

WEBINAR SERIES ON
"IoT/M2M APPLICATIONS
FOR VERTICALS"

Webinar on **Utilities**

SCAN TO
REGISTER



 4 May 2022

 2:30 PM – 5:30 PM IST

tsds
India's Telecom SDO

Co-organisers



Webinar on Utilities

Context Setting

By

Rajesh Kapoor

Technical Consultant SGSS, TSDSI

DOT-TSDSI Webinar series on “IoT/M2M applications for verticals

- Objective of DoT-TSDSI Webinar series
- IOT/M2M –Need and Role in Utilities Vertical
- Way Forward

Objective : DOT-TSDSI Webinar series IOT/M2M Application Verticals

- **Digital Infrastructures are being deployed** to provide citizen services and to ensure **efficiency in delivery of services and resiliency in operations of infrastructure**
- **Technologies** are continuously evolving processes in respect of
 - Usage of the services
 - Deployment of technologies
- **IOT/M2M has been seen as a Technology** which can impact on delivery of services and resiliency of operations –
 - IOT /M2M applications shall use other digital and telecom technologies in their deployment such as 5G Mobile, Cloud Computing, Edge computing, network slicing, AI/ML, AR/VR,
- It is important to Understanding the challenges & needs to develop solutions and services meeting the expectations in IOT/M2M

In the environment of evolving technologies, All stake holders Policy makers, Technology deployment organizations, Technology developers and Solution providers, Service providers come together to discuss issues, Challenges and solutions to enable industry mature the technology.

Standards Development is part of such a dialog.

- **Impact of Utilities on Various Sectors of economy**

Power Consumption

Industry	41%
Domestic	26%
Agriculture	18%
Commercial	8%
Others	6%
Railways	1%.

Gas Consumption

Fertilizer	32%
Power	20%
City gas	16%
Refineries	14%
Petrochemicals	5%
others	8%

Water Consumption

Irrigation	78%
Domestic	6%
Industry	5%
Power	3%
others & losses	8%

Smart Utilities Initiatives

- Smart Grid management
- Real time Monitoring Systems
- Supervisory Control & data Acquisition system
- Automated processes for Metering, Billing & Collection (MBC) ,
- Customer Relation Management (CRM)
- Enterprise Resource Planning (ERP) System
- Automated process flow for field crew management
- Advanced metering infrastructure (AMI) & meter data management(MDM)
- GIS based Resource mapping & automated data maintenance
- logistics management for maintenance and repairs

- **Every sector of economy needs the Power, water and Gas for their economic growth.**
- **Digitalization , IOT/M2M applications are fourth dimension for the economic development.**
- **Implementations of Smart utility initiatives does bring out role of stakeholder's dialog to evolve standards and standard practices**

Way Forward and TSDSI Role

- TSDSI is already working in Standards Development in utility domain in its study group SGSS WG3
- ITU, 3GPP and local SDOs are actively working on building standards in Utility areas
 - **ITU has published report on ICT as an enabler for smart water management and termed it as key policy issue for the 21st century** for delivery of already scarce fresh water.
 - **3GPP Rel-18. TR 22.867** has been released on 2021/12/24 on **Study on 5G Smart Energy and Infrastructure**. The report details use cases for enabling microgrids in case of distributed generation, distributed power supply, netter automation, power load measurements and control.
 - **TEC has released a report** in May 2015 on **M2M Enablement in Power Sector** which was submitted to **ITU Study group 20**. The report identified use cases of smart metering, SCADA, Wide Area Monitoring System (WAMS), Electric Vehicles, Distributed Generation, Energy Storage, Microgrids..
 - **TSDSI also has released report on NB-IoT capabilities for Energy Metering and report on Context Specific Data Pruning in Smart IoT Applications** in March 2021 in respect of *applications in Smart Metering* from India context; Wide Area Monitoring Systems and *Power Outage and Restoration Management (ORM)* use cases for local and regional power outage scenarios.
 - **TSDSI Service Study Group on Service and Solutions Work Group 3** is engaged in study of COMMUNICATIONS REQUIREMENTS AND RECOMMENDATIONS FOR THE ENERGY SECTOR with participation of its members. TSDSI encourages association of academia, industry and Govt. bodies to work towards development of standards.

Thank You