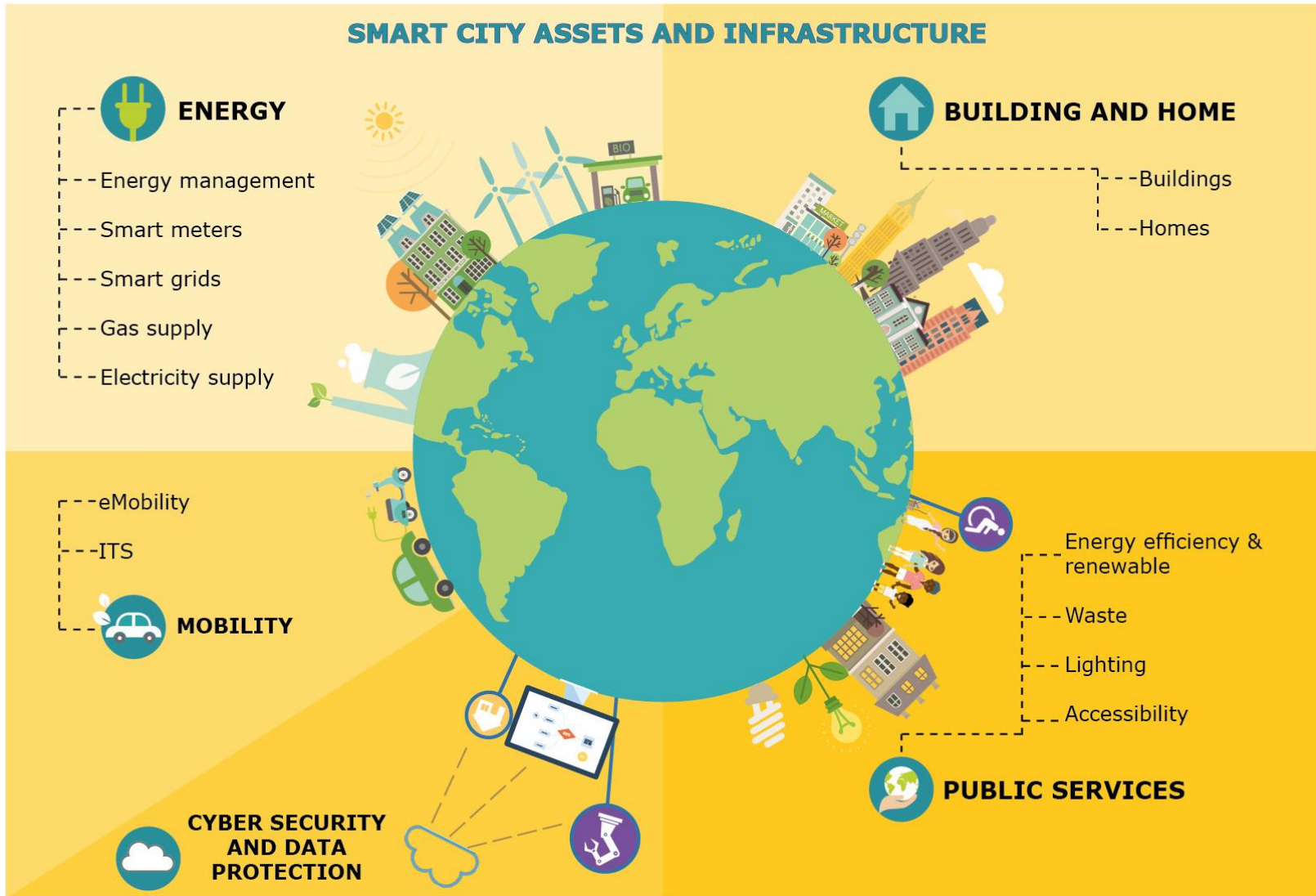# Transforming India Towards Smart Cities

