



oneM2M presentation
Identification in IoT, oneM2M views –
Session on “Diversity of business models &
interoperability”
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oneM2M www.oneM2M.org

Outline

- Introduction to oneM2M
- oneM2M design principles
- Identification in IoT, oneM2M perspective

oneM2M Partnership Project



Over 200 member organizations in oneM2M



www.oneM2M.org

All document are publically available

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Purpose & Deliverables



Purpose

To specify and promote a

Global Standard

for an

M2M Common Service Layer

Deliverables

Technical Reports and Technical Specifications

M2M Common Service Layer in a nutshell

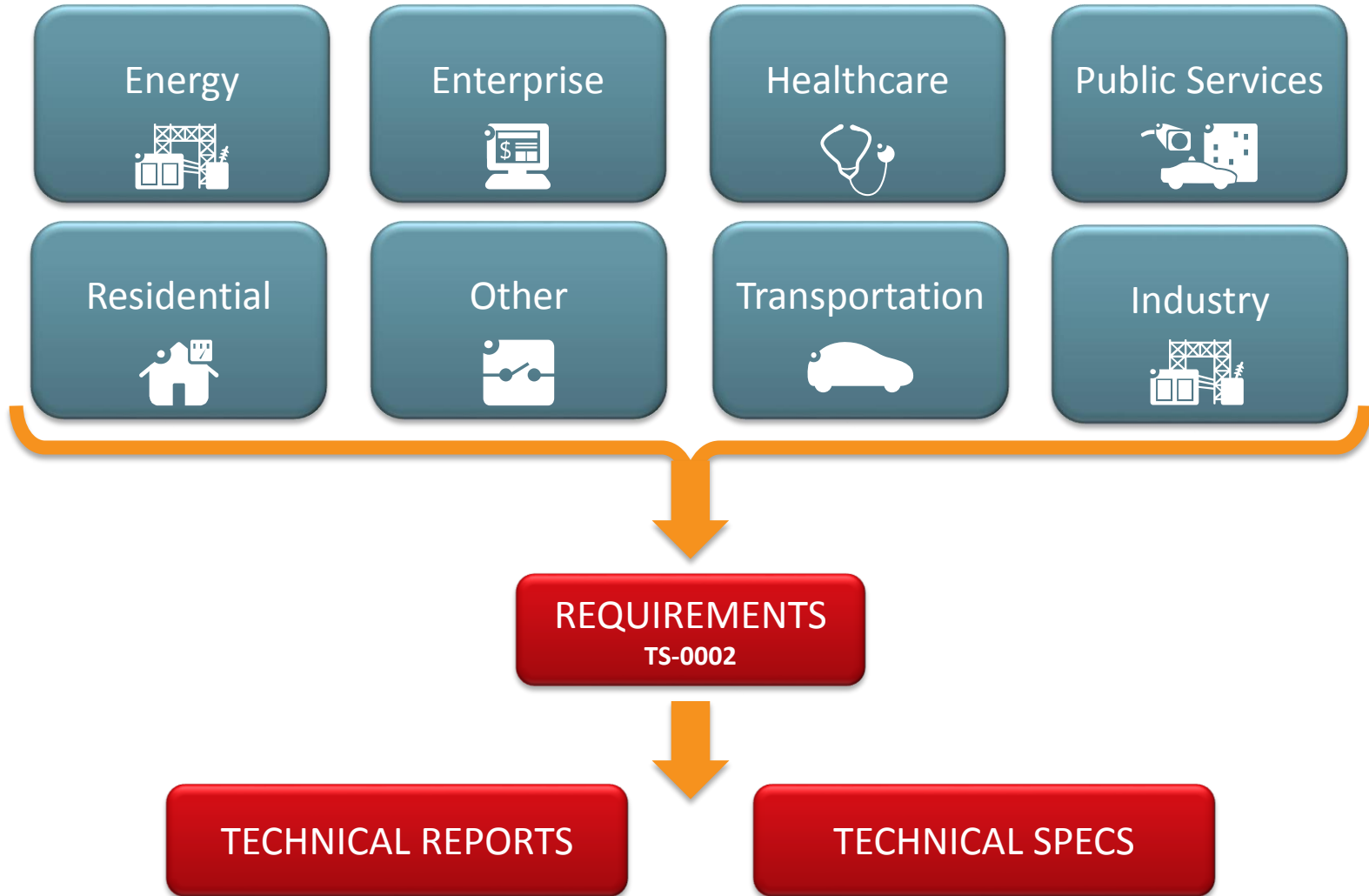
A software “framework”

Located between the M2M applications and communication HW/SW that provide connectivity

Provides functions that M2M applications across different industry segments commonly need (eg. data transport, security/encryption, remote software update...)

