



Overview of oneM2M and Recent Activities

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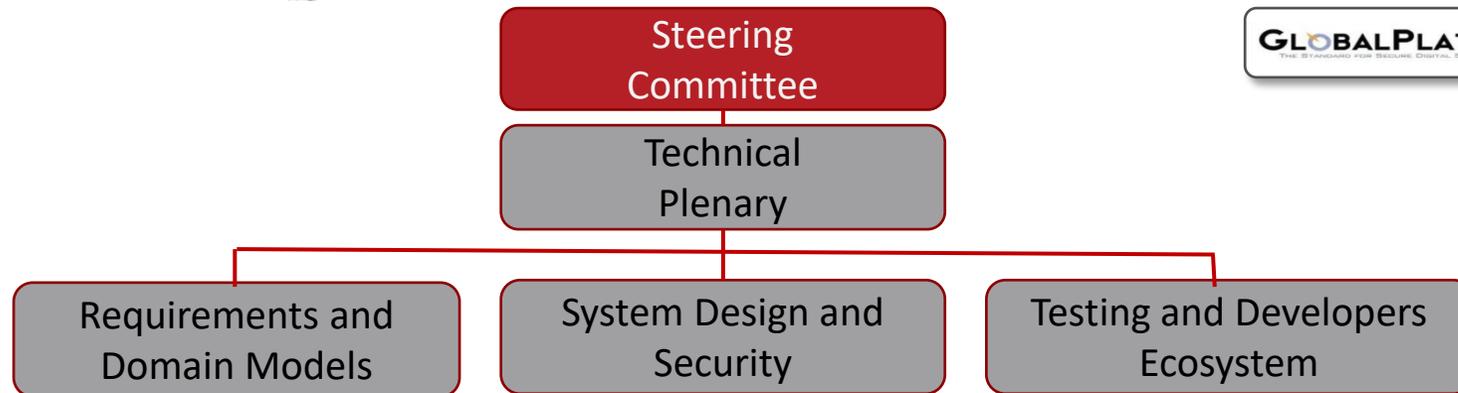
oneM2M Partnership Project

www.oneM2M.org All documents and specifications are publically available



founded¹ July, 24th 2012
 TP#1: Sep 24th 29th 2012
 [1] [Partnership Agreement V 2.0](#) (Approved March 2013)

- Join forces
- => reduce fragmentation
- Partner transpositions
- => De jure Standard
- => focus on interoperability
- => *“collaborate on standard compete in implementation”*



=> Reuse e.g.

Release 2 transposition
 ITU-T SG20 Y.4500.x

200+ Members in oneM2M

Some of the 200+ active members of oneM2M



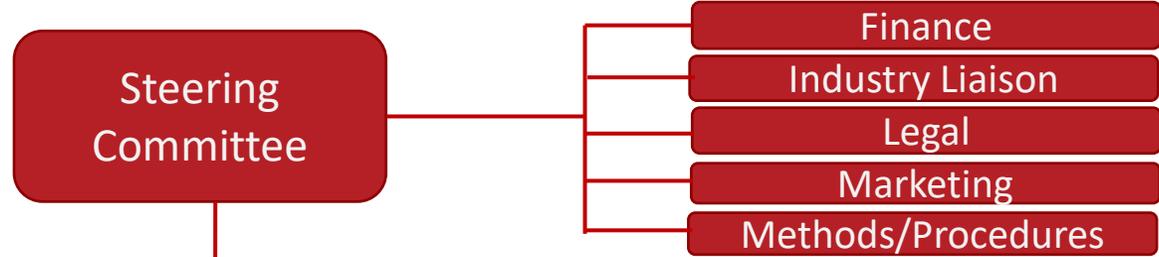
Organization

<http://onem2m.org/about-onem2m/organisation-and-structure>

Partners

SC Chair:
Enrico Scarrone, Telecom Italia (ETSI)
Vice Chairs:
Rouzbeh Farhoumand, Huawei Technologies (ATIS)
Nick Yamasaki, KDDI Corporation (TTC)
Omar Elloumi, Nokia (ETSI)

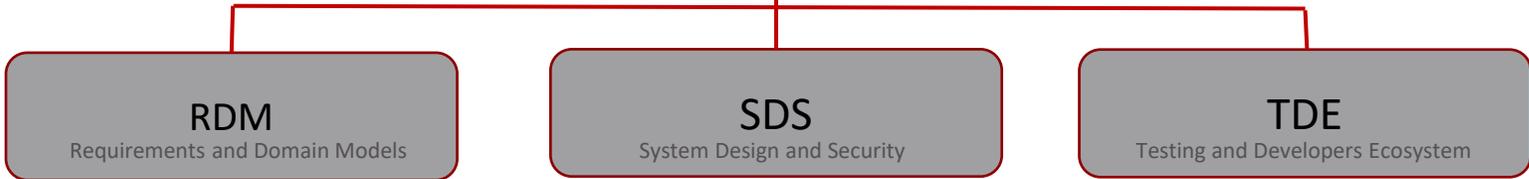
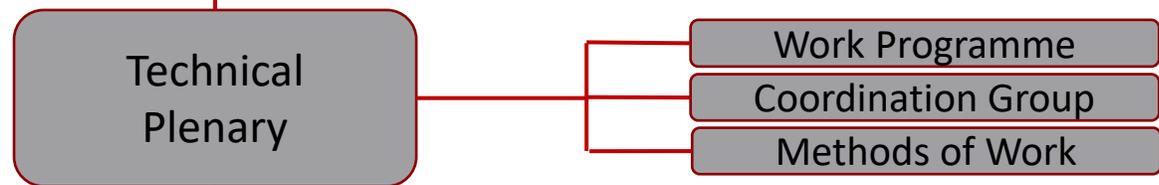
Secretariat support: Victoria Mitchell (TIA)



Members / Partners

TP Chair:
Roland Hechtwarter, Deutsche Telekom (ETSI)
Vice Chairs:
JaeSeung Song, KETI (TTA)
Dale Seed, Convida Wireless (TIA)

Secretariat Support:
Karen Hughes, ETSI



Working Groups

WG1 – RDM Chair:
Saïd Gharout, Orange
Vice Chairs:
Catalina Mladin, Convida Wireless
TaeHyun Kim, SyncTechno Inc
Bei Xu (Echo), Huawei (elected @TP39)

Secretariat Support:
tbc

WG 2 SDS Chair:
Dale Seed, Convida Wireless
Vice Chairs:
SeungMyeong Jeong, KETI
Wei Zhou, Datang Telecom
Peter Niblett, IBM (elected @TP39)

Secretariat Support:
Karen Hughes (ETSI) & Victoria Mitchell (TIA)

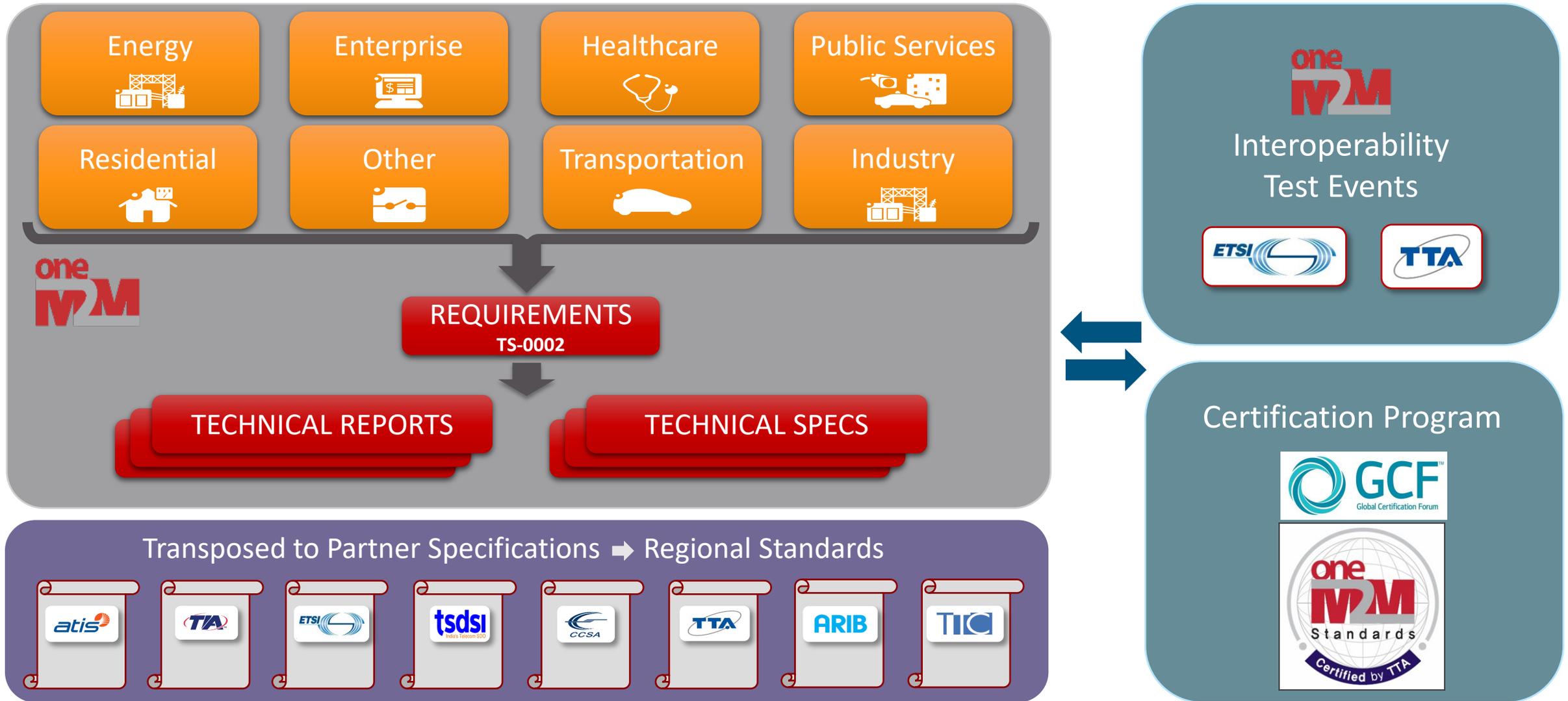
WG3 – TDE Chairman:
Andrew Min-gyu Han, Hansung University
Vice Chairs:
Mahdi Ben Alaya, Sensinov
Subhash Gajare, Spirent
N.N.

