total 1027 Cases have been identified.
Billing Ratio	1.068	14,047 consumers with total consumption of 2,22,779 Units have not been billed for September 2021.
Contracted Demand (kW)	4,31,289	<ul style="list-style-type: none"> • 27.89 % of Total consumers Exceeded Sanctioned Demand in year 2021. • 421 HT/LT Consumers exceeded Sanctioned Load
High bill generation Analysis (No. of Accounts)	1,603	7,225 Consumers defaulted due to High Bill.
Complaint Defaults	5,660	5,660 Customers who had raised complaint with Discom have defaulted on their payments

AI & ML based pilots on advanced data analytics have potential to generate additional revenue of ~USD 10 Bn in India.

DER Integration Tool



- 1 Provide heatmaps to **Utilities** of DER potential in the state and help in identifying location for setting up project
- 2 Facilitate **customers' and developers** to plan their DER and submit requisition to utility
- 3 Allow **Utilities** to plan DER penetration and grid integration, and bid out/match requirements
- 4 Allow **developers** to participate in microgrid/DER project bidding, seek grid clearance, plan DER supply models, and also sell surplus generation
- 5 Allow **Utilities** to manage/control DER proliferations in the region and leverage localized supply effectively and increase value benefits
- 6 Beside DERMS analytics, perform various **other ancillary analytics** on customer behavior, vendor/developer performance, DER inventory and equipment performance etc.
- 7 Facilitate **customer's** participation in Demand response events



Utilities in India are showing good interest for implementation of DER solution.

Other Digital Initiatives

Enterprise IT Infrastructure

- Supports multiple technologies and products
- Cluster-based scalable architecture
- Composite solutions on secured & well-managed architecture

Stack for RF and Cellular Communication

- RF Mesh/NB-IoT/Cellular integration for electricity & gas
- Common NIC & stack cellular + RF with single antenna

EV Charging Platform

- Aggregation of in-home/residential electric car charging stations
- Last mile electric network asset management based on IoT/AMI & AI/ML techniques

Gas Metering

- Implementation of smart metering in gas sector
- Globally accepted standard

P2P Block Chain for Rooftop Solar

- Trading based on P2P models using blockchain
- Market place for prosumers and consumers for trading

Smart Meter as a tool for Disaster Management

- Capacitors or batteries store sufficient energy to send out a “dying gasp” message in the event of power loss

Smart Meter Hub

- Single Point Entry into the consumer home
- Electricity, gas, water, broadband all to be done through single hub





The IntelliSmart Advantage

First Mover Advantage

- Strong management team
- Largest Developer in India

Proven on-ground experience

- Managing over 3 Mn operating meters
- MI of ~ 5,000/day

Cost Leadership

- Strategic tie-up with OEMs/service providers
- Leveraging economies of scale

India's pure play smart meter asset manager

- Unique parentage
- Focus on robust IT infra via tie-ups with IIT Delhi, Infosys and various digital initiatives

Best Practices

Focus on Business Process and Quality

- 1 | Robust Quality Assurance Program
- 2 | Process Driven Project Implementation
- 3 | State and Corporate Level Monitoring
- 4 | Continuous Improvement

Implementation of a **Robust Quality Assurance Program** to ensure quality across the complete value chain from meter supplies to field operations, cyber security and IT application & operations, have established the most defined FQP and MQP for the smart metering

Carryout **Process Driven implementation of projects** and governance framework to standardize operations with defined process control points to enable improved efficiency, collaboration and effective decision-making. Have defined instituted end-to-end process definitions

Rigorous product quality tests through external NABL labs and compliance checks through independent Quality Assurance Consultant in addition to stringent **monitoring at state and corporate level**

Enable cross-pollination between project teams and external partners to continuously capture and integrate best practices leading to systemic and **process improvements**

Best Practices in Supply Chain Management



Hybrid Supply Chain Structure

Hybrid Approach - Centralized strategy & decision-making with decentralized operations to align corporate and divisional goals, utilize the functional expertise & efficiency and adaptation of flexibility and agility across functions



Leveraging Technology

From inventory management and replenishment to order fulfillment and last-mile delivery, each stage of the supply chain is being leveraged as a strategic tool to further enhance the business objectives in terms of strategic positioning, increased value, reduced operational cost, flexibility & risk mitigation



Strategic Partnership for Key Components of AMISP

Engaging partners equipped with the right mindset; establishing a healthy relationship with the vendors based on strong foundation of communication, common goals, increased transparency, and mutual collaboration



Centralized Contract Management

Ensure effective and timely compliance, contract standardization and incorporation of learnings from various projects





Collaborate to Change & Change is the Only Constant

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