Like an “Android” for the Internet of Things
But it sits both on the field devices/sensors and in servers
And it is a standard – not controlled by a single private company

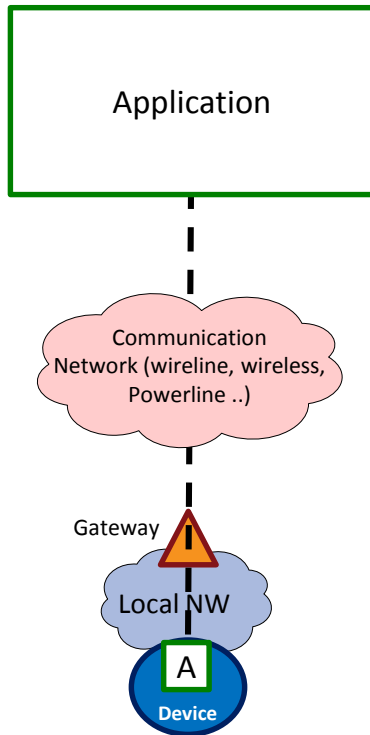
Work Process



oneM2M Architecture approach

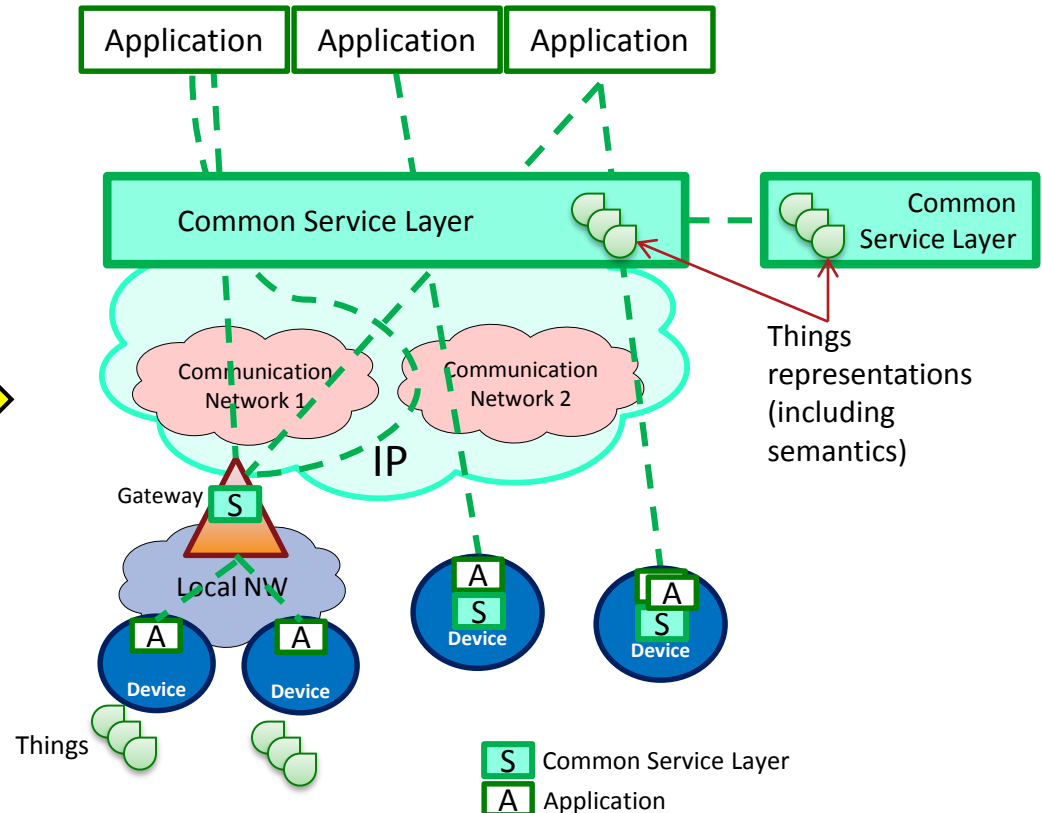
Pipe (vertical):

1 Application, 1 NW,
1 (or few) type of Device
Point to point communications



Horizontal (based on common Layer)