Secretariat Support:
Peter Kim (TTA) & Laurent Velez (ETSI)

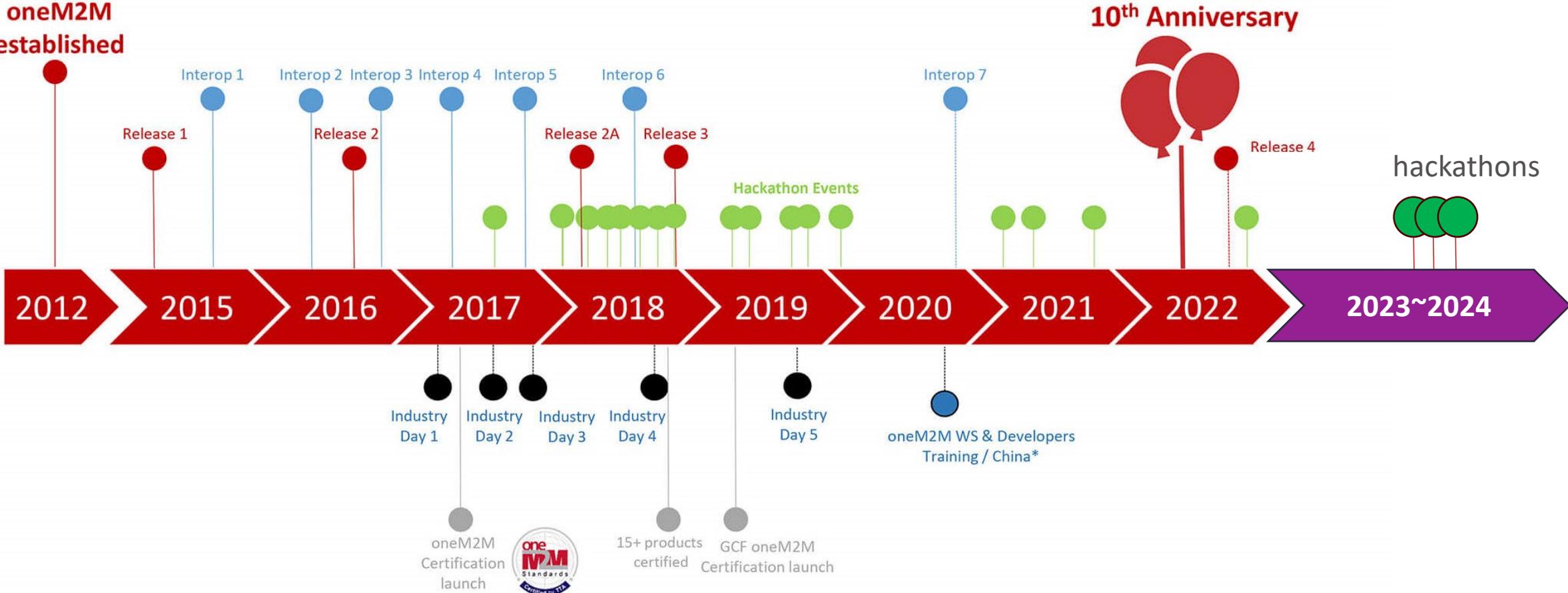
**New WG structure agreed at TP #38
December 8, 2018**

Approved ToR:
TP-2018-0287R02-draft_ToR_for_new_WG1
TP-2018-0288R03-Draft_ToR_for_new_WG2
TP-2018-0289R01-draft_ToR_for_new_WG3
(w.o. names of WGs)

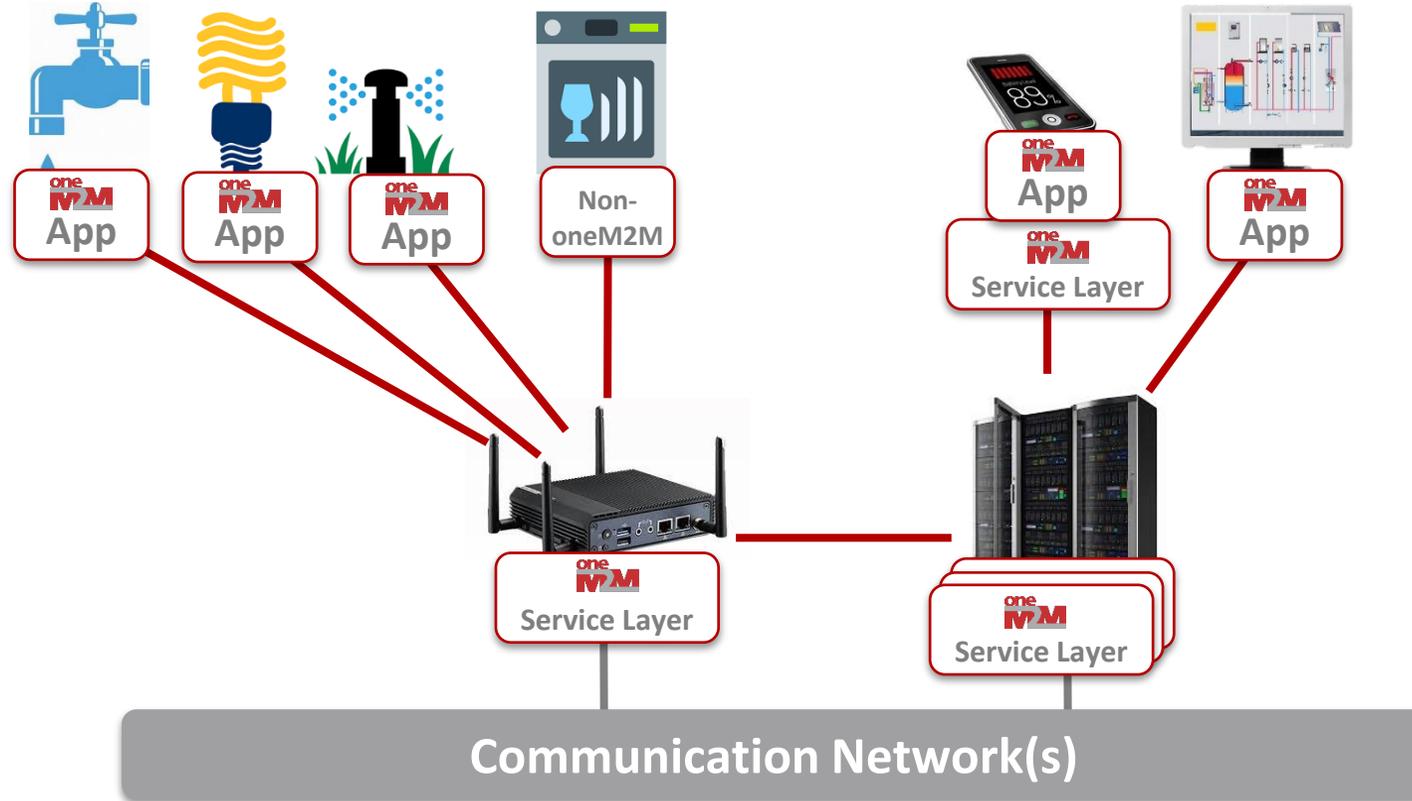
oneM2M Standard – Testing – Certification Program