Global => Local

Dinesh Chand Sharma
(Seconded European Standardization Expert In INDIA)
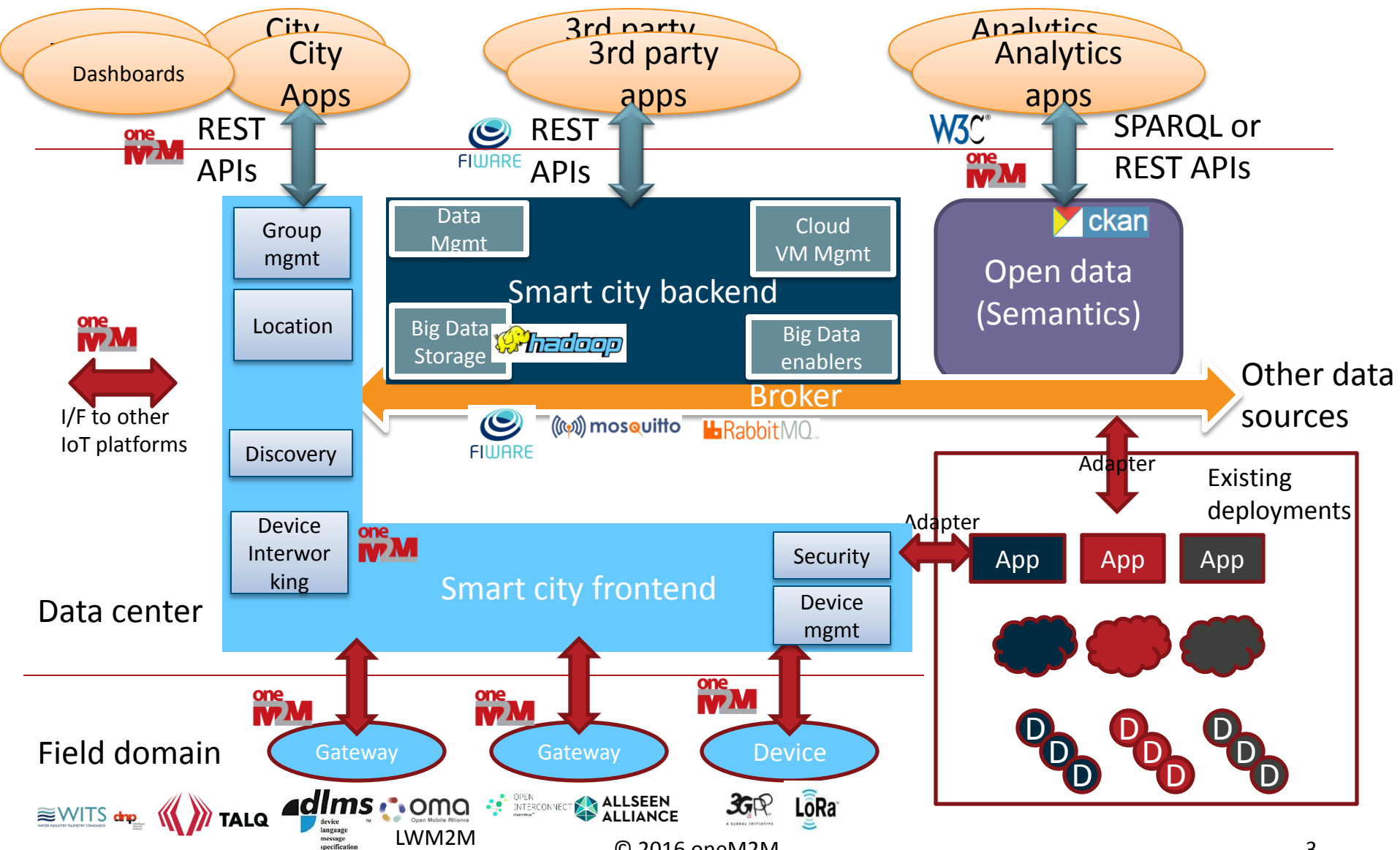4th National Summit on 100 Smart Cities India 2018 – 24th August 2018

All are looking for similar needs, but stages are different

SMART CITY ASSETS AND INFRASTRUCTURE

ENERGY
- Energy management
- Smart meters
- Smart grids
- Gas supply
- Electricity supply

MOBILITY
- eMobility
- ITS

CYBER SECURITY AND DATA PROTECTION

BUILDING AND HOME
- Buildings
- Homes

PUBLIC SERVICES
- Energy efficiency & renewable
- Waste
- Lighting
- Accessibility

Smart City – Blue Print

Cloud apps

Dashboards

City Apps

3rd party apps

Analytics apps

REST APIs

REST APIs

SPARQL or REST APIs

Smart city backend

Data Mgmt

Cloud VM Mgmt

Big Data Storage

Big Data enablers

ckan

Open data (Semantics)