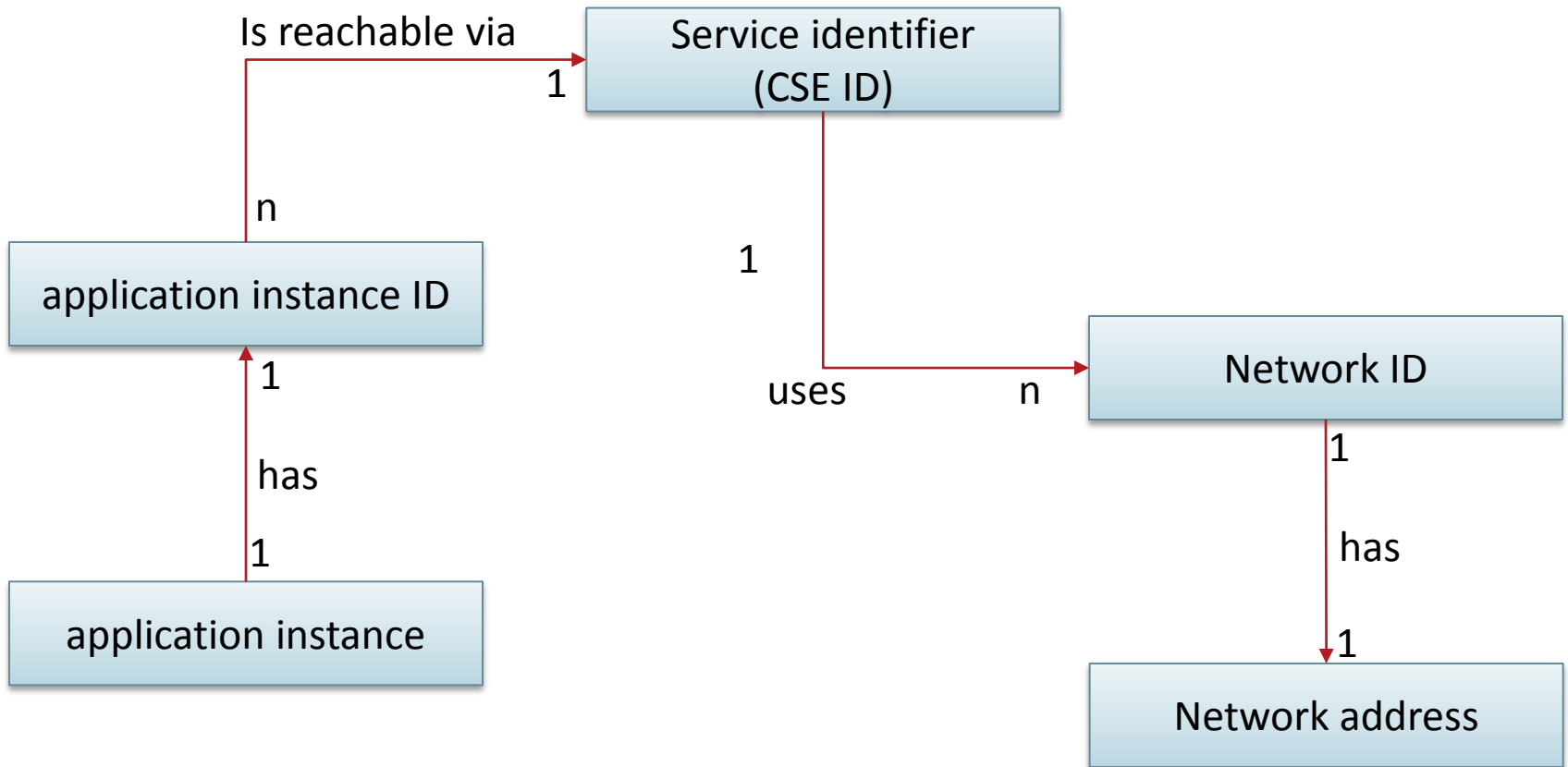
Applications share common service and network infrastructure
Multipoint communications



oneM2M identification principles

- A device may have *multiple network interfaces* at the same time (3GPP, WiFi, etc.), *each* interface should have a *network identifier* (not to be confused with a network address)
- The network identifier for a device may change during the lifecycle of the device, e.g. because of a change in the network subscription. Such a change shall not impact continuity of service layer operations.
- A device may run an instance of the oneM2M service layer, which also has an identifier on its own. A service layer identified is linked to one or more network identifiers of the device
- A device may run multiple applications, each has its own ID. In addition each application exposes resources, identified using resource identifiers URI (temperature sensor)

Relationships between identifiers (simplified view)



Advantage of oneM2M identification requirements

- A change of network subscription does not impact service and application layer operations, as long as a mapping is maintained between service and network identifiers
 - Number portability is not a strong requirement as compared to personal communications
- Network identifiers are not visible by applications which only deal with application and resource identifiers
- Selection of a network identifier to be used depends on availability at a certain point in time and network selection policies
- In the 5G world with ubiquitous connectivity, applications need to rely on IDs independent of the actual used network