oneM2M Activities



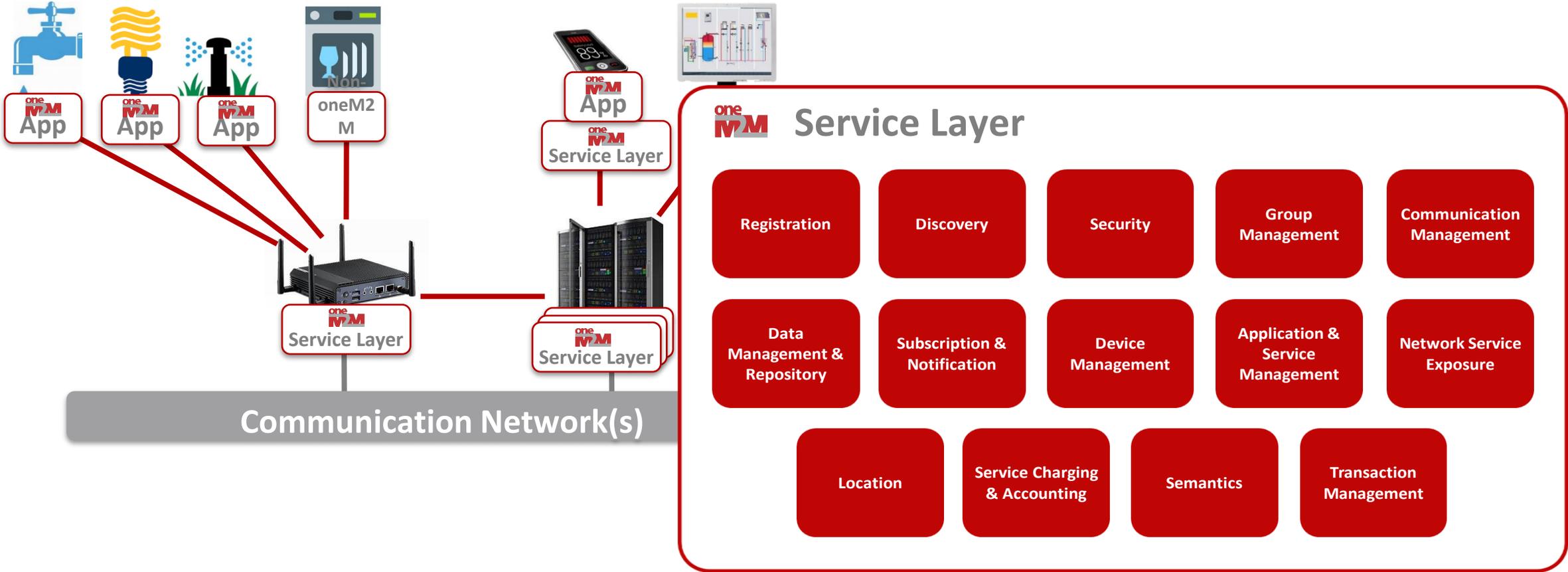
oneM2M is an End-to-End IoT Technology



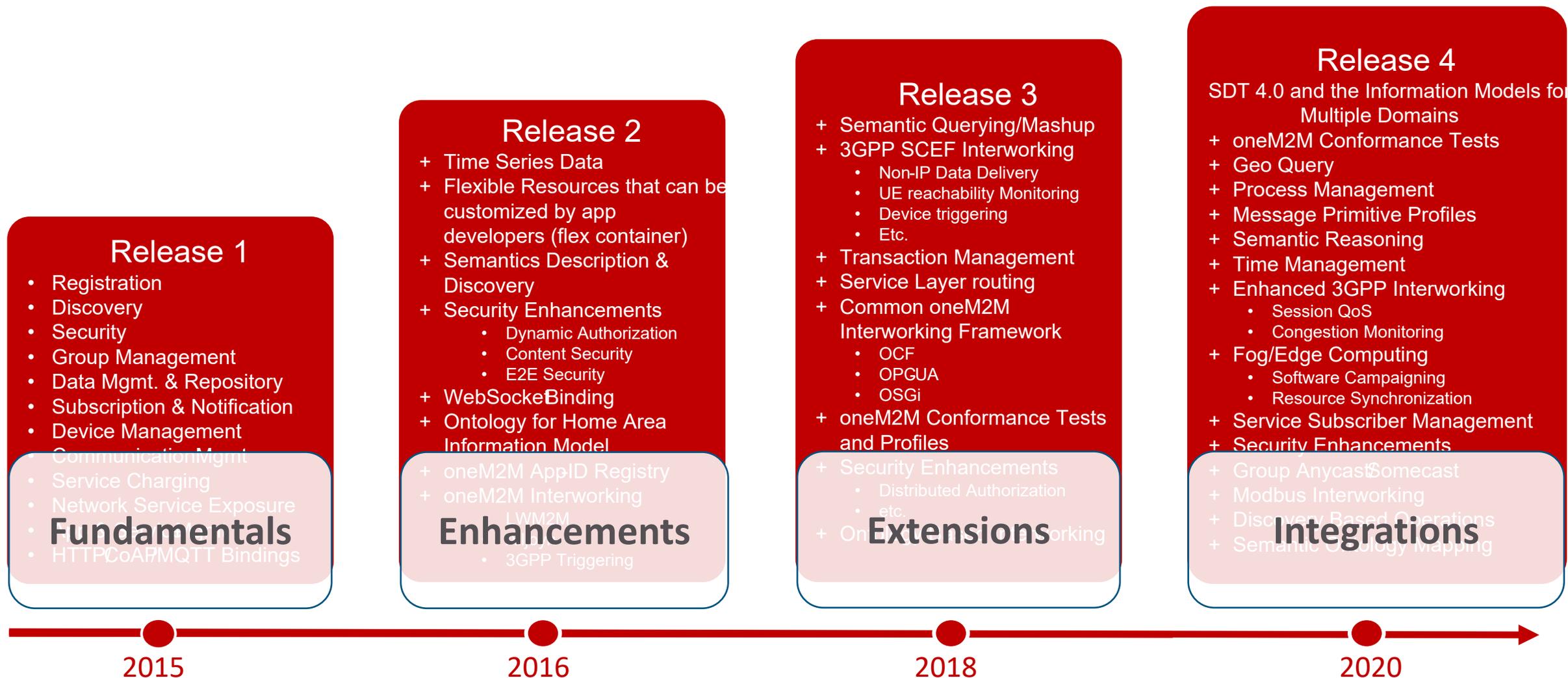
Flexible Deployment Options

- IoT Cloud / Enterprise
- IoT Gateway
- IoT Edge Device
- IoT User Devices

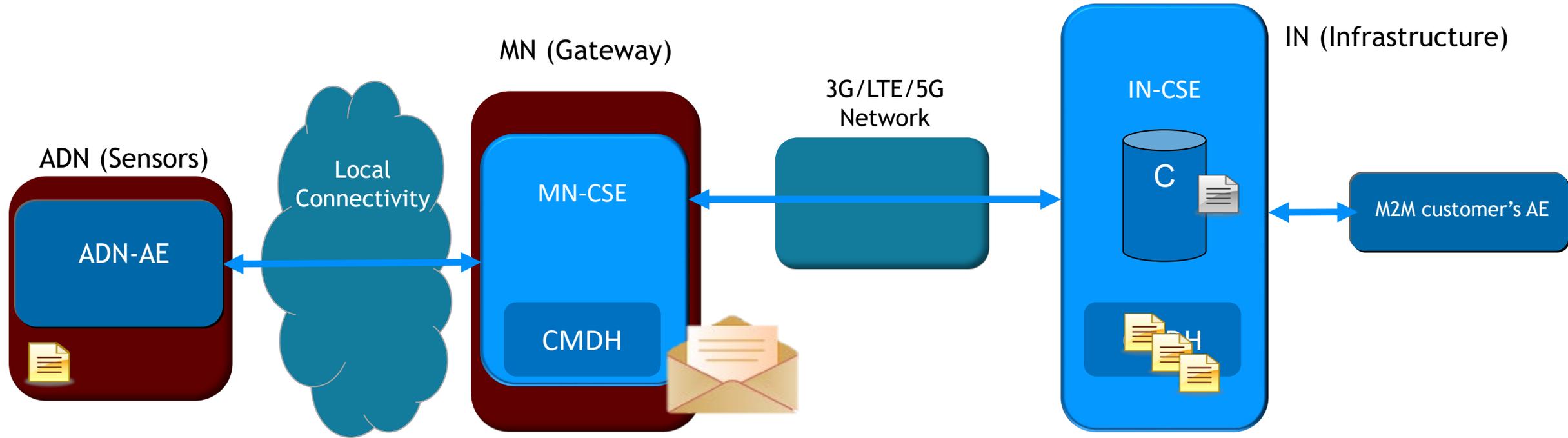
oneM2M's modular service functions fit into a coherent framework



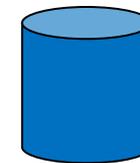
oneM2M Feature Summary



How to use oneM2M? (Example)



IN-CSE (DMR) notifies M2M Customer's AE about new data in C
 IN-CSE produces all the requested UPDATES to C
 Policies on MN say: For ec=3 => only from 2 am to 5 am
 MN-CSE accepts and buffers request in CMDH
 Accepts request in IN-CSE's CMDH

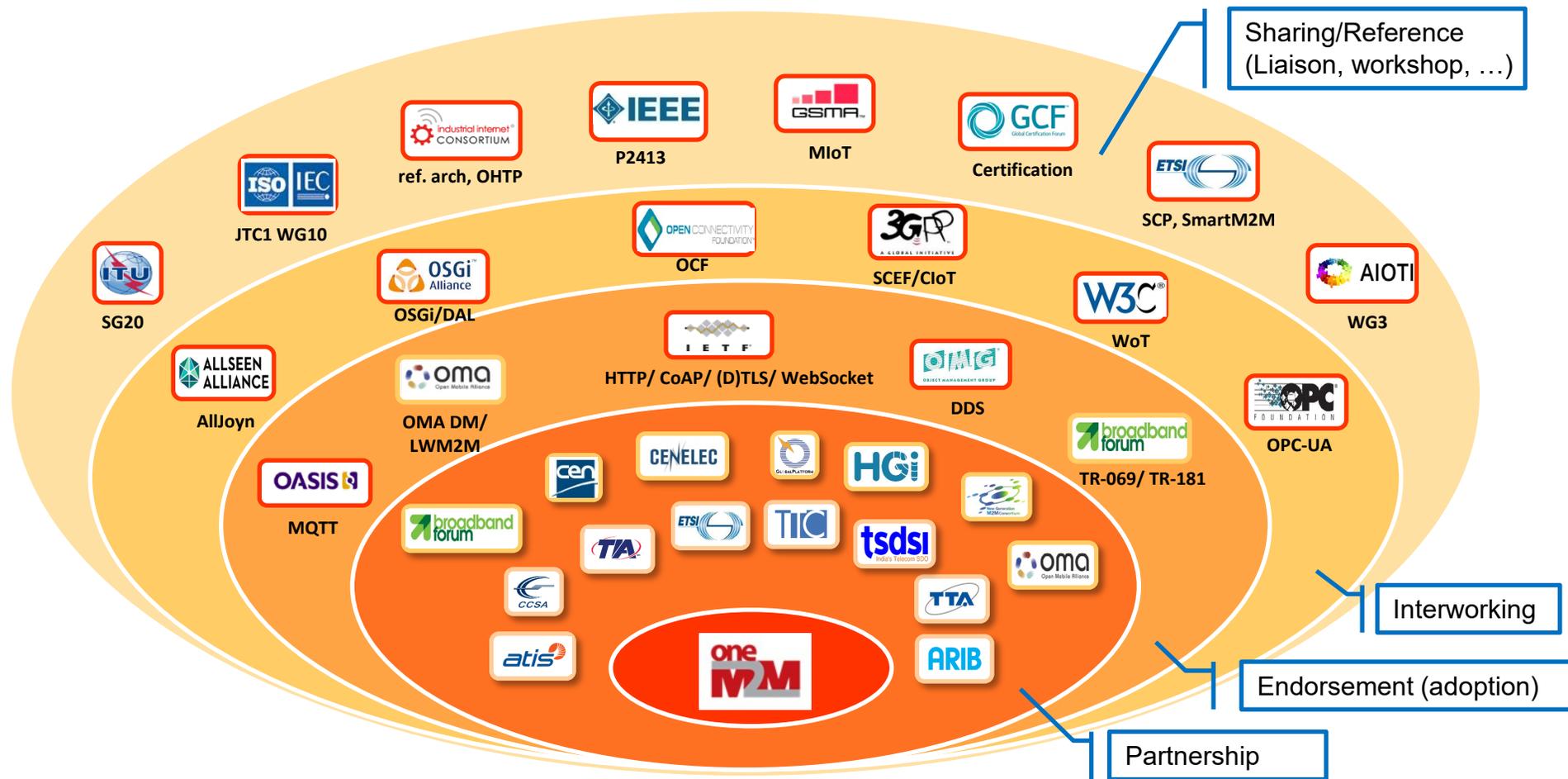


Container Resource

02:00 am

Ongoing Collaborations

- Collaboration is important to reach common understanding, avoid overlap and build **interoperable** IoT ecosystems globally.



