

No Harm To Networks

