oneM2M Use Cases

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IIC/oneM2M Liaison Workshop, Reston, VA

Strong and growing oneM2M implementation base

Industry-driven Open source implementations

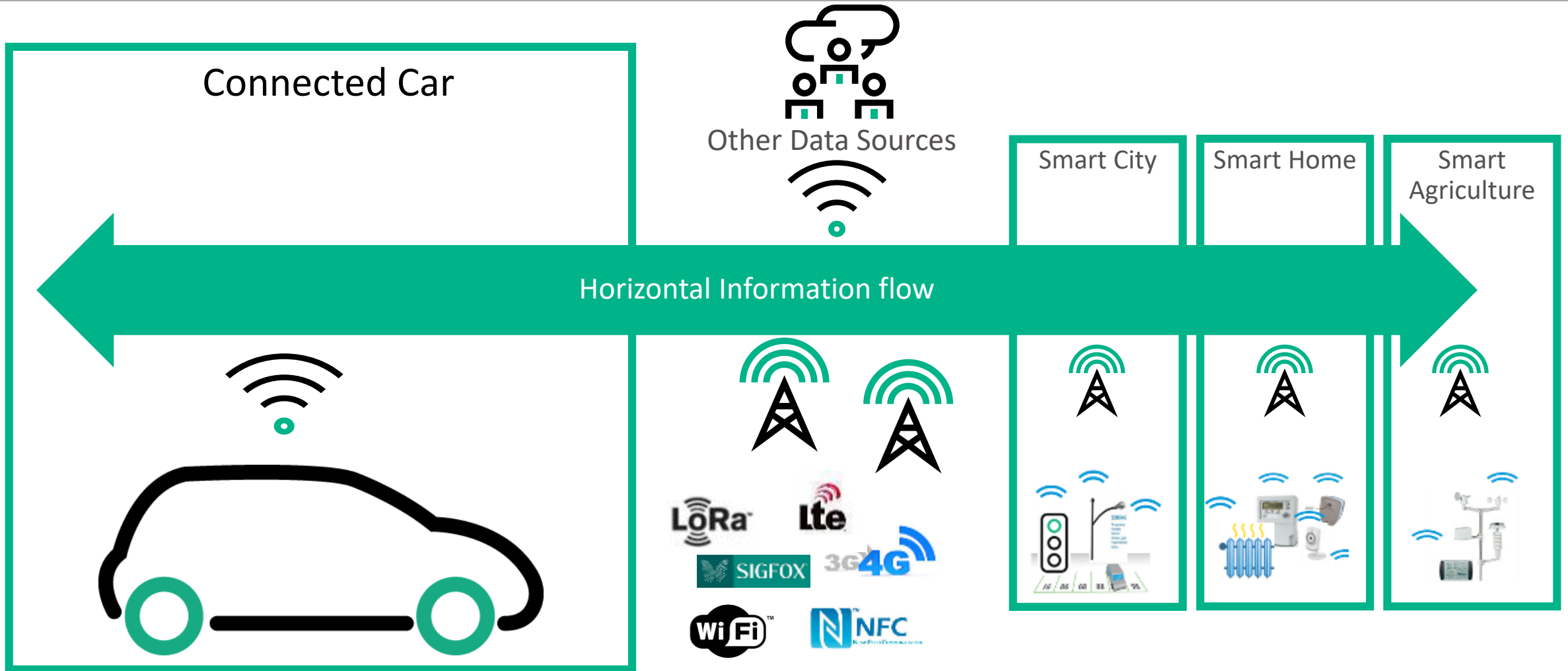## *Examples* of Commercial implementations /demos

5 interop. events so far

oneM2M Use Case examples

- Connecting many "things" to enable horizontal information flows

- Enabling collaboration between multiple users in common spaces: oneTRANSPORT for smart cities and rural transport