oneM2M & ETSI MEC ISG

Enablement of Mobile Edge Computing for Internet-of-Things using oneM2M and ETSI MEC ISG



ETSI White Paper No. #59

Enabling Multi-access Edge Computing in Internet-of-Things: how to deploy ETSI MEC and oneM2M

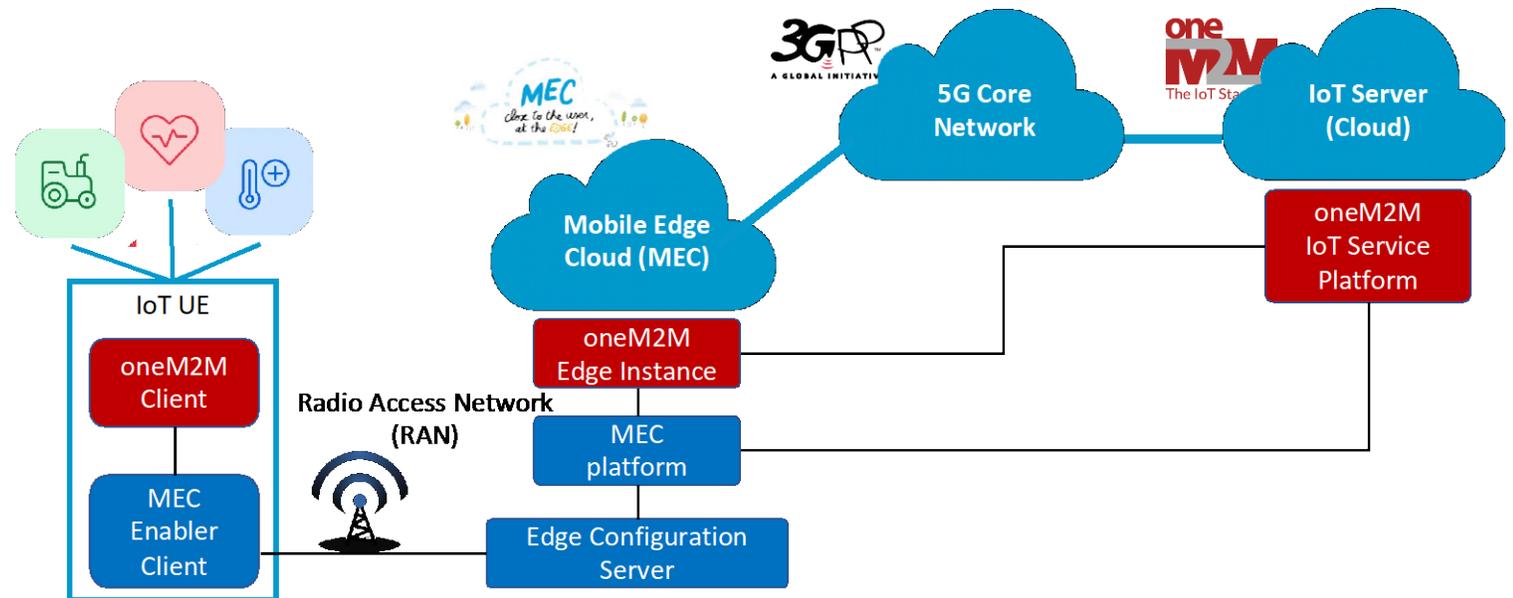
1st edition – June 2023

Authors:
Dario Sabella, Roland Heschwagner, Enrico Scarpone, Samar Shalendra, JaeSeung Song,
Bob Flynn, Arif Ishaq, Laurent Velez, Robert Garcia, Lee Jieun

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www.etsi.org

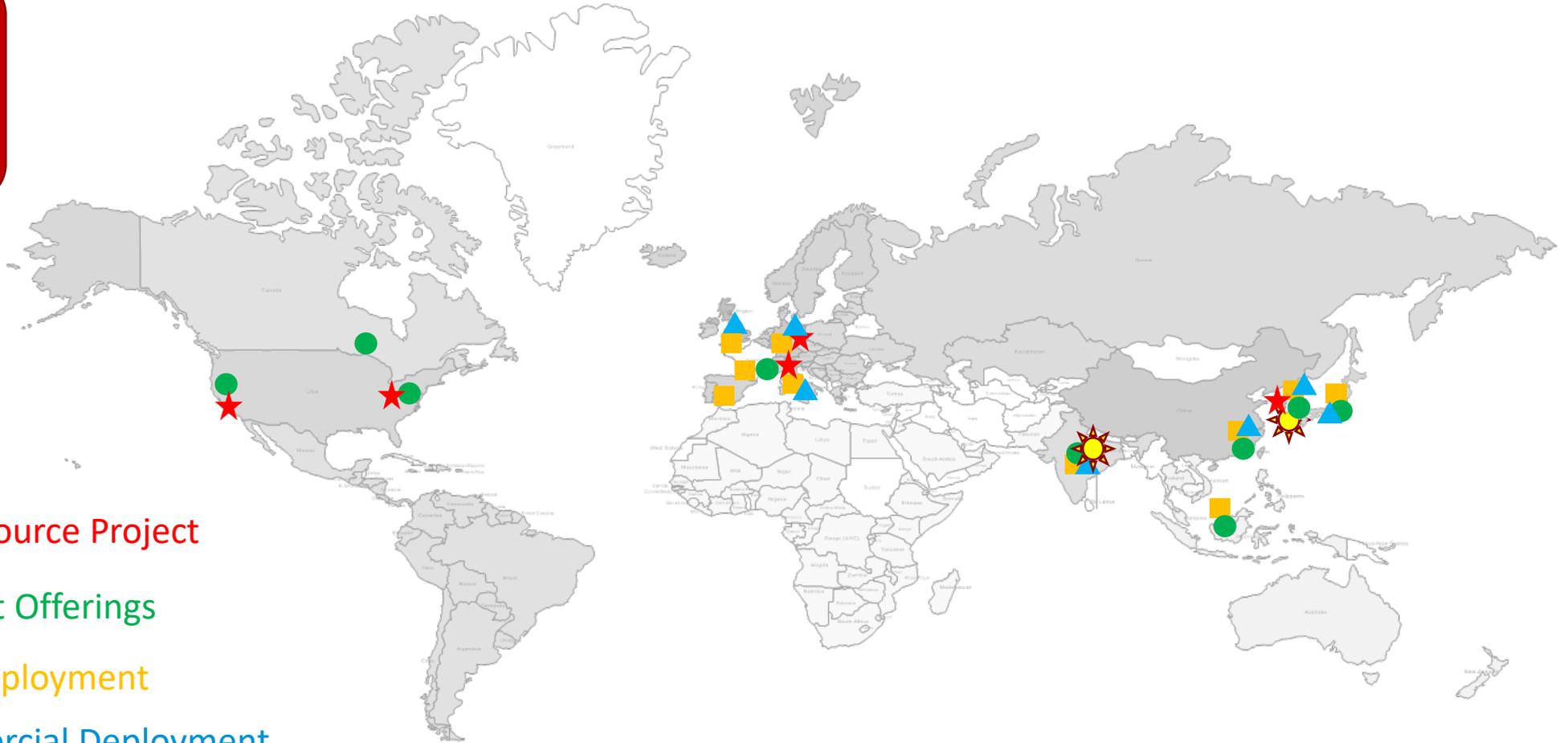
- ETSI ISG MEC

- oneM2M platform instance can be placed where MEC is running
- two features allows this to happen:
 - Software Campaign
 - Enhanced resource announcement
- Published a joint Whitepaper



