



oneM2M Industry Day

OCEAN

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KETI

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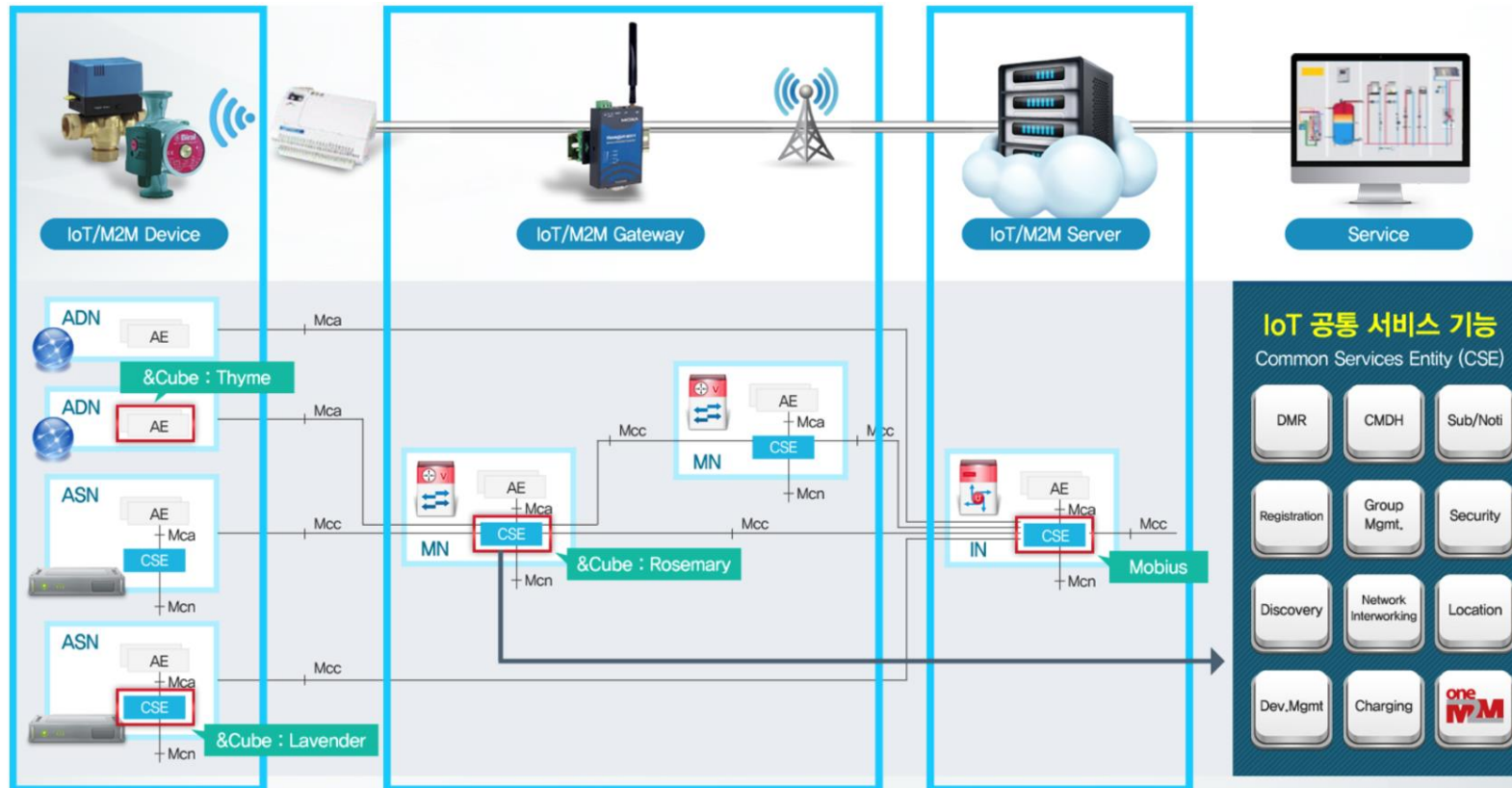


OCEAN Intro

OCEAN and its adoptions

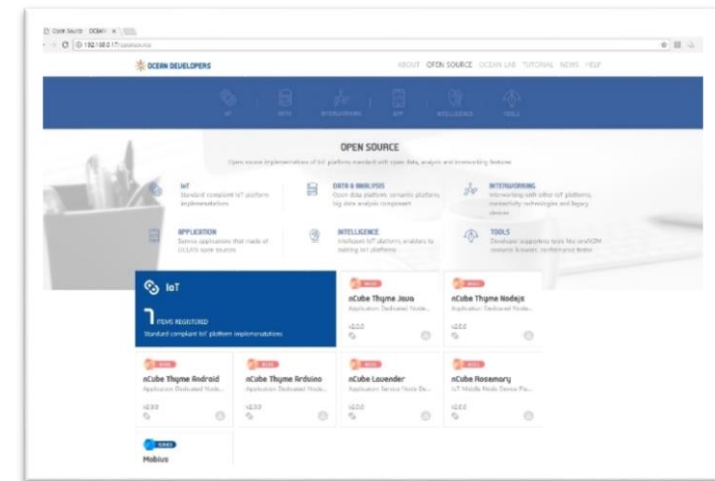
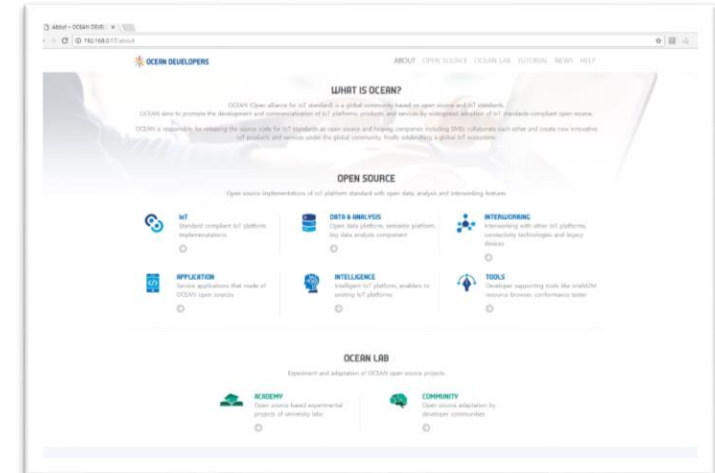
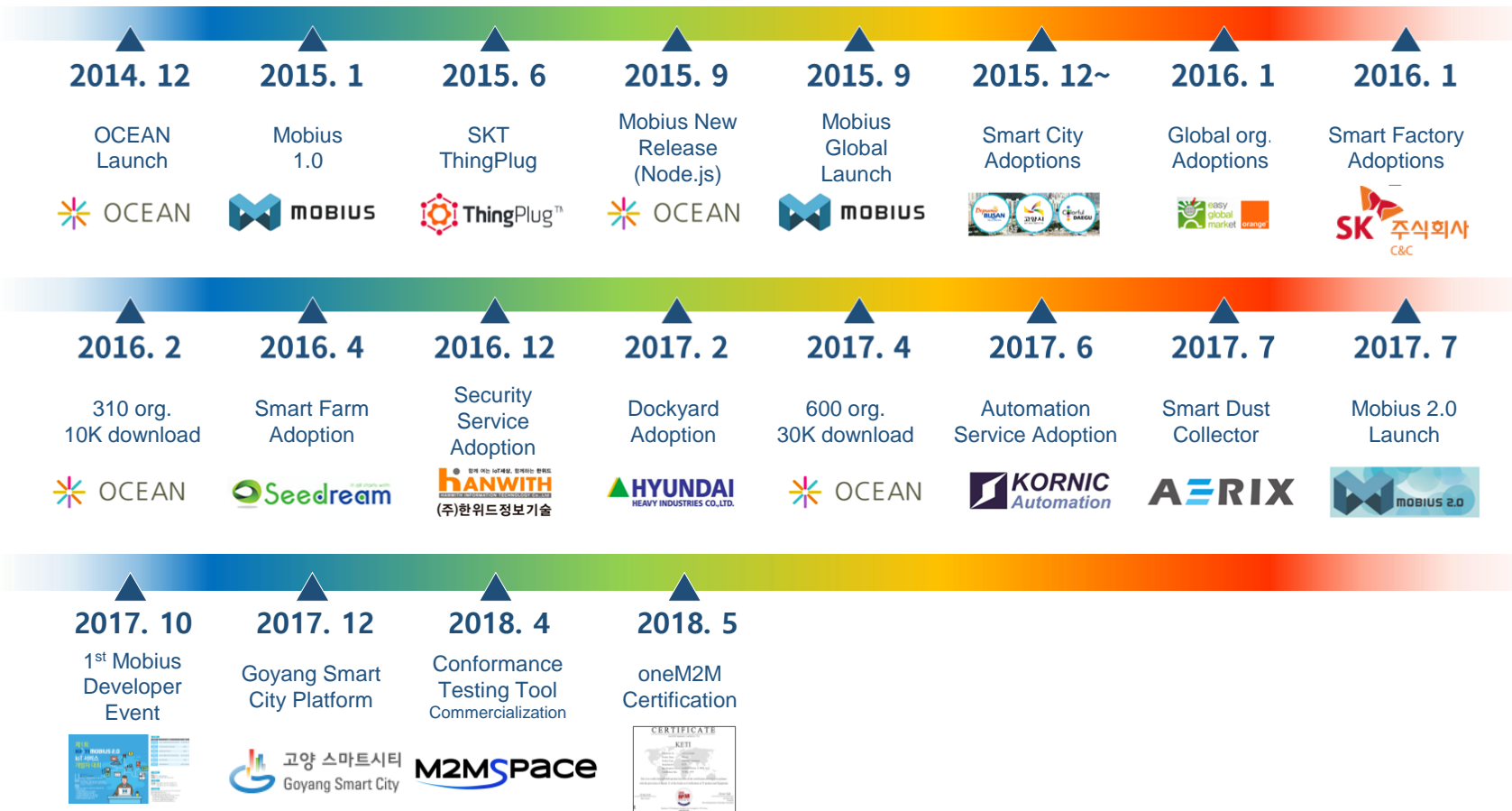
Dawn of OCEAN¹⁾