- Plant Dust collector Use case: Improving energy efficiency in plant facilities

- Gas Meters Use case: Providing interoperability across millions of nodes

- Smart City Use case: Expanding services through data sharing and public datasets
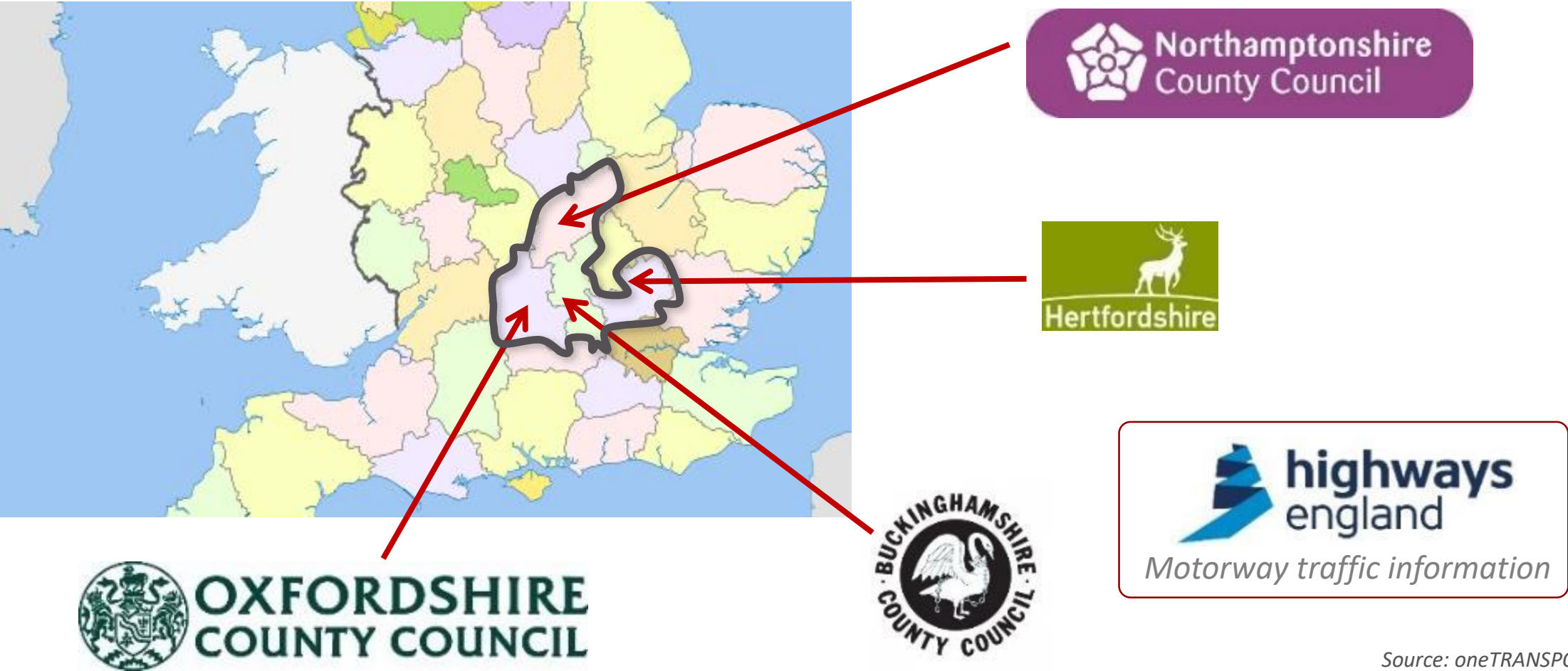
Connecting "things" requires a horizontal IoT platform

Connected Car

Other Data Sources

Smart City

Smart Home

Smart Agriculture

Horizontal Information flow

LoRa Lte SIGFOX 3G4G Wi Fi NFC

Application of oneM2M in a collaborative, multi-user setting

Overview of Scope and Local-authority Participants in oneTRANSPORT™

Northamptonshire County Council

Hertfordshire

Buckinghamshire County Council

Oxfordshire County Council

highways england
Motorway traffic information

Source: oneTRANSPORT.io

oneM2M platform supporting multiple users and use-cases

Citizen and transport service applications cut across geographic and operational boundaries

Journey planning

Smart parking

Park-n-Ride

#4

#5

#n

Independent IoT-application developers

oneM2M™ Standards-based Horizontal IoT Platform & Data Marketplace

BUCKINGHAMSHIRE COUNTY COUNCIL

Hertfordshire

Northamptonshire County Council

OXFORDSHIRE COUNTY COUNCIL

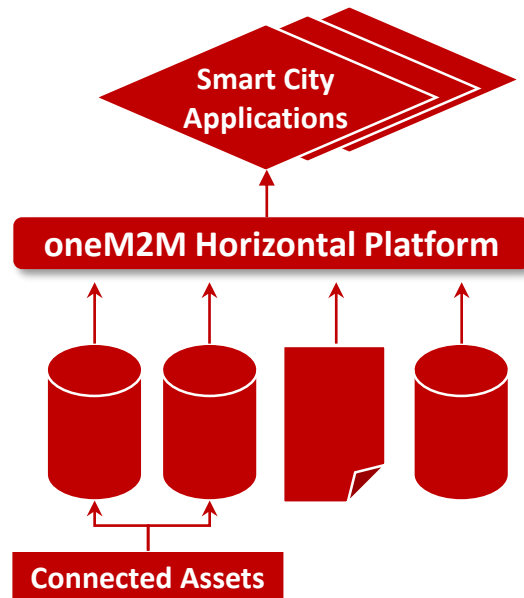**Data sourced from over 300 public & private-sector connected assets**

