

# C-DOT-TSDSI Webinar Series

The National Standards for IoT  
Smart Cities Perspective

 5-8 July, 2021

 2:00PM to 4:00PM IST



# C-DOT-TSDSI Webinar Series: The National Standards for IoT – Smart Cities Perspective IoT Standards and Smart Cities: Global Perspective

## Smart City Standardization efforts in BIS

### BIS

### Mr J Roy Chowdhury

DDG (Standards P & M)

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# Smart City Standardization efforts in BIS



J Roy Chowdhury  
DDG (Standards P & M)  
Bureau of Indian Standards

# Smart Cities

- Rapid urbanization
- Increasing urban population
- Developing infrastructure
- Providing public services
- Optimum use of resources
- Environmental sustainability

# Smart Cities – the challenges

## Diverse Stakeholders

- Citizens,
- city administration,
- vendors,
- system integrators

## Diverse Geographical Entities

- Parking lots,
- streets,
- buildings,
- electric stations

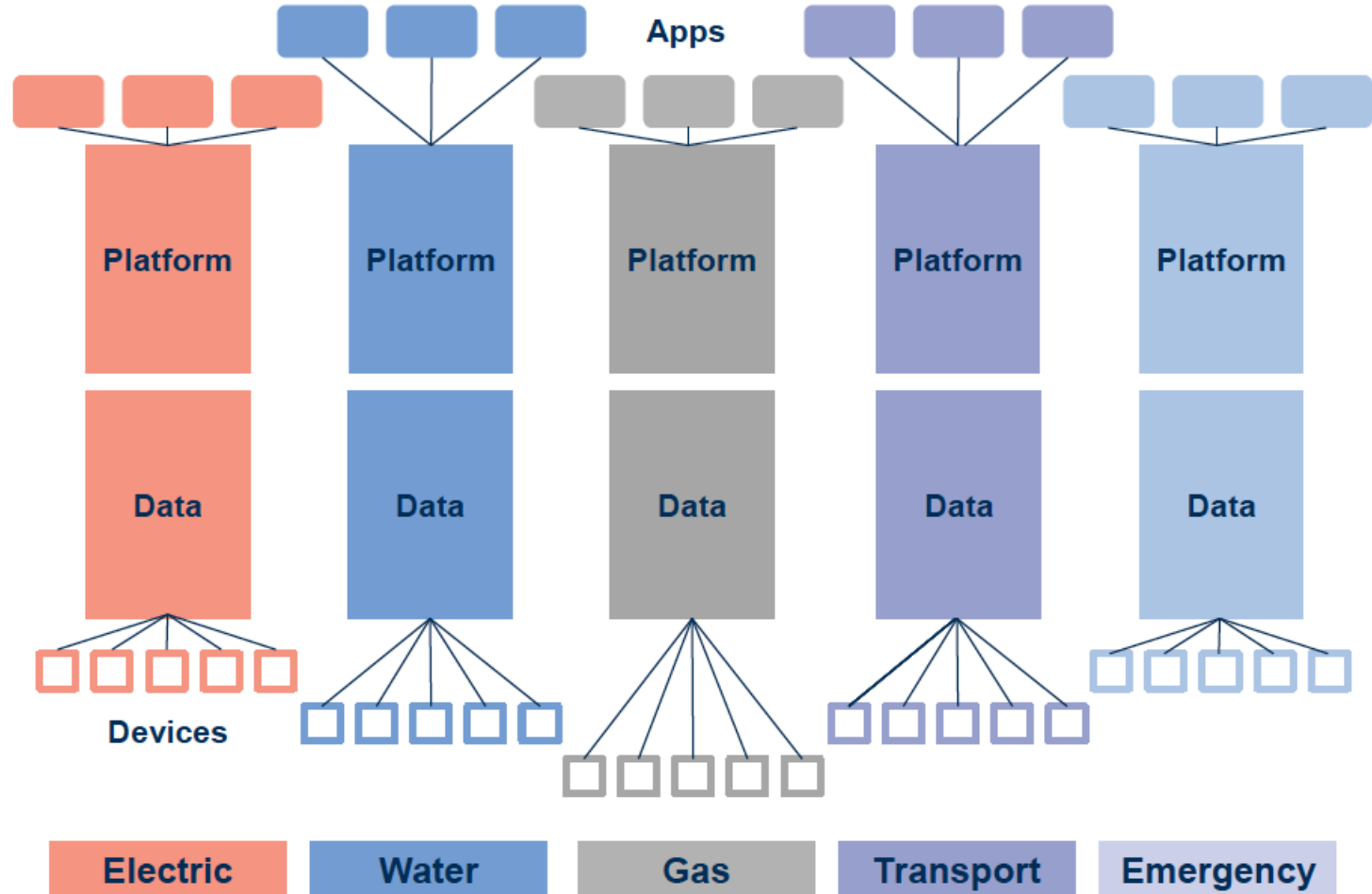
## Diverse Services and Business Processes