- oneM2M standard open source implementations



1) Open allianCE for iot stANDARD

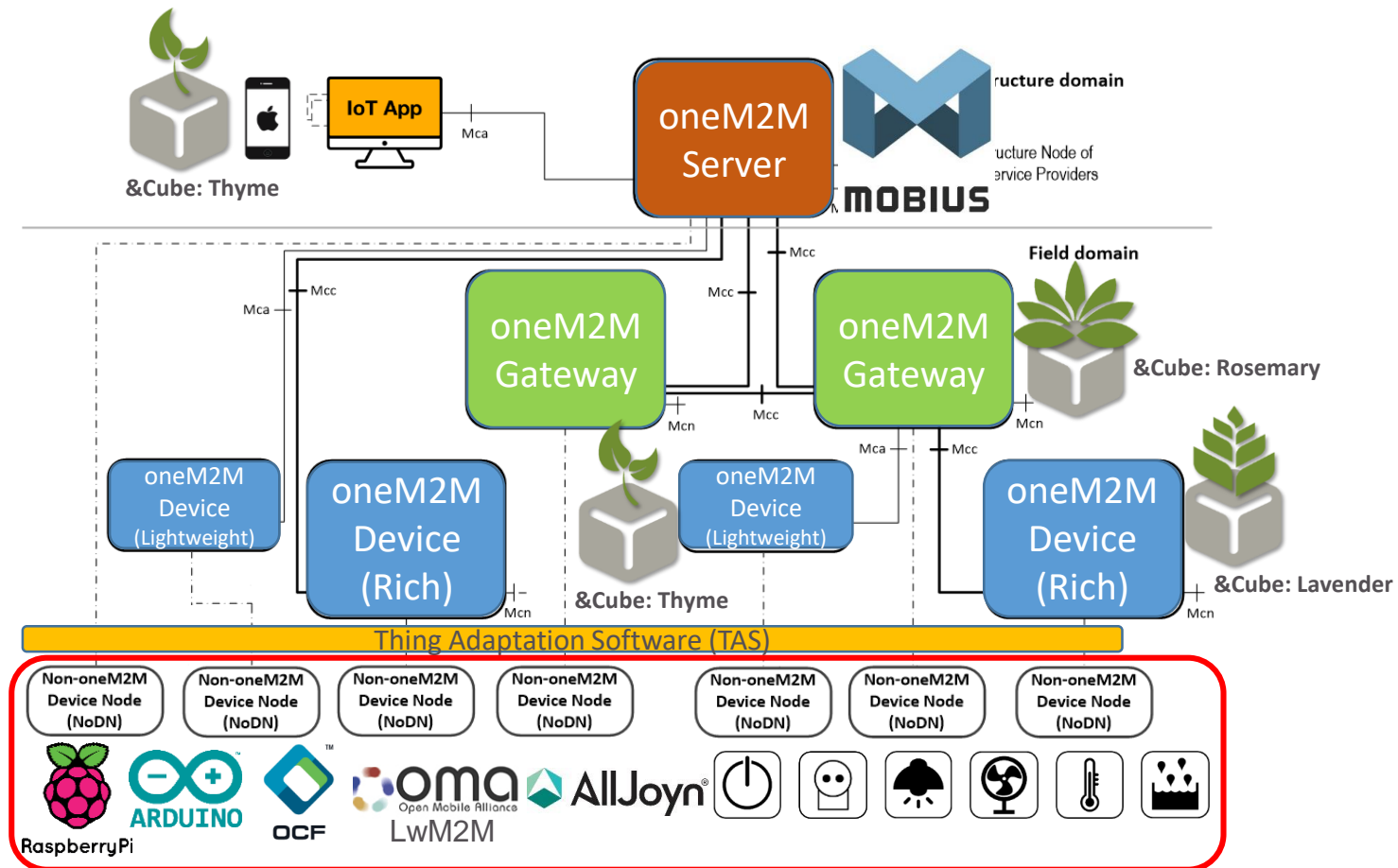
OCEAN History



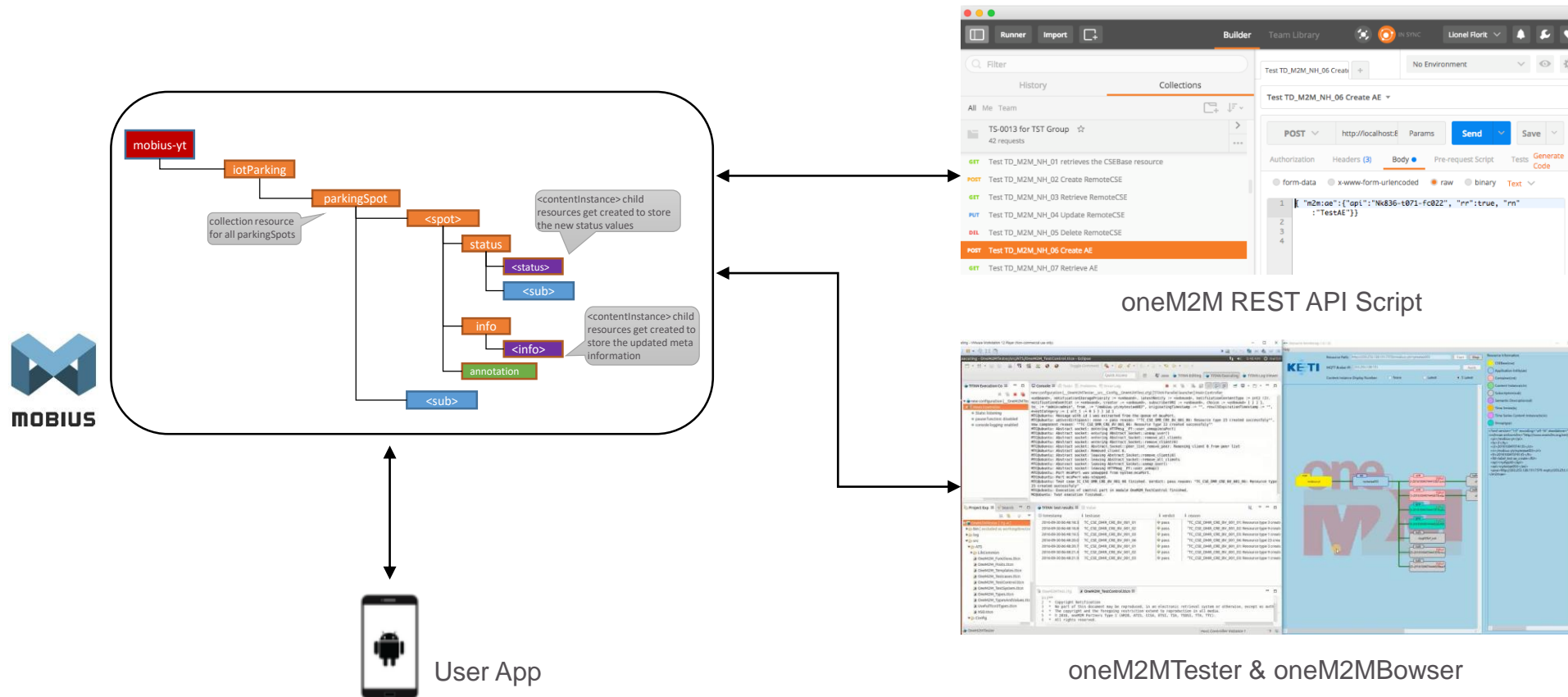
<http://developers.iotocean.org>

OCEAN over oneM2M

- OCEAN covers various oneM2M system configurations



- Tools for oneM2M API tests and service implementations

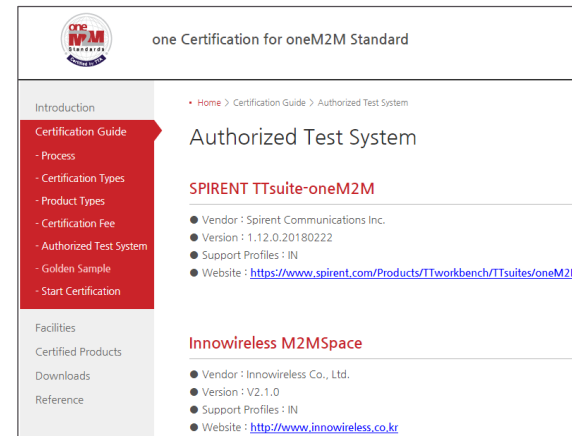


- Mobius

- 1st oneM2M open source certification

- oneM2MTester

- M2MSpace as commercial product is designated as authorized testing system