Source: IIC Journal of Innovation, Intelligent Transport Solutions for Smart Cities & Regions (June 2017), www.oneTRANSPORT.io

oneM2M simplifies data sharing and avoids vendor lock-in

Enable Business Decisions

Smart City Applications

↑

oneM2M Horizontal Platform

↑ ↑ ↑ ↑

↑ ↑

Connected Assets

Multiple and diverse data sources, not limited to connected devices/sensors

- oneM2M satisfies the requirement for a standards-based & data type agnostic mechanism for sharing data
  - oneM2M information model enables publication and discovery of data from a diverse set of data providers and data consumers
  - Avoids vendor lock-in – sensor/data providers can interface directly without doing any systems integration

- oneM2M services and APIs being used:
  - Application Entity Registration
  - Access Controls
  - Data Management
  - Resource Discovery
  - Subscriptions & Notifications
  - HTTP Protocol Binding

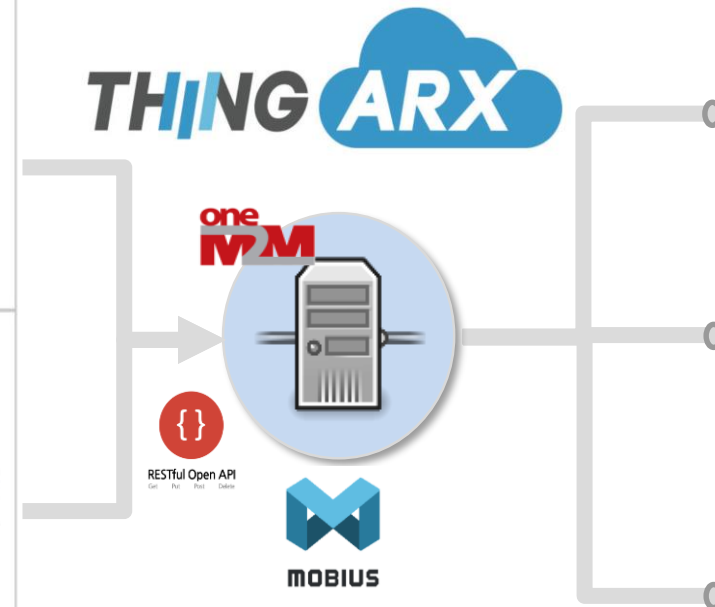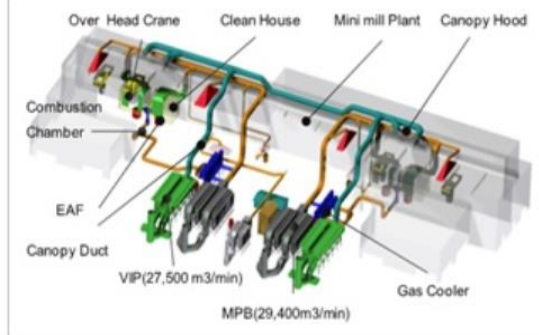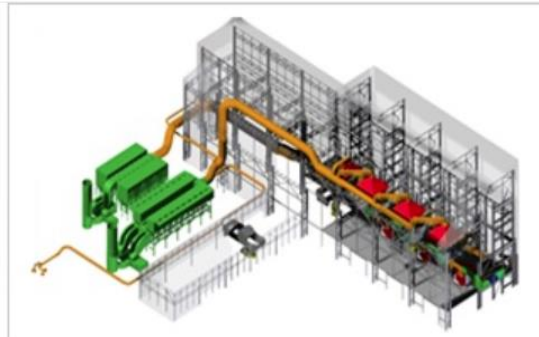# Improving energy efficiency via optimal operation of plant facilities

Reducing Power Consumption by 30~60% through Smart Dust Collector Solution based on Mobius Platform