Group mgmt

Location

Broker

Other data sources

I/F to other IoT platforms

Discovery

Adapter

Existing deployments

Device Interworking

Smart city frontend

Security

Adapter

App

App

App

Device mgmt

Data center

Field domain

Gateway

Gateway

Device

D D D D D D D D D

WITS   dnp   TALQ   dlms device language message specification   oma Open Mobile Alliance
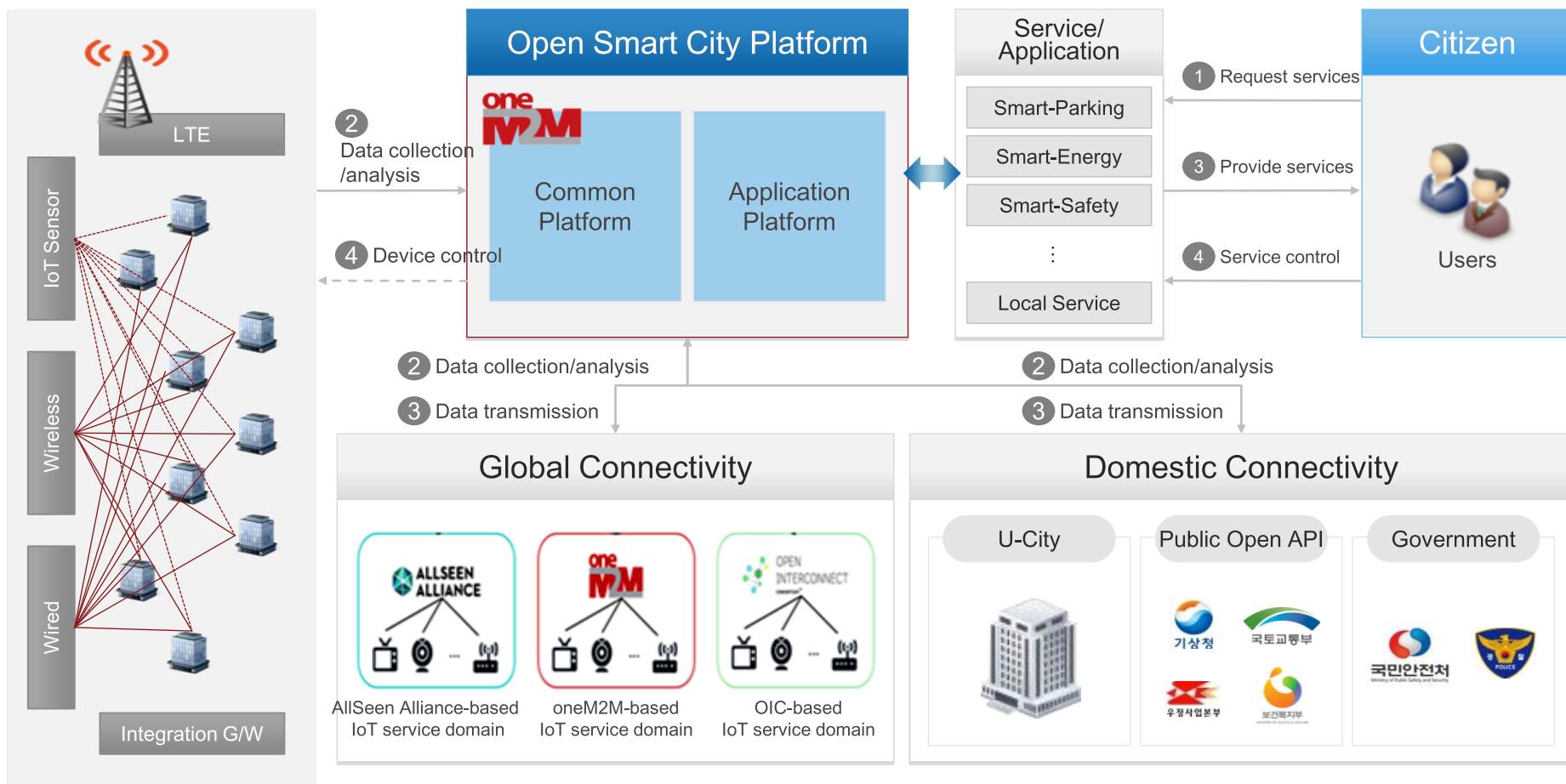
OPEN INTERCONNECT   ALLSEEN ALLIANCE

3GPP   LoRa

LWM2M

3

oneM2M based smart city deployment example - Busan

Source: SKT

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Selected cities with proposed investments

City Challenge (Year)	Selected Cities	Total cost of projects (bn. euro)	ABD (bn euro)	Pen city solutions (bn euro)	Total urban population impacted (Cr.)
Round 1 (2016)	20	6.02	4.65	1.37	3.74
Fast track (2016)	13	3.73	3.25	0.48	0.94
Round 2 (2016)	27	6.75	5.32	1.42	2.55
Round 3 (2017)	30	7.18	5.87	1.32	2.37
Round 4 (2018)	99	1.6	1.33	0.27	0.35
Total	**99**	**25.28**	**20.42**	**4.86**	**9.95**

- Total winning proposals – 100=> One more City Shillong (Meghalaya) gets selected as the 100th Smart City
- Total Cost of Projects – 25.28 billion euro
  - ✓ Area based development (ABD) investment - 20.42 billion euro
  - ✓ Pan city solutions investment - 4.86 billion euro
- Total impacted urban population – 99.5 Million

Projects completed and under progress

According to [report released](#) by Ministry of Urban & Housing Affairs (MoUHA):

- ✓ As on 17th January 2018, 2,948 projects worth Rs. 1,38,730 crore (17.36 billion euro) are in various stages of implementation

    - 189 projects have been completed

    - 495 projects projects have started work

    - Tenders have been floated for 277 projects and

    - 1,987 projects are at detailed project report (DPR) stage.

Challenges

- ✓ Availability of master plan & retrofitting of existing cities
- ✓ Financial sustainability of Urban Local Bodies (ULBs)
- ✓ Technical constraints & Multi-tier governance
- ✓ Providing clearances in a timely manner
- ✓ Dealing with a multivendor environment
- ✓ Capacity building
- ✓ Reliability of utility services

Conclusions

➢ Concept of Smart Cities is great but lack of infrastructure & basic amenities are the biggest challenges

➢ Government is driving Smart Cities mission but progress is quite slow

➢ Strong need for Common ICT Architecture, Common Service Layer, Global Standards for the Smart Cities applications

➢ In case of Smart Cities standards does exist, they need to stitched, and implemented

  ➢ Common Service Layer is important and critical for its implementation as part of Smart Cities & oneM2M is global and interoperable standard

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