<http://www.oneM2Mcert.com>

주의 요함 | onem2m.org/developers-corner/tools/open-source-projects

Open Source Projects

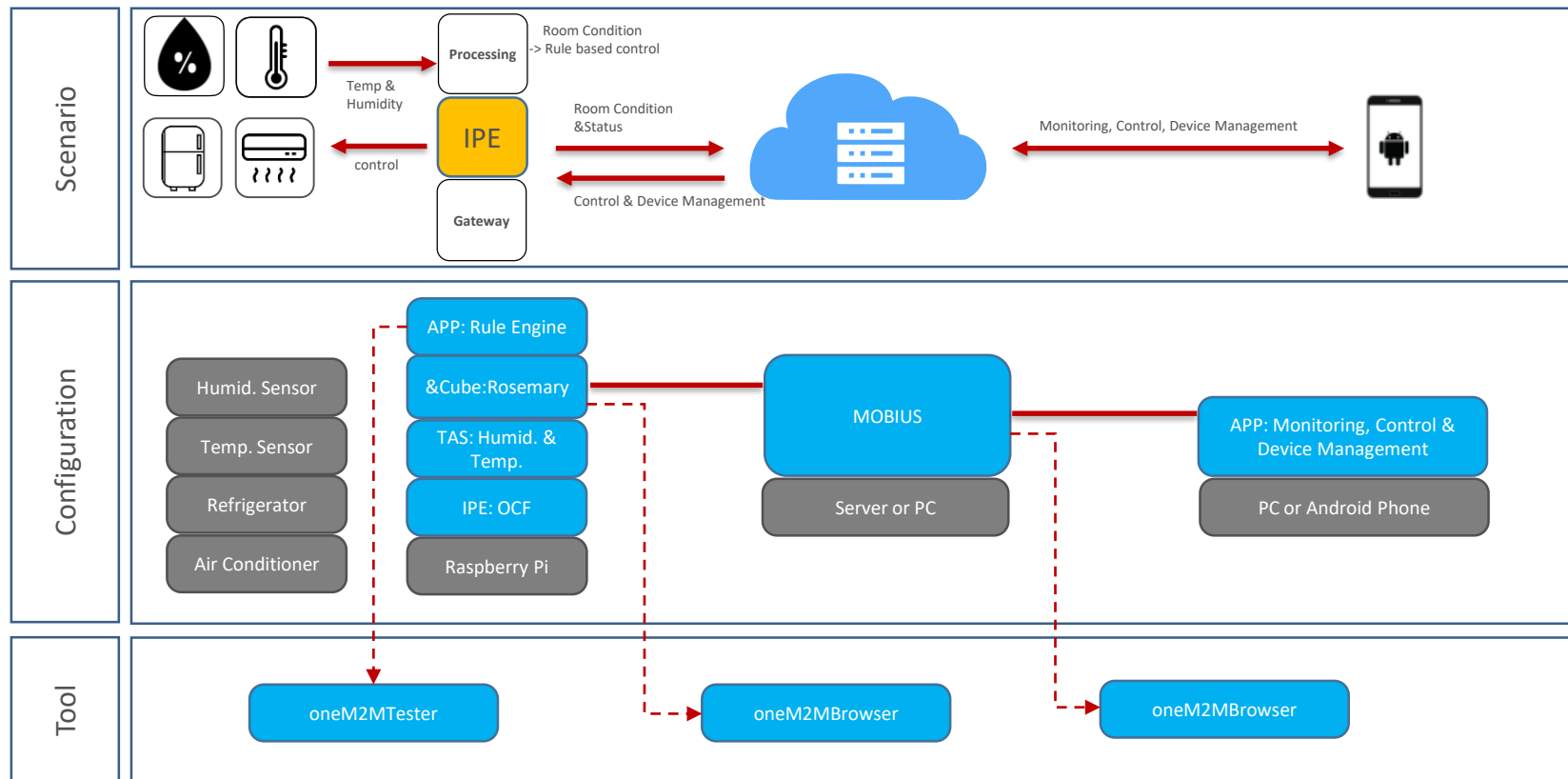
Several independent Open Source foundations and projects have been actively using oneM2M standards in various applications and services since oneM2M Release 1 was published in January 2015. These Open Source projects may be a useful place for developers to start to familiarise themselves with oneM2M. [Print](#)