- Waste collection
- Energy management
- Transport

## Diverse ICT Technologies

- Data systems
- sensor technologies
- software systems
- networking systems

# Application silos



# Role of standards

- Interoperability
- Data and information exchange
- Safety
- Security
- Privacy
- Frameworks
- Guidelines/best practices
- Practical tools for regulatory bodies
- level playing field for solution providers
- Creates a globally competitive market

# Smart city standardization ICT Aspects



# LITD 28 Smart infrastructure e Sectional Committee

Published a comprehensive set of standards for ensuring a unified, secure and sustainable digital infrastructure in our Smart cities. The Standards published covers all aspects of IT / ICT, pertaining to Smart Cities.

# Standards developed by LITD 28

- IS 18000 Unified Digital Infrastructure – ICT Reference Architecture
- IS 18002-1 UDI - Data Layer Part 1 Reference Architecture
- IS 18003-1 Unified Data Exchange Part 1 Architecture
- IS 18003-2 Unified Data Exchange Part 2 API specifications
- IS 18004-1 IoT System Part 1 Reference Architecture
- IS 18006-1 Municipal Governance - Part 1 Reference Architecture
- IS 18006-3-1 Municipal Governance Part 3 Property Tax Section 1 Taxonomy
- IS 18008-1 Smart Cities- GIS Part 1 Reference Architecture
- IS 18010-1 UDI - Unified Last Mile Communication Protocols Stack Part 1 Reference Architecture
- IS 18010-2 UDI - Unified Last Mile Communication Protocols Stack - Part 5 Network Access Layer (IEEE 802.15.4) Section 1 Specification

# IS 18000:2020

IS 18000 Unified Digital Infrastructure – ICT Reference Architecture has already been proposed as an international standard

ISO/IEC JTC 1/WG 11 Smart Cities has constituted a Ad-hoc group under it to initiate the work.

# Standardization in other aspects of Smart Cities

# CED 59: Smart Cities Sectional Committee

- IS 17000 Sustainable Development of Habitats - Indicators
- IS 17451 Smart Community Infrastructure - Best Practices for Transportation - Guidelines
- IS 17456 Smart Community Infrastructure - Guidance on Smart Transportation for Allocation of Parking Lots in Cities
- IS 17457 Sustainable Development of Habitats - Vocabulary

# TED 28 Intelligent Transport Systems Sectional Committee

- IS/ISO/TR 12859 Intelligent transport systems - System architecture - Privacy aspects in its standards and systems
- IS/ISO/TS 13140 ( Part 1) Electronic fee collection - Evaluation of on - Board and roadside equipment (Series)
- IS 16722 Radio Frequency Identification (RFID) System for Automotive Applications – Specification
- IS 15754 Intelligent transport systems - Continuous air interface, long and medium range (CALM) - Infra - Red systems

# ETD 51- Electro-technology in Mobility Sectional Committee

- IS/ISO 15118 ( Part 1) Road vehicles - Vehicle to grid communication interface (Series)
- IS 17017 ( Part 1) Electric Vehicle Conductive Charging System (Series)



Thank you!