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# India SMART UTILITY Week 2025

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**Session : Challenges in Smart Metering Rollouts  
Solution Provider and System Integrator  
perspectives**

*Presented By*

***Ramana Elchuri, SVP, Fluentgrid Ltd***

*With only about 8% Smart Meters implemented out of the total planned 250M rollout under RDSS in over 3 years now, there definitely is a need for the stakeholders to introspect, review lessons learnt and to come together for some course corrections..*

*The Good part: A few states have taken major strides and fared significantly better*

**So how does one classify some of these challenges?**

**Some Social, environmental and System induced factors**

- System level Inertia towards adopting change, taking decisions- bid finalizations, awards getting delayed.
- Political factors sometimes coming in the way.
- Consumer awareness and engagement: Lack of awareness of the benefits and **resistance to prepaid**. *Could we do more in terms of using mainstream media, social channels and ground level outreach?*
- At a utility level- deeper cross learning from states that have fared better is missing
- Finance/ funding plan of AMISP's disrupts due to uncertainties



## Technology and Methodology related

- Ability to visualize the technological Complexity involved and selection of the right solutions when rolling out programs of this scale.
- System Integration may often lag behind- with multitude of solutions and technologies powering each AMISP project.
- SLA's, SAT and Go Live requirements?- originally provisioned in SBD, need a fresh look? Now that there is a huge learning from actual deployments.
- Skilled Workforce Availability: Shortage of skilled professionals for installation, configuration, and maintenance impacts scalability.
- Lack of Centralized visualization tools that can give a holistic picture and automation.
- Standardisation of Smart metering field implementation apps is missing -results in Data inconsistency and delays in restoring semblance- primarily Utility to utility the requirements may vary.

# Key AMI considerations for faster roll-outs



## *Product Interoperability*

- Meter agnostic HES- helps choose from a variety of meter makes, types and roll-outs are naturally faster.
- Unified HES that supports multiple communication standards- GPRS, RF, NBIoT
- MDM integrations with multiple HES and multiple Billing Systems.
- Cloud agnostic- scalable and able to use Platform Services
- Database and Operating System agnostic, portable.

## *Product Capability*

- Robust Product roadmap- future proofing solutions for e.g. renewable (roof top solar, EV) integrations.
- Product architecture – SOA principles, configurable, flexible, and designed to adopt changes seamlessly.
- Readily available Data Adaptors and integration layers to variety of billing, metering, SCADA and other IT/OT systems, from MDM and HES
- Products that have withstood the test of time in multiple utilities and deployments not just in India but internationally.

## *System Integrator capability*

- Proven distribution sector IT and domain experience of SI's is key.
- Past experience of integrating MDM, HES with multiple utility systems, legacy products and solutions.