- ATIS Open Source Internet of Things (OS-IoT) is an open source software library that simplifies the development of IoT devices, particularly small clients, that connect to the oneM2M ecosystem.
- IOTDM, part of the OpenDaylight project hosted by the Linux Foundation: Developing a oneM2M-based IoT Data Broker to enable authorised applications to retrieve IoT data uploaded by any device.
- OASIS SI, part of Open-source Architecture Semantic IoT Service-platform project: Developing code for the oneM2M-based IoT server platform. It consists of protocol binding, controller & resource handling and database layer for flexibility.
- OCEAN, open alliance for IoT standard, Open source implementations for oneM2M server/gateway/device platforms and applications are supported. Also, developer tools including platform resource browser, self-conformance testing tool are provided. The oneM2M implementations for open hardware like Raspberry Pi, Arduino are distributed to help oneM2M product development. Mobius, the oneM2M server implementation, got the oneM2M certification and it is designated as one of the golden samples.
- OM2M, hosted by the Eclipse Foundation and part of Eclipse's IoT Working Group: Offers a flexible oneM2M-based platform to implement horizontal M2M servers, gateways, and devices. It brings forward a modular architecture, running on top of an OSGi container, which is highly extensible via plug-ins.
- OpenMTC is a integration middleware based on the oneM2M standard, for conducting applied research and developing innovative M2M and IoT applications. Its horizontal service approach easily integrates devices from different Industrial IoT verticals, independent of the underlying hardware or network infrastructure.
- oneM2MTester is the world first free open source conformance testing tool that developers can use to check the compliance of their platforms and applications with oneM2M specifications. The oneM2MTester is built upon Eclipse TITAN, which is a free open source TTCN-3 compilation and execution framework also supporting Eclipse IDE. Developers can select test cases in the tool that are specified in oneM2M TS-0018 and get the test result. oneM2M Certification Body designated one of the commercialized conformance testing tools that is based on oneM2MTester as the authorized testing system.