POSCO Steel Manufacture

POSCO High Mill B/F

Over Head Crane · Clean House · Mini mill Plant · Canopy Hood · Combustion Chamber · EAF · Canopy Duct · VIP(27,500 m3/min) · MPB(29,400m3/min) · Gas Cooler

THING ARX

oneM2M

RESTful Open API

MOBIUS

Application

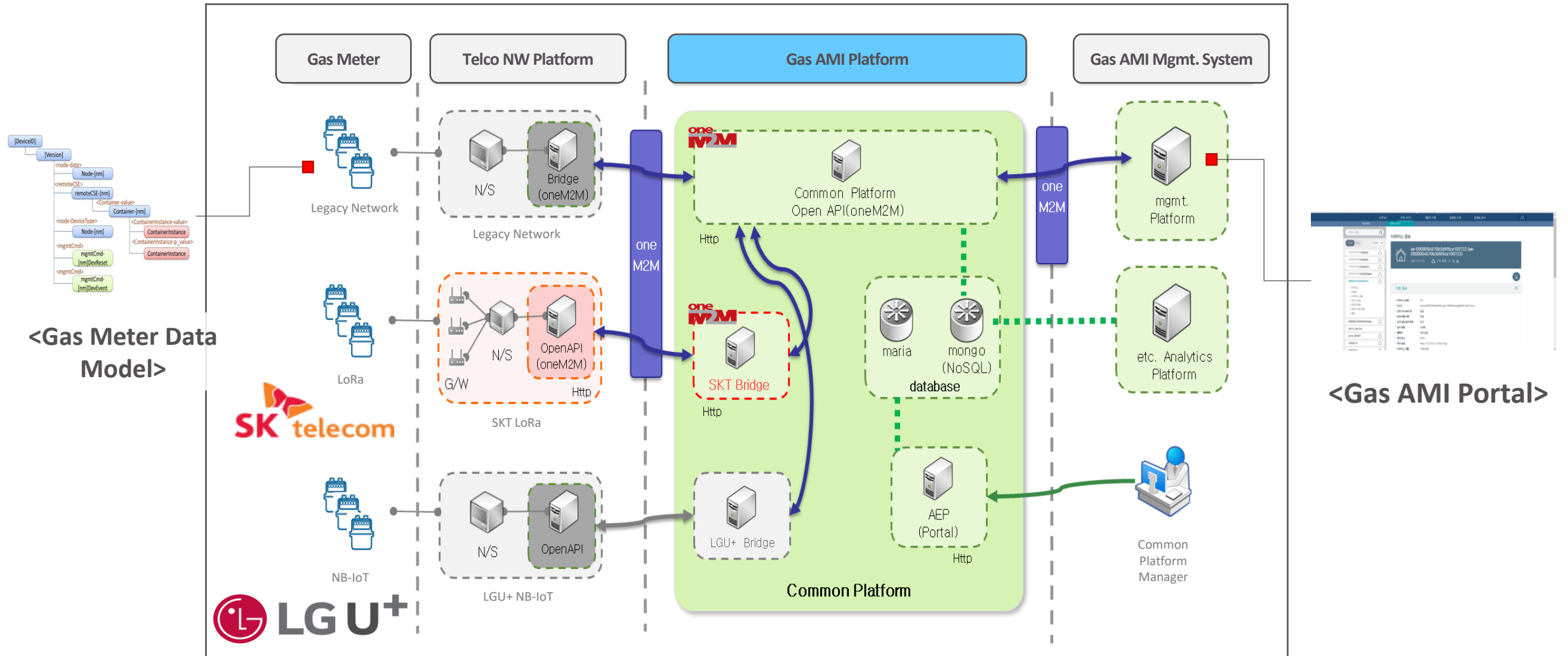Dashboard

Statistics

Control Mgmt.
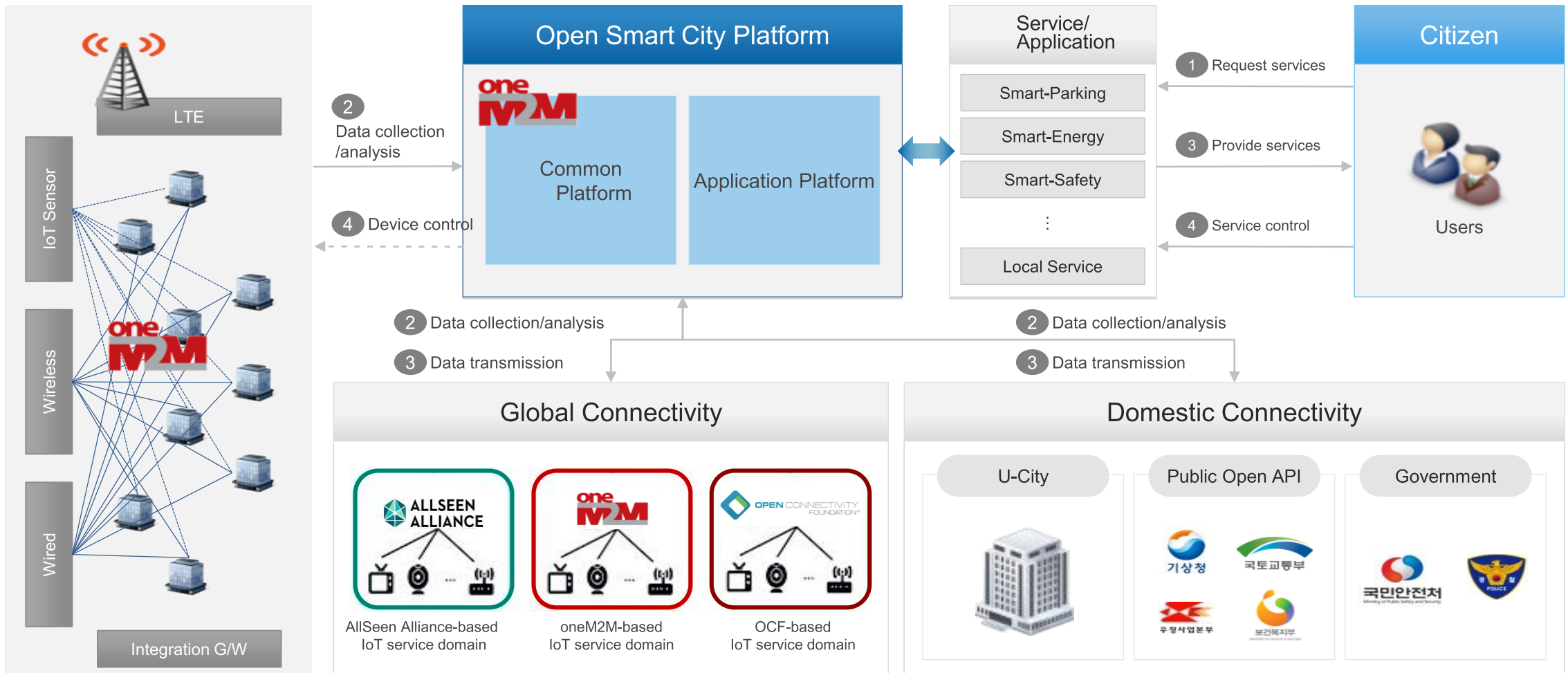
Sensor Monitor

Providing Interoperability, millions of node compatibility

<Gas Meter Data Model>

<Gas AMI Portal>

Expanding services through data sharing and public datasets

oneM2M deployments cover multiple application sectors

Organization	Reference	User (primary)	Geography
HP-E	Shell Eco-marathon	Event manager	Global
HP-E	Trans-Siberian Odyssey	Sports people (journey tracking)	Asia
HP-E	Tata Communications	Telco	India
HP-E	identidad	Telco (LPWAN)	LatAm (Colombia)
HP-E	Inmarsat - Smart Agriculture	Telco (satellite)	Global
HP-E	Bhopal Smart Cities	City Authority	India
Pilot Things	Smart City open-street gateway	National Research Agency	France
ZTE	ZTE ThingxCloud - IoT Clout Platform Product	IoT Solution Providers	Global
InterDigital	Chordant platform for smart cities	Smart City Solution Providers	UK
DT	"Cloud of Things" platform	Telco	Germany
Sensinov	Sensinov Global Platform	IoT Solution Providers	France
NEC	Mobile Edge Computing platform	Telco	Global
NEC	Cloud City Operation Center (CCoC)	City Authority	Spain
C-DOT	C-DoT open M2M platform	National Research Agency	India
LG Uplus	International expansion	IoT Solution Providers	Global
InterDigital	Smart Routing App	City Authority (Birmingham, UK)	UK
City of Turin	Turin Smart City	City Authority (Turin)	Italy
SK Telecom, KT, LG Uplus	International expansion	Telcos	Global

Published Specifications

IoT Standards

oneM2M is the global standards initiative for Machine to Machine Communications and the Internet of Things

Specifications available at http://onem2m.org/technical/published-documents