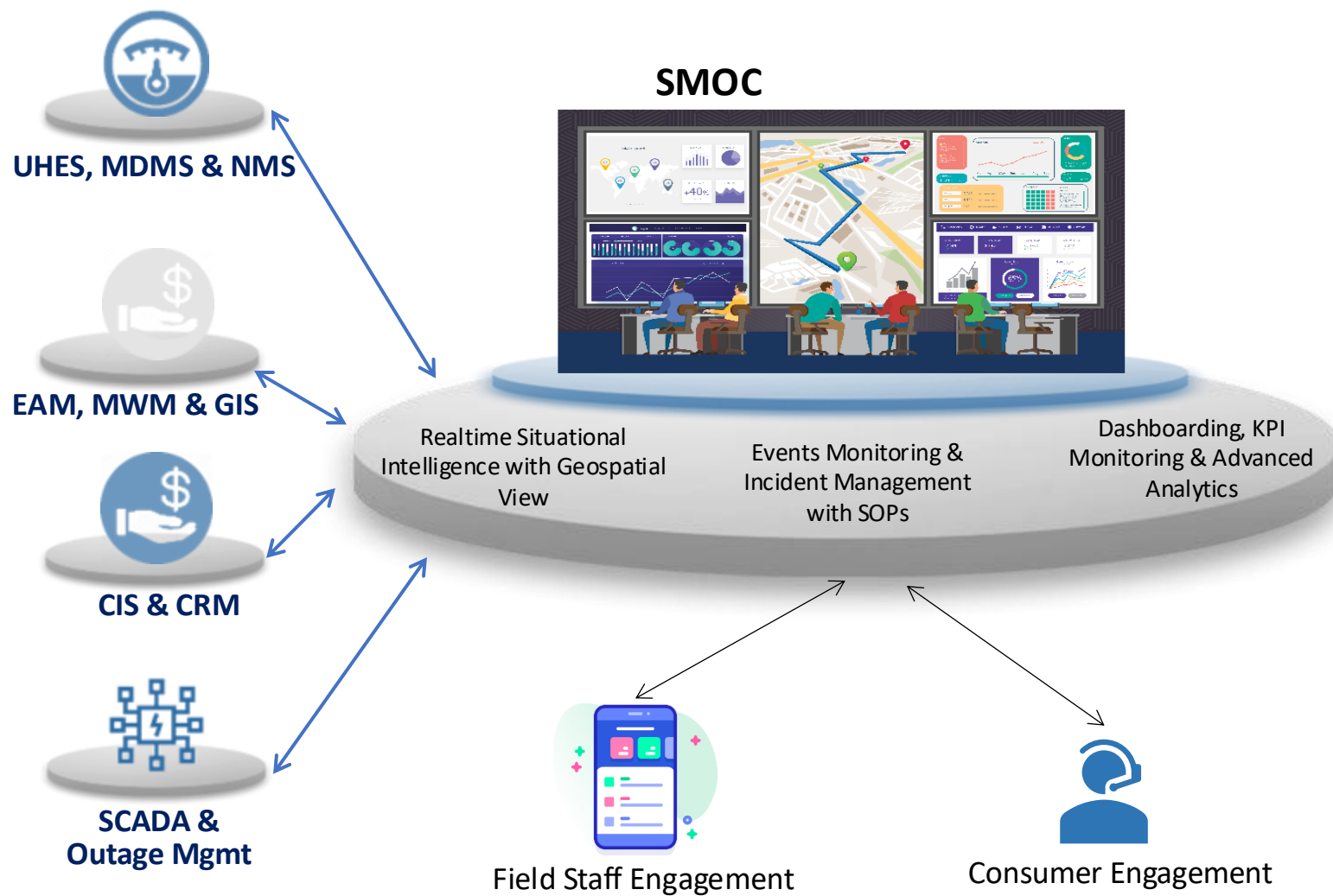


# Fully integrated and centralized command and control center for AMI



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Helps rapidly deploy smart meters and prevent/address Deployment/ operational challenges.

Provides a platform for continuous innovation and value creation for quicker RoI.



## SMOC Use Cases- “Significantly Extending the NOMC”

From data visualization to advanced analytics

### • Smart Meter Rollouts

- AMI rollout status vs plan and trend analysis
- Progress review by period and region
- Installation vendor/team performance review
- Assist field support personnel with consumer and meter data
- First level troubleshooting in response to consumer complaint
- AMI rollout complaints analysis & resolution as per SLAs
- Meter replacement flow & data analysis

### • Smart Meter Operations

- Geo-view of meter status, instantaneous data, tamper events and communication issues
- Meter uptime analysis by region and manufacturer
- Monitor supply interruptions/leaks to avert cascading issues
- Monitor meters beyond their guaranteed life
- Tracking status of meter configuration changes
- Monitor version upgrades/roll-backs to AMI sub-systems and firmware
- Identify communication failures or meter functionality through HES, NMS and EAM