<http://www.oneM2M.org>

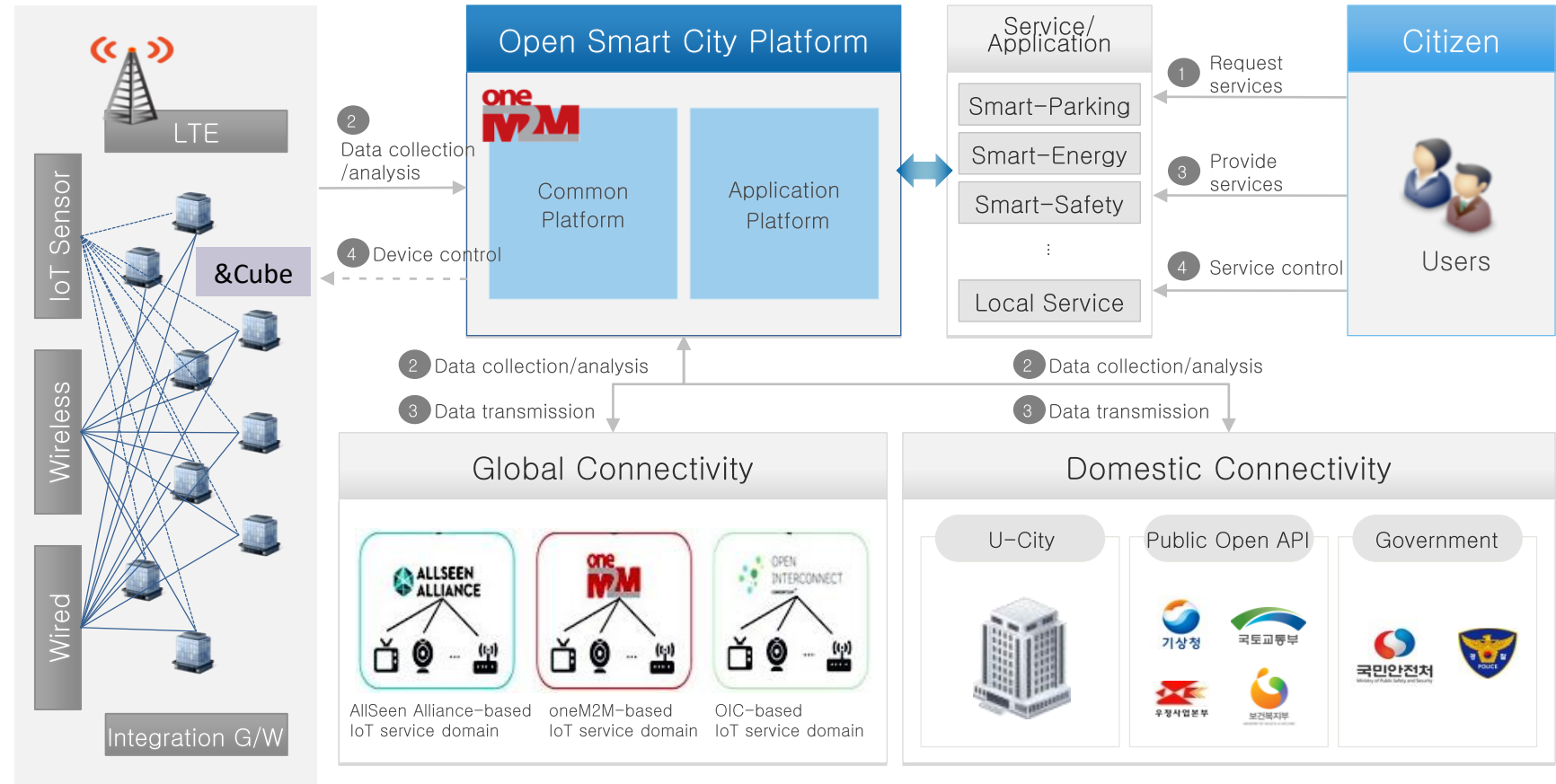
OCEAN-based Solution

- A solution is half ready with OCEAN



OCEAN Adoptions

- Busan Haeundae Smart City

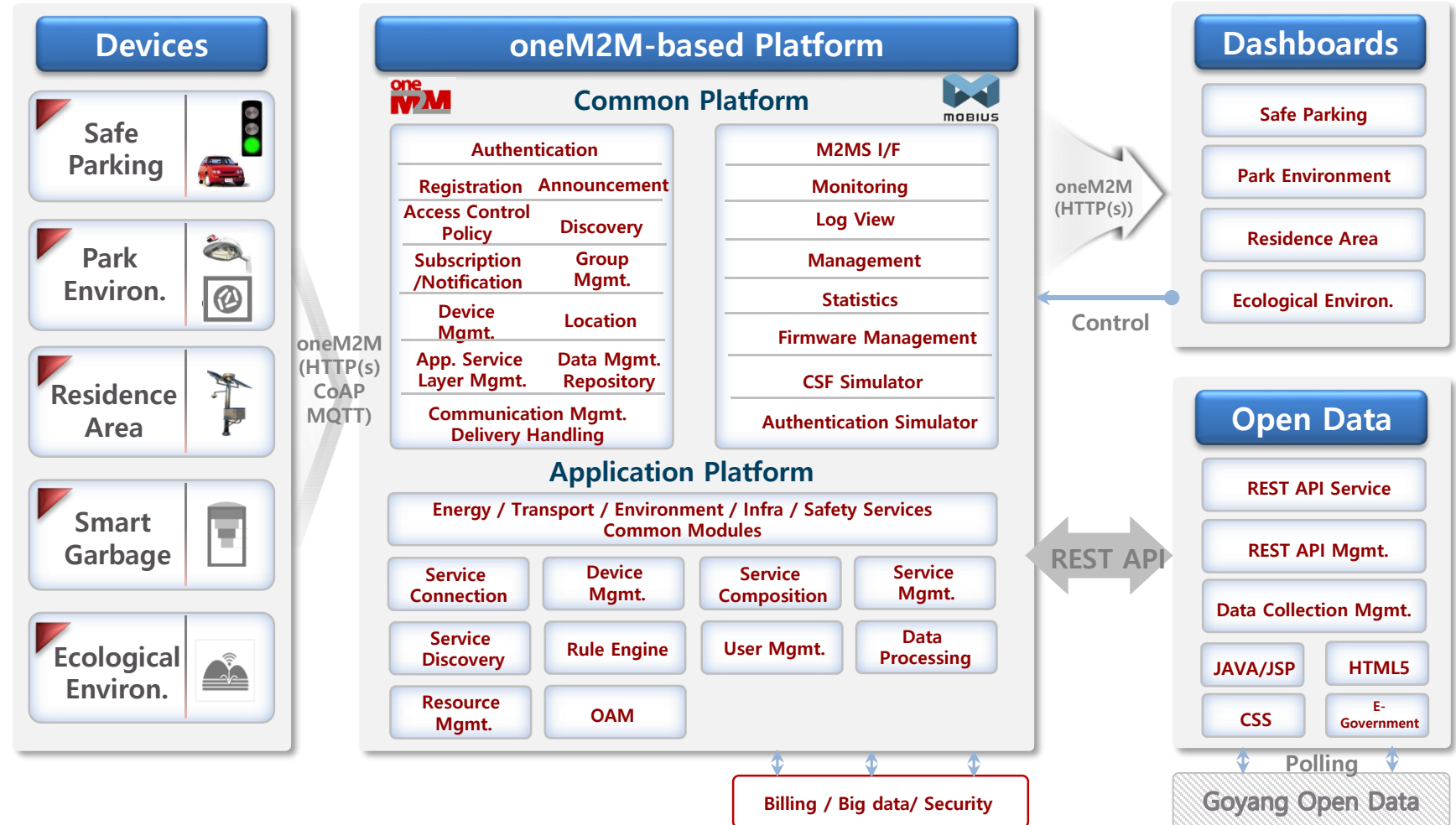


Source: SK telecom

OCEAN Adoptions



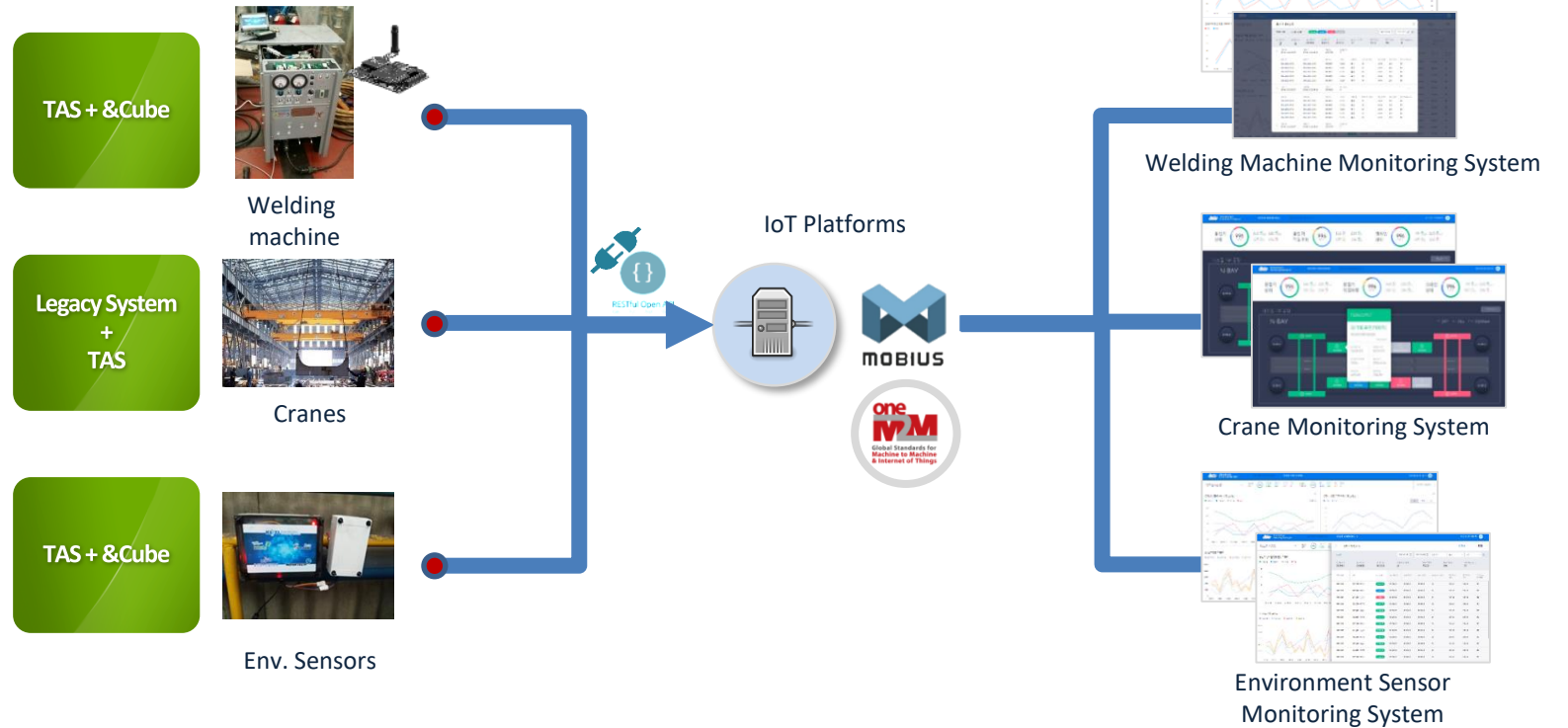
- Goyang Smart City



Source: N2M

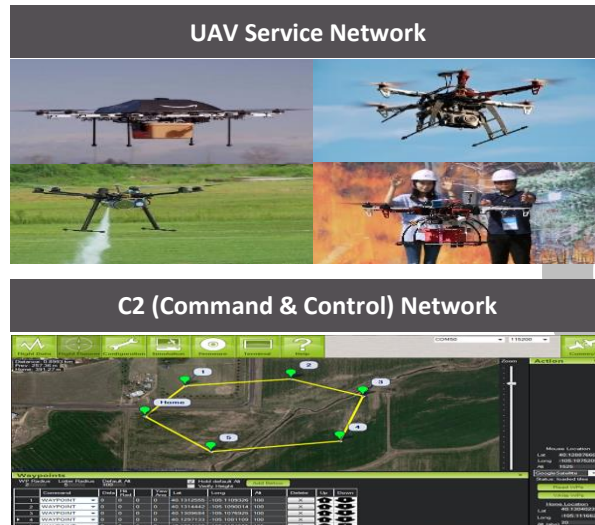
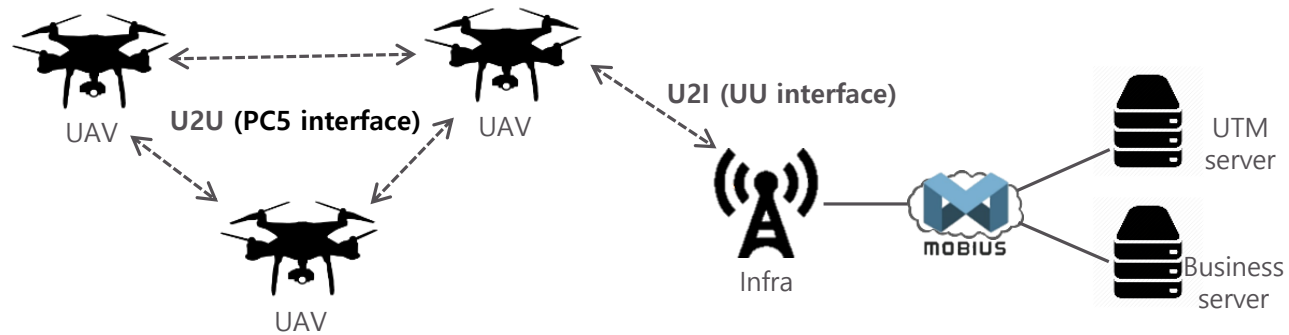