oneM2M Adoption is Global

oneM2M adoption
is
expanding



★ oneM2M Open Source Project

● oneM2M Product Offerings

■ oneM2M Trial Deployment

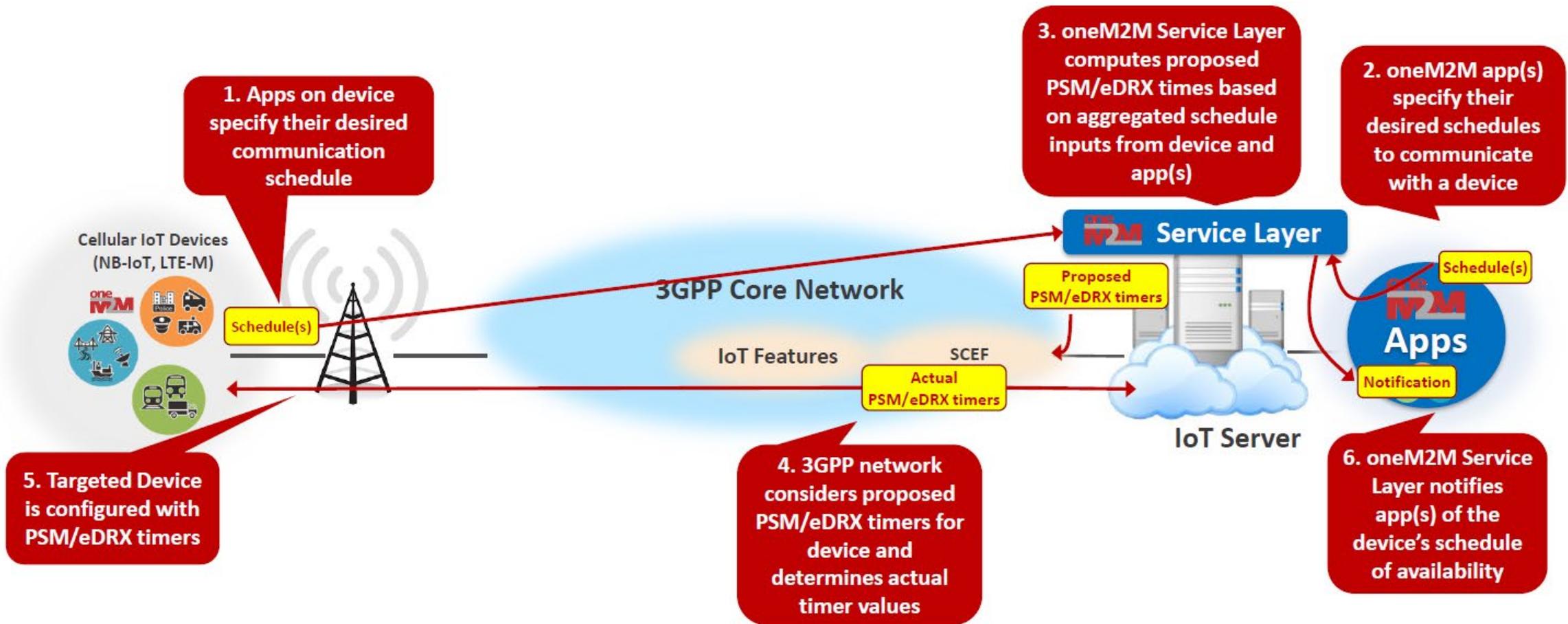
▲ oneM2M Commercial Deployment

☀ Use of oneM2M recommended (Smart Cities)