### Smart Meter Data Analytics

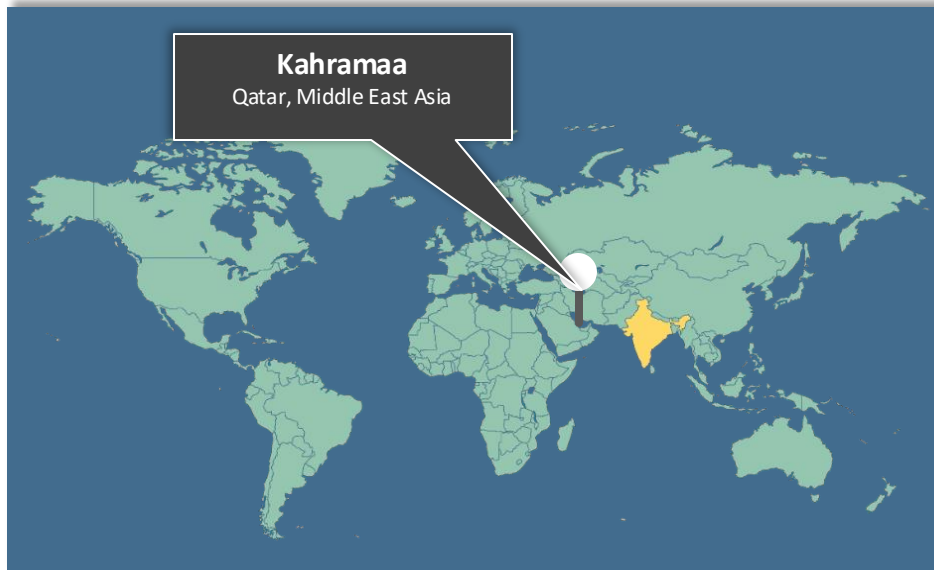
- Analyse the impact of reduced bill corrections and improved billing efficiency
- Power consumption analysis
- Analysis of commercial losses
- Monitor reverse current tamper
- Identify possible energy/water theft cases
- Analysis of tariff parameters for revenue maximisation
- Load flow analysis to calculate technical losses
- Voltage stability analysis



## Fluentgrid SMOC for Power & Water smart meter operations

### Kahramaa - The Qatar national power & water utility

Kahramaa decided to setup a Smart Meter Operations Center (SMOC) to manage their ambitious electricity and water smart meter rollout initiative with the following objectives:



**Kahramaa** (Qatar General Electricity and Water Corporation), is the sole transmission and distribution system owner and operator (TDSOO) for the electricity and water sector in Qatar.

**Founded** 2000

**Headquarters** Doha, Qatar

Kahramaa has embarked on a mission to complete installation of about 800,000 electricity and water smart meter by the end of 2024.



The Smart Meter Operations Center has been established to monitor, reveal, and gather insights from connected data sets by integrating AMI and other utility systems such as Head-end, Meter data management, CIS, CRM, EAM and GIS with these benefits.

#### Business Objectives



- Optimize smart meter operations with faster issue resolution as per SLAs
- Improve field staff productivity through centralized monitoring, collaboration and timely escalations
- Instantaneous meter data and events monitoring with root cause analysis
- Cross-connect siloed systems for tangible efficiency gains through data analysis and proactive issue resolution

- 24x7 operations to ensure consumer and field issues are addressed instantly
- Monitor meter installation status on a dashboard and drive faster rollouts
- A rule engine generates alerts on meeting certain thresholds, for proactive resolution of issues, before they occur
- Dashboards with data visualizations are used to provide targeted insights to respective stakeholders.
- Helps identify revenue losses and introduce new business models for revenue maximization

#### Solution Implemented



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# THANK YOU

For discussions/suggestions/queries email: [isuw@isuw.in](mailto:isuw@isuw.in)

[www.isuw.in](http://www.isuw.in)

Links/References ([Ramana.Elchuri@fluentgrid.com](mailto:Ramana.Elchuri@fluentgrid.com))