OCEAN Adoptions

- Dockyard Monitoring System



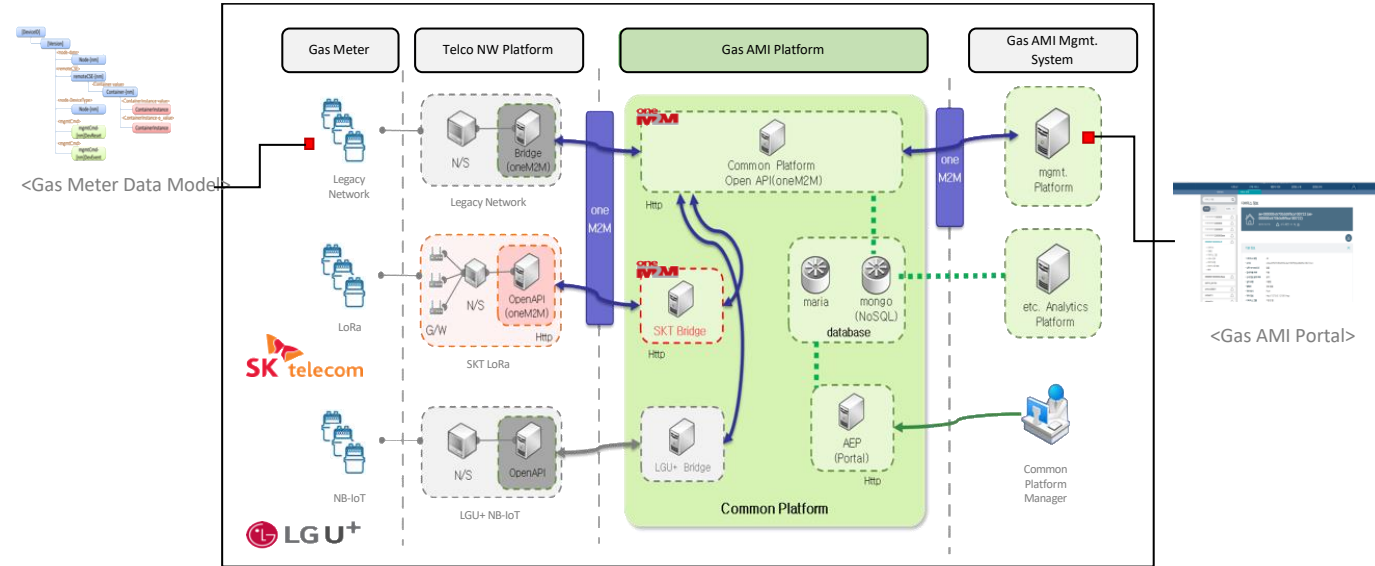
OCEAN Adoptions

- Unmanned Traffic Management



OCEAN Adoptions

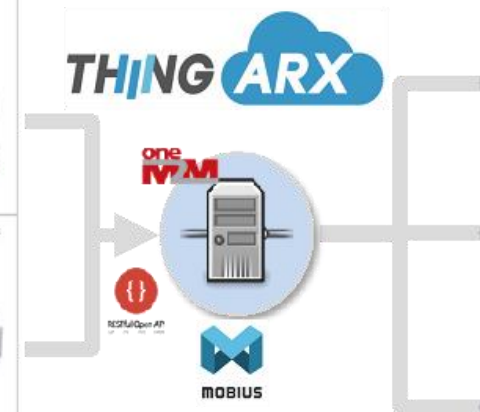
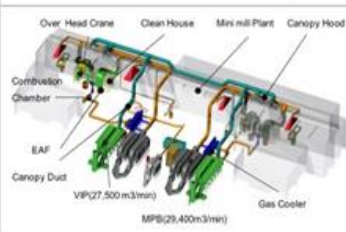
- Gas AMI
- Smart Dust Collector



POSCO Steel I Manufacture



POSCO High Mill B/F



Application

Dashboard

Statistics

Control Mgmt.