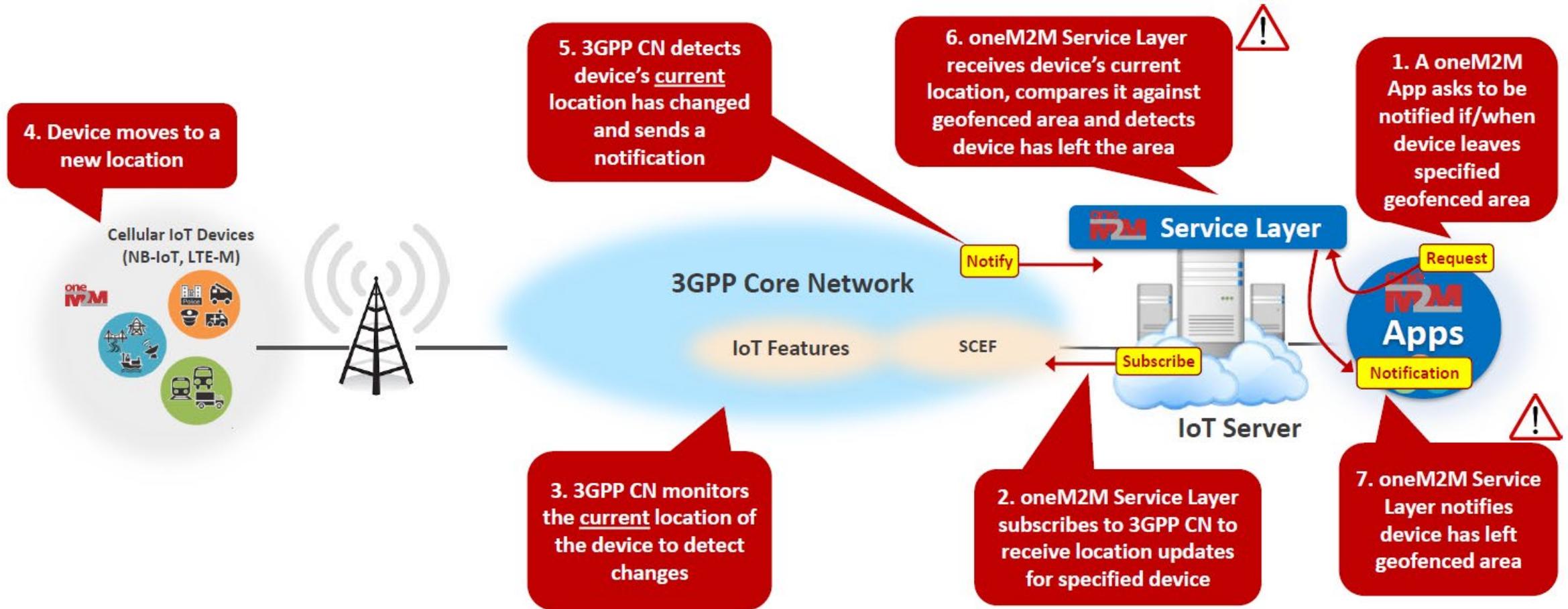
Selected oneM2M Features

- Selected features from Rel1 to Rel4
- New features in oneM2M Release 5

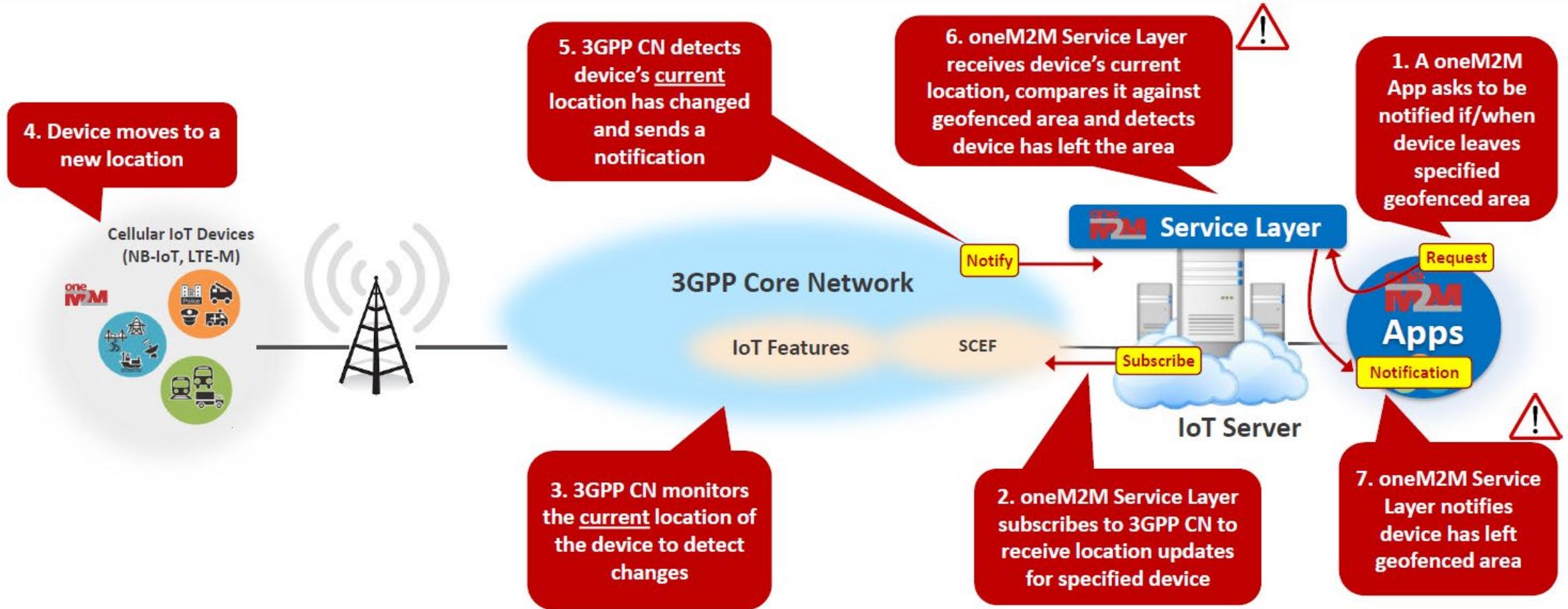
IoT Device Sleep Schedule Management



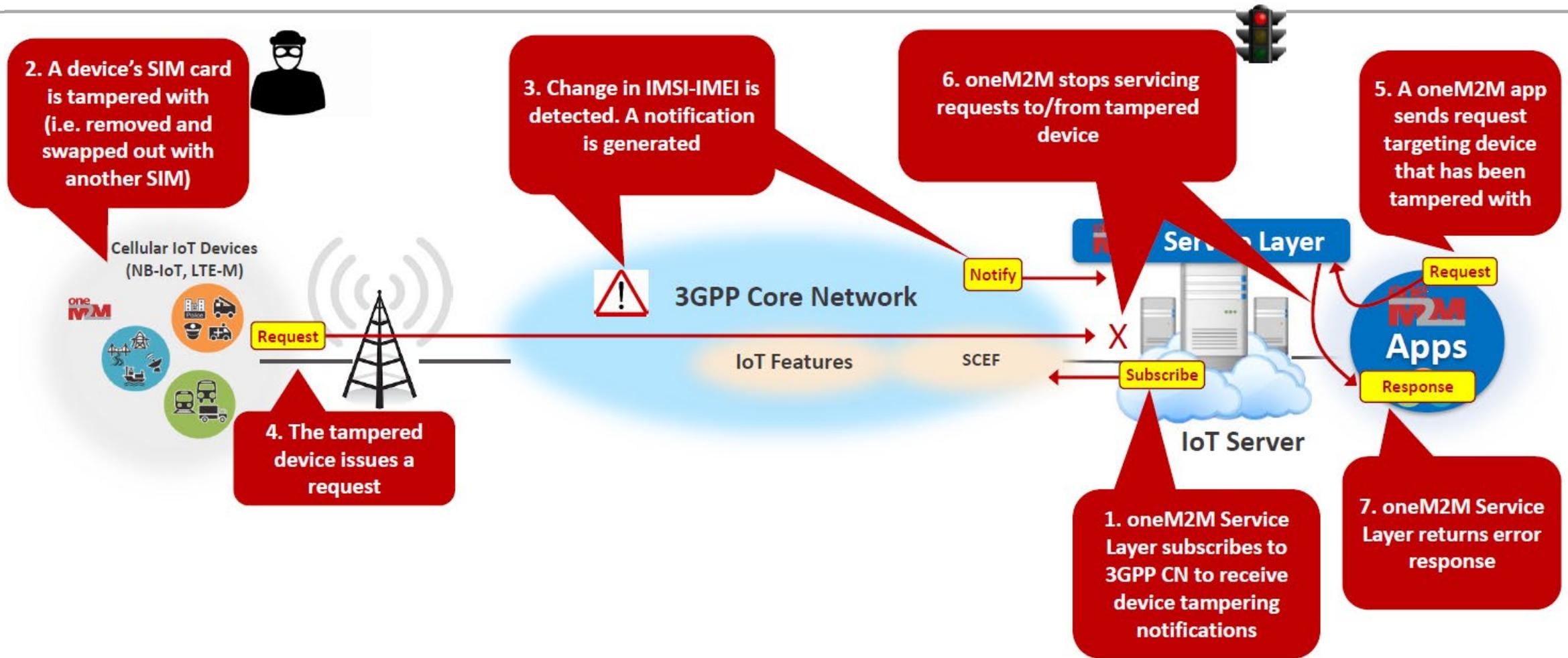
IoT Device Location Tracking



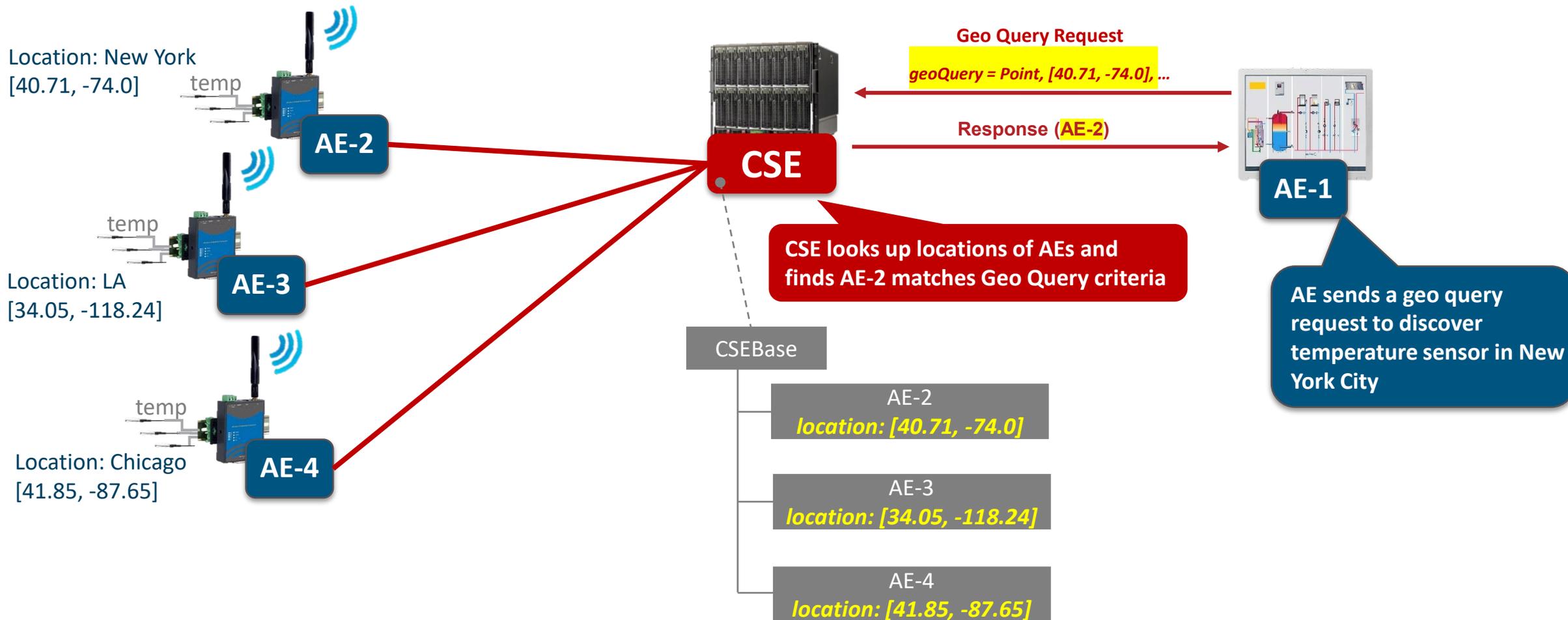
3GPP Network Congestion Control



IoT Device Tampering Detection

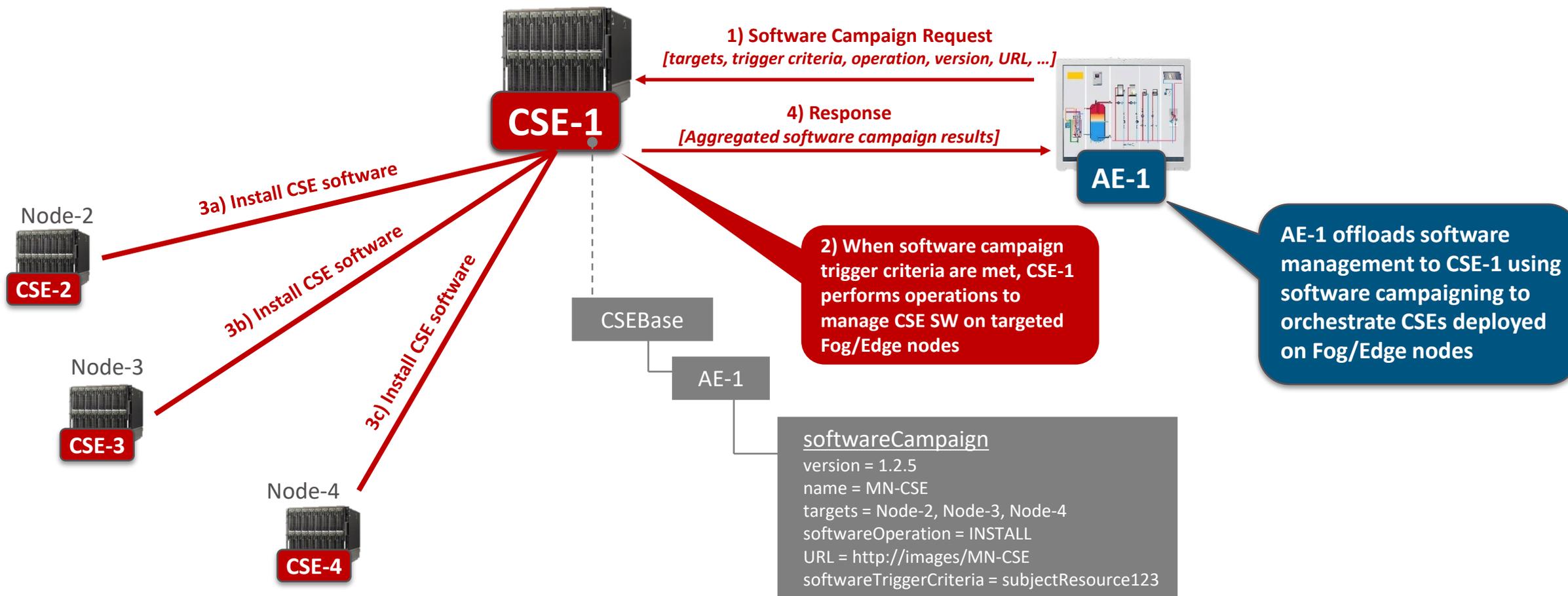


Geo Query



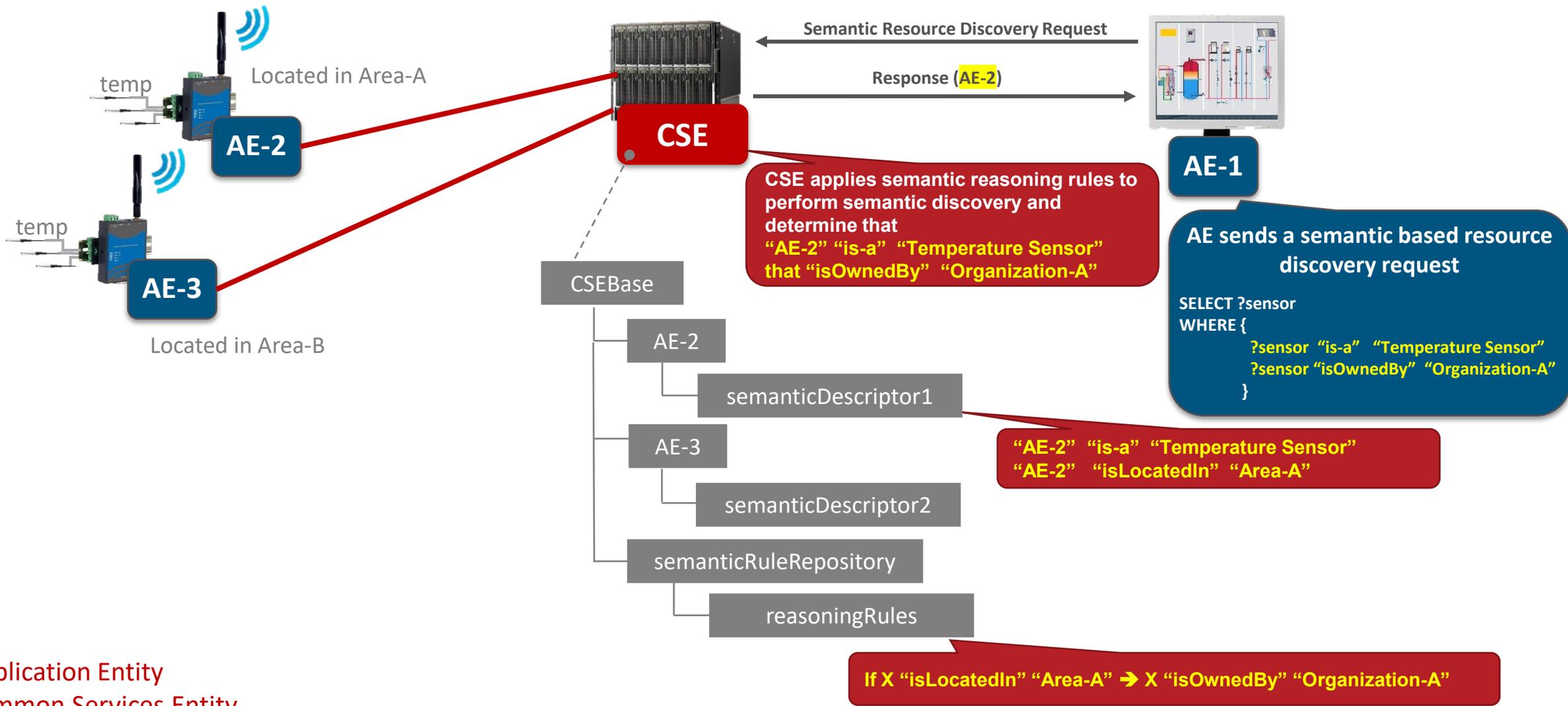
AE: Application Entity
CSE: Common Services Entity

Software Campaigning



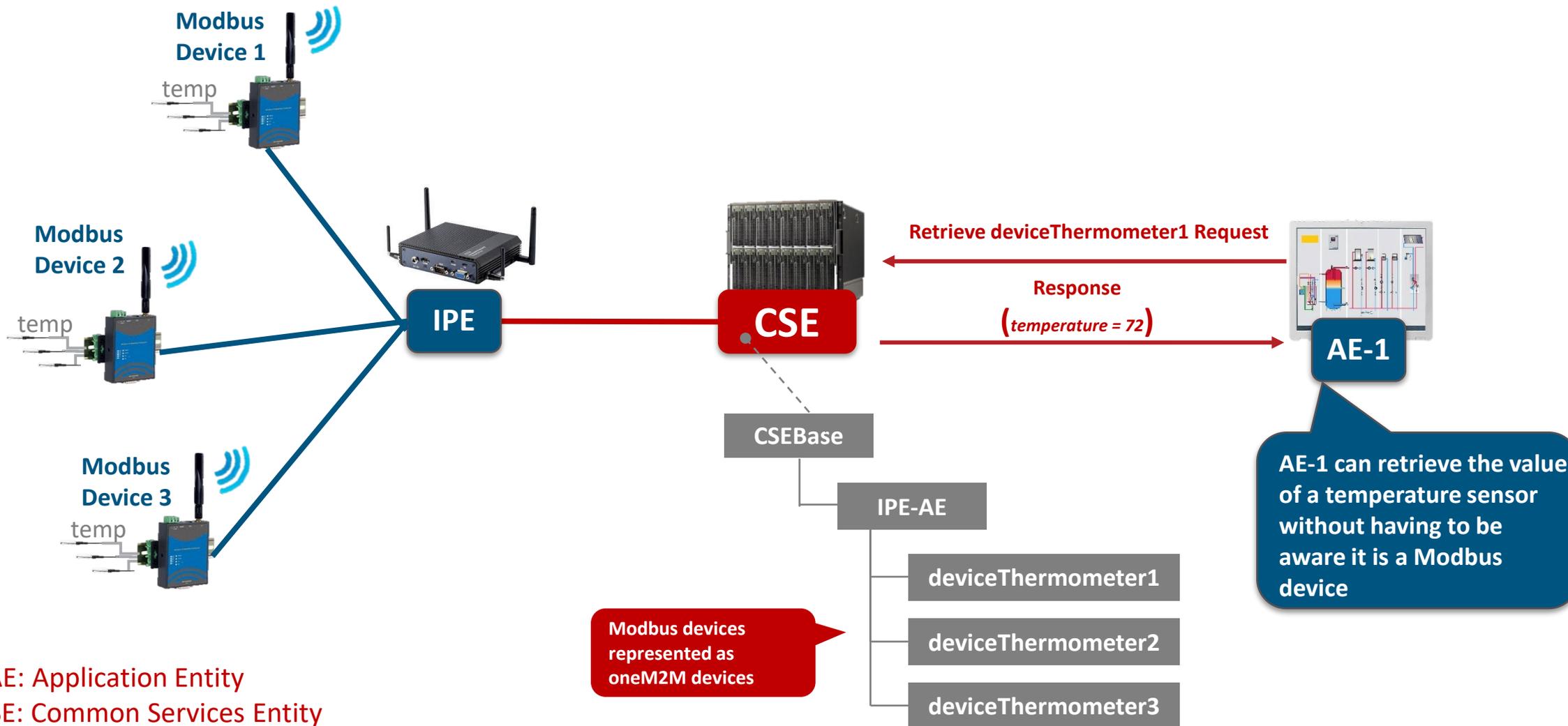
AE: Application Entity
 CSE: Common Services Entity

Semantic Reasoning



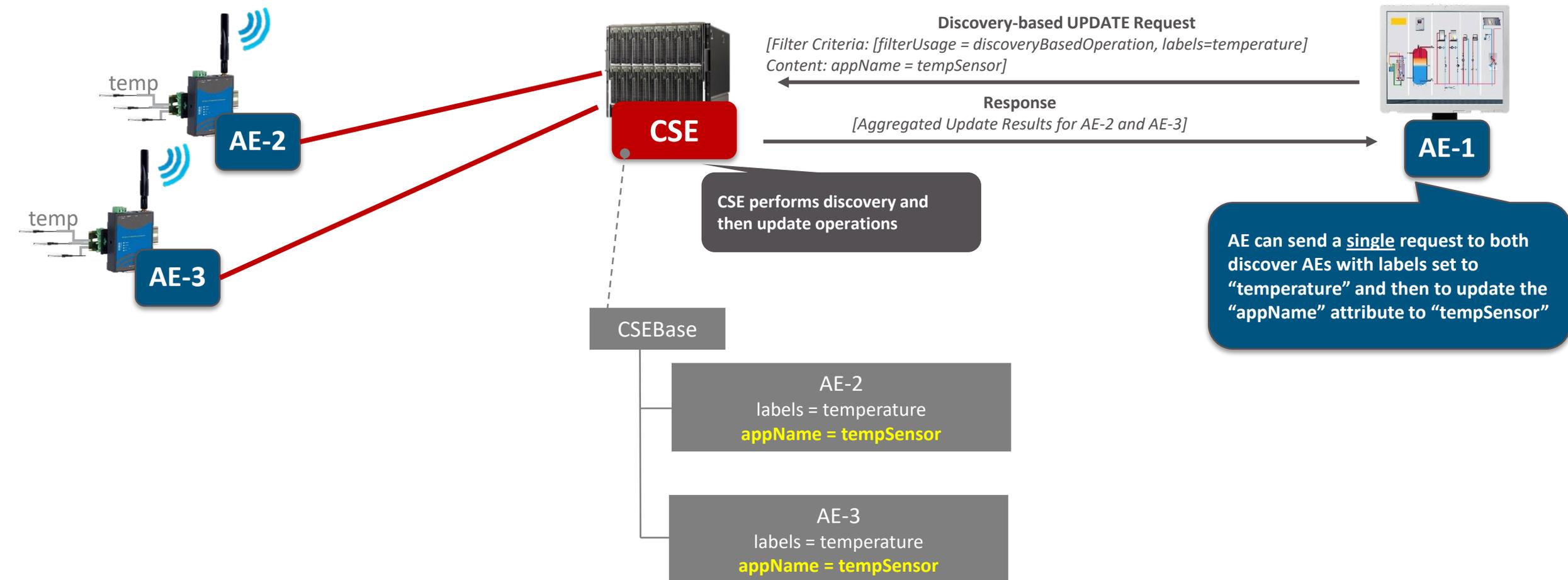
AE: Application Entity
 CSE: Common Services Entity

Modbus Interworking



AE: Application Entity
 CSE: Common Services Entity
 IPE: Interworking Proxy Entity

Discovery-based Operations



AE: Application Entity

CSE: Common Services Entity

oneM2M Future Feature development

- oneM2M Release 5
 - Developed Use Cases and Requirements
 - Work ongoing in Requirements and Domain Models Working Group
 - Started architecture and protocol related work

Release 5
Work in Progress

oneM2M System Enhancements to Support Data Protection Regulations [WI-0095]

Effective IoT Communication to Protect 3GPP Networks [WI-0096]

oneM2M and SensorThings API [WI-0100]

Advanced Semantic Discovery [WI-0101]

System enhancements to support Data License Management [WI-0102]

...

