ETSI M2M /oneM2M

• After 5 years of work in ETSI M2M, the seven leading ICT standards development organisms and five industry consortia founded oneM2M (ETSI, TIA, ATIS, ARIB, CCSA, TTA, TTC), with more than 200 member companies from the across the world.

• OneM2M defines a service platform, which specify requirements, architecture, API specifications, security solutions and mapping to common industry protocols.

• In January 2015, oneM2M has announced its Release 1, a set of 10 specifications, all publicly available from oneM2M's website: (www.onem2m.org/release1)
  — provides building blocks to enable generation of M2M and IoT applications.
  — makes use of OMA and BBF specifications for Device Management capabilities.

• This reduces the complexity for the M2M Network Provider, for the application developer, allowing the service providers to seamless interact and to transform the way we all work and play in the future.

It will transform the way we all work and play in the future, in our daily life.
OneM2M top 3 features

- Interoperability of the service layer
- Interworking with any underlying network
- Allowing Seamless Application Development on Data

Pipes (verticals):
1 Application, 1 NW, 1 (or few) type of Device

Horizontal (based on common Layer)
Applications share common infrastructure, environments and network elements
OneM2M top 3 features (1) : Interoperability

• **A generic service Platform with Open Interfaces and APIs**, with a RestFull Based architecture, imaging real devices by standardised tree structured resources

• oneM2M's architecture and standards for M2M communications are designed to be applied in many different industries, and take account of input and requirements from any sector

• **Targets** :
    • e-Health, Transport, Smart Grid, Smart metering, e-Mobility, Smart Building, Home Automation, Assisted Living, ...
  – tomorrow : allowing low cost Smart Cities Monitoring, Management and Control.
OneM2M top 3 features (2): Interworking with any Industrial or Vertical Low level Protocol

- oneM2M architecture can integrate current and future home and building control technology, federating the range of different protocols in use, over several underlying transport technologies, such as Wi-Fi, Zigbee, fixed-line, and cellular.
  - mapping to common industry protocols such as CoAP, MQTT and HTTP
  - Interworking with Cellular protocols, Wireless LAN protocols, Wireline Internet based protocols ...

- Targets: Industrial Automation, Smart grid, Home Automation.
  - scalable architecture and Interoperability
OneM2M top 3 features (3):
Seamless Services and Applications development

• High level functionalities will allow service providers to support applications and services across a range of industries.
  – Security, authentication,
  – Device management (OMA DM, OMA Lightweight, BBF TR 69)
  – Semantic Interoperability, thanks to Reference Ontologies first defined in the domain of Smart Appliances.

• Targets: Home Automation, Industrial Automation, ...
  – oneM2M architecture can integrate current and future home and building control technology, federating the range of different protocols in use.