Sensor Monitor

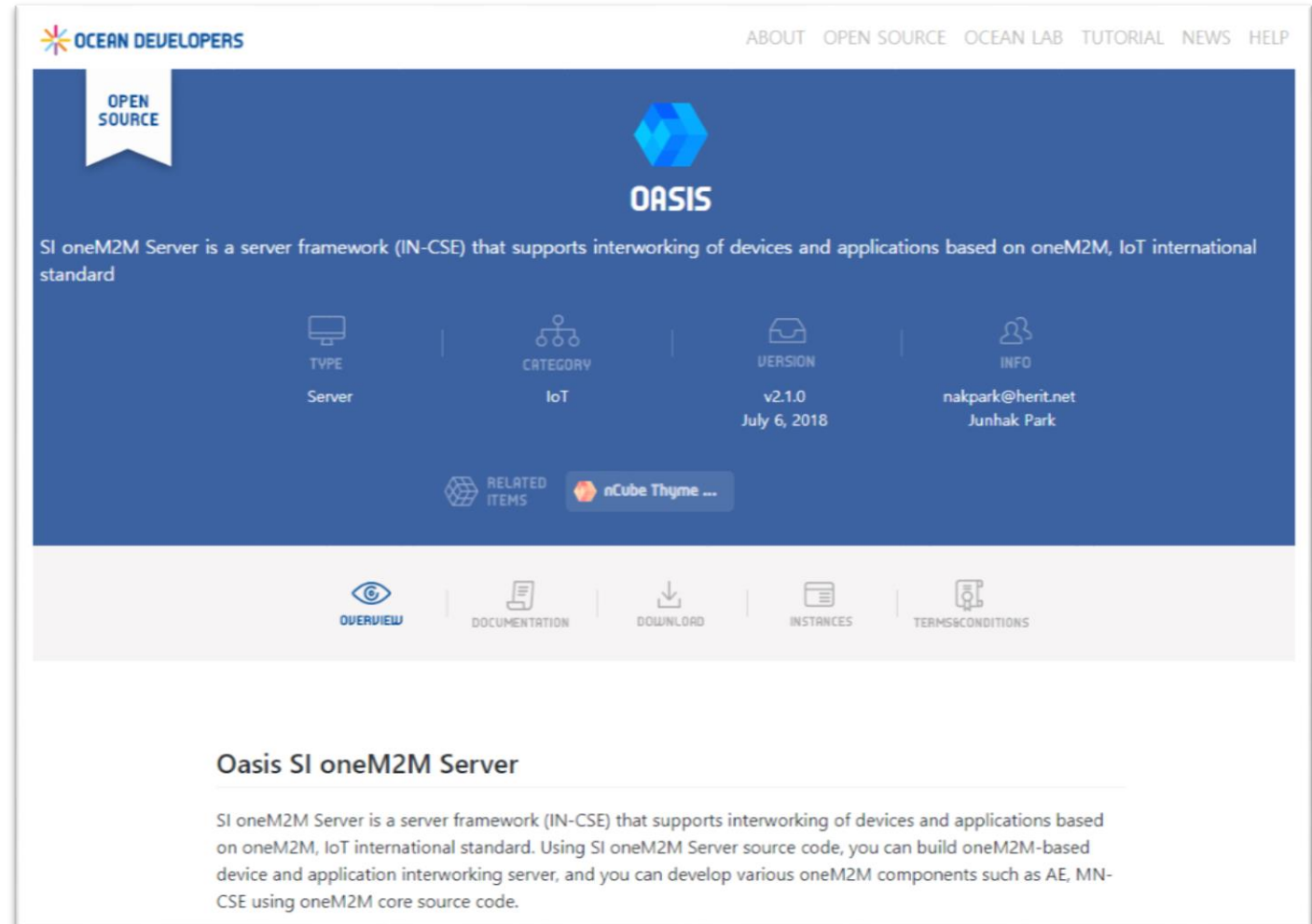




OCEAN Now

Sub text

- OASIS
 - oneM2M IN-CSE implementation



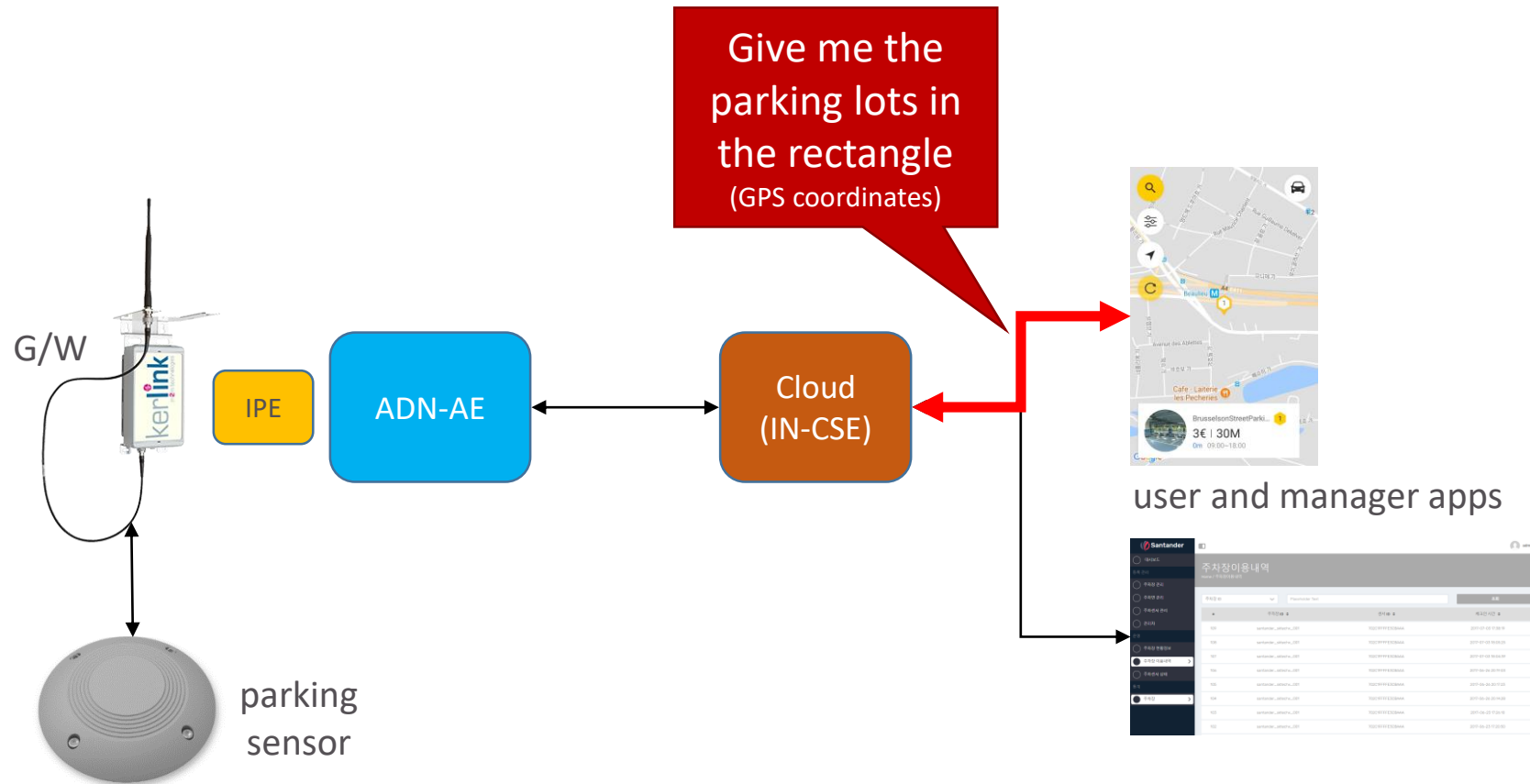
The screenshot shows the OASIS project page on the Ocean Developers website. The page features a blue header with the 'OASIS' logo and a description: 'SI oneM2M Server is a server framework (IN-CSE) that supports interworking of devices and applications based on oneM2M, IoT international standard'. Below this, there are four columns of metadata: Type (Server), Category (IoT), Version (v2.1.0, July 6, 2018), and Info (nakpark@herit.net, Junhak Park). A 'RELATED ITEMS' section includes a link to 'nCube Thyme ...'. At the bottom, there is a navigation bar with icons for Overview, Documentation, Download, Instances, and Terms & Conditions. The main content area below the navigation bar is titled 'Oasis SI oneM2M Server' and contains a detailed description of the server framework.