Data License Management

Allow oneM2M to manage data license so support

- **Linked Open Smart City Data**
- **License-based discovery**

WORK ITEM	
Work Item Title:	System enhancements to support Data License Management
Document Number	WI-0102
Supporting Members or Partner type 2	Hyundai Motors, KETI, Deutsche Telecom, Telecom Italia, Convida Wireless, BT, Orange
Date:	2020-05-29
Abstract:	Proposes a work item to study oneM2M system enhancement to support data license management.
Template Version:23 February 2015 (Do not modify)	

Data Protection Regulations

Make oneM2M platform to be compliant with Data Protection Regulations such as GDPR and PIPA

WORK ITEM

Work Item Title:	System enhancements to support Data Protection Regulations
Document Number	WI-0095
Supporting Members or Partner type 2	Hyundai Motor, KETI, BT, SyncTechno Inc., Hansung University, EGM, Sejong University
Date:	2022-11-30
Abstract:	Proposes a work item to study oneM2M system enhancement to support data protection regulations such as General Data Protection Regulation from EU.

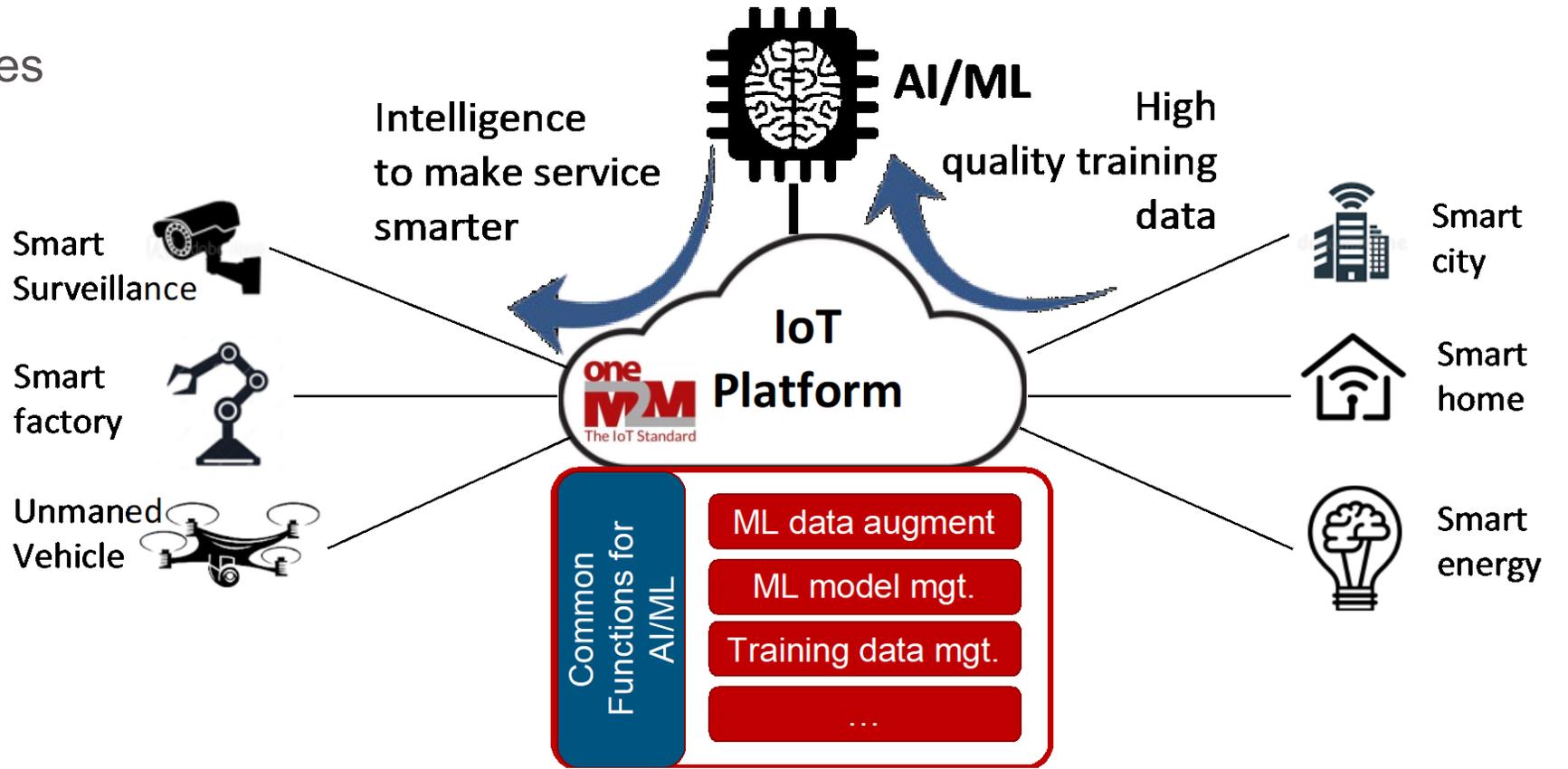
AI-enabled oneM2M System

Make oneM2M platform to support data management for AI and provide AI/ML capabilities

WORK ITEM	
Work Item Title:	System enhancements to support AI capabilities
Document Number	WI-0105
Supporting Members or Partner type 2	KETI, Hyundai Motors, Exacta GSS, Deutsche Telekom, SBS, Nokia, Hansung University, Orange, Convida Wireless
Date:	2023-04-21
Abstract:	This work item aims to enable oneM2M to utilize Artificial Intelligence models and data management for AI services.
Template Version:23 February 2015 (Do not modify)	

AI-enablement to oneM2M

- oneM2M system should be enhanced with
 - A new common service function (CSF) to support AI capabilities
 - A set of new resources
 - Various AI/ML use cases



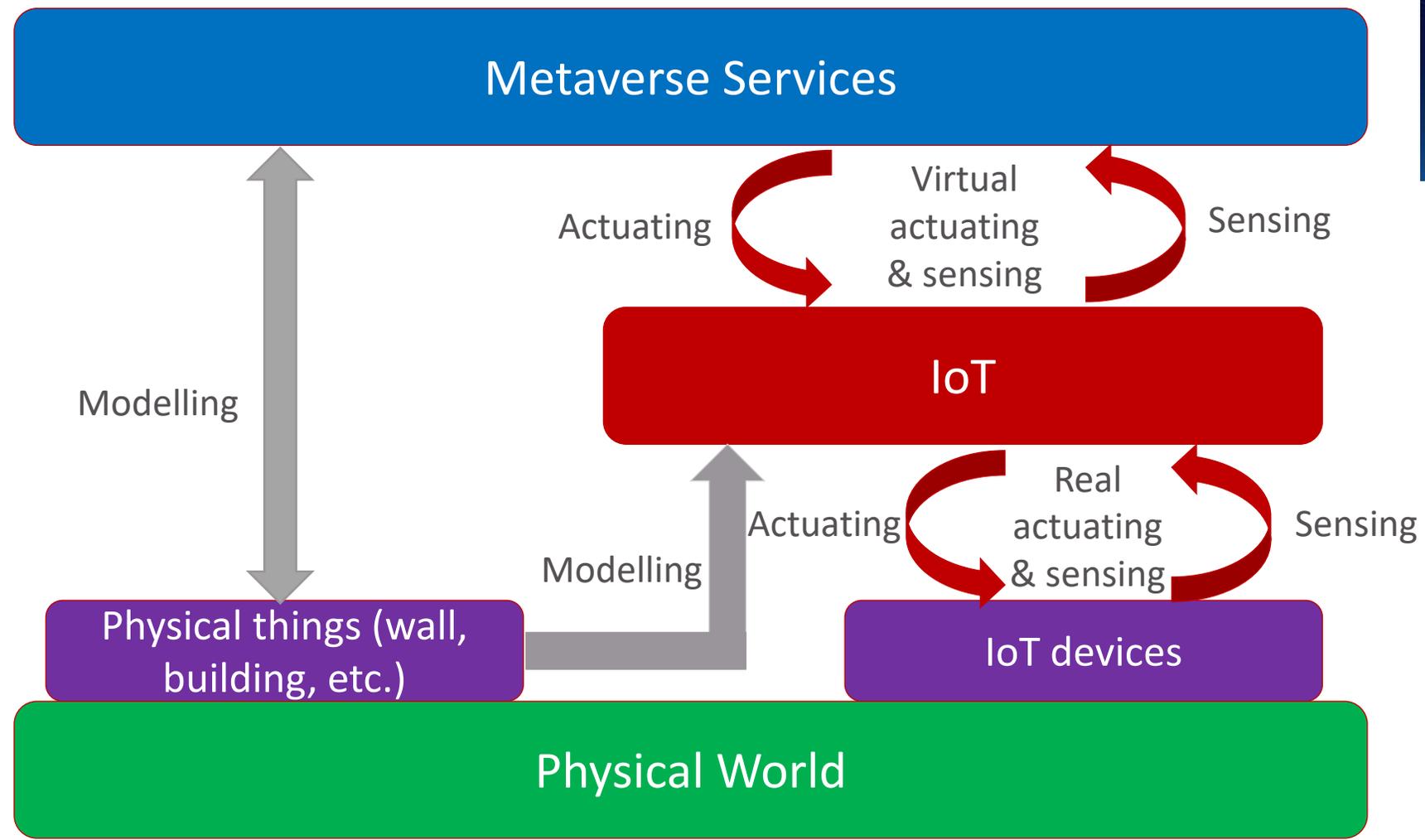
Make oneM2M platform to support Metaverse services

WORK ITEM	
Work Item Title:	Enablement of IoT in the metaverse (MetalIoT)
Document Number	WI-0110
Supporting Members or Partner type 2	Hansung University, Nokia, KETI, Sejong University
Date:	2022-09-28
Abstract:	Propose a Work Item for enabling Metaverse services on IoT

'Template Version: January 2020 (do not modify)

NEW
Rel-5 Feature

MetalIoT



oneM2M enhancements

- New work items & requirements
- Rel-4 enhancements
- Collaboration with other standard technologies (e.g., ETSI MEC)
- More deployments around the world
- Managing data and devices for other technologies (AI, Blockchain, Smart City, Metaverse, Digital Twin, etc.)
- Developer supports
- Collaborate with open source communities (OCEAN, OM2M, ACME, tinyIoT, etc.)



Thank You