Oasis SI oneM2M Server

SI oneM2M Server is a server framework (IN-CSE) that supports interworking of devices and applications based on oneM2M, IoT international standard. Using SI oneM2M Server source code, you can build oneM2M-based device and application interworking server, and you can develop various oneM2M components such as AE, MN-CSE using oneM2M core source code.

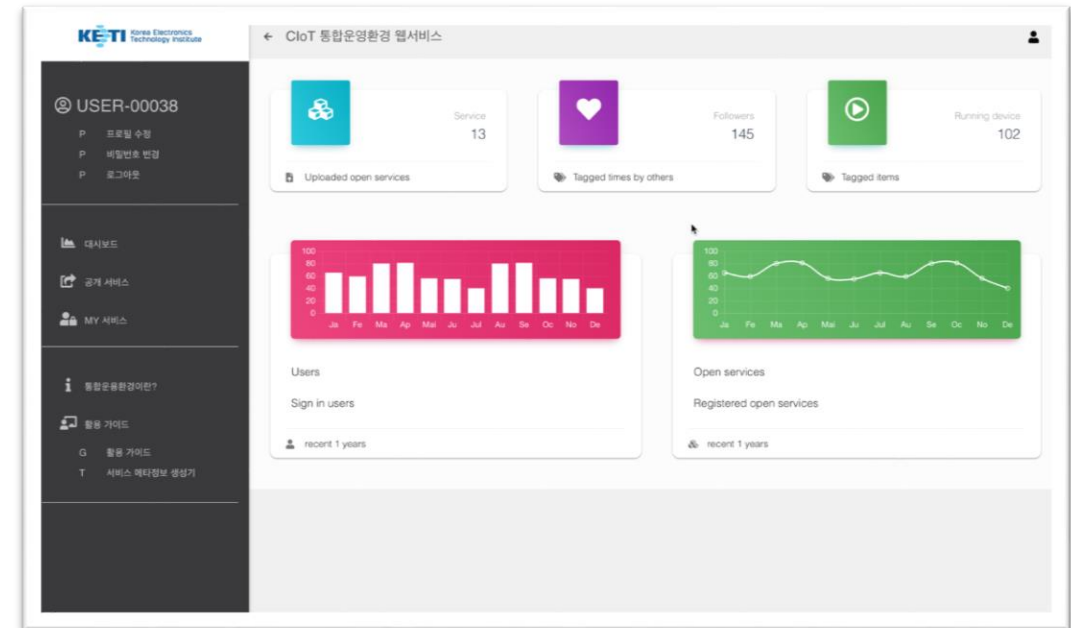
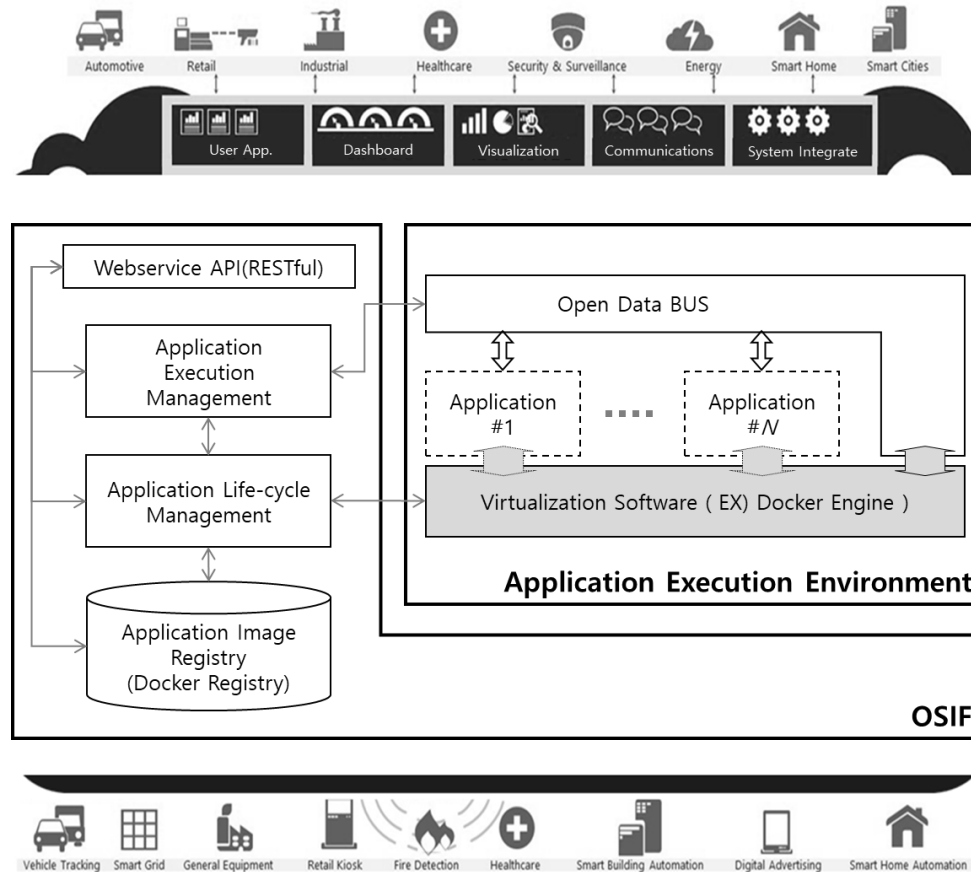
oneM2M Extensions

- Supporting geo-query



Beyond oneM2M

- Open Service Integration Framework (OSIF)





OCEAN Plans

Beyond IoT

Towards Smart City

- Smart city data hub modules

- Analytics
- Service
- Security
- Data
- Connectivity
- Infrastructure
- IoT (oneM2M, legacy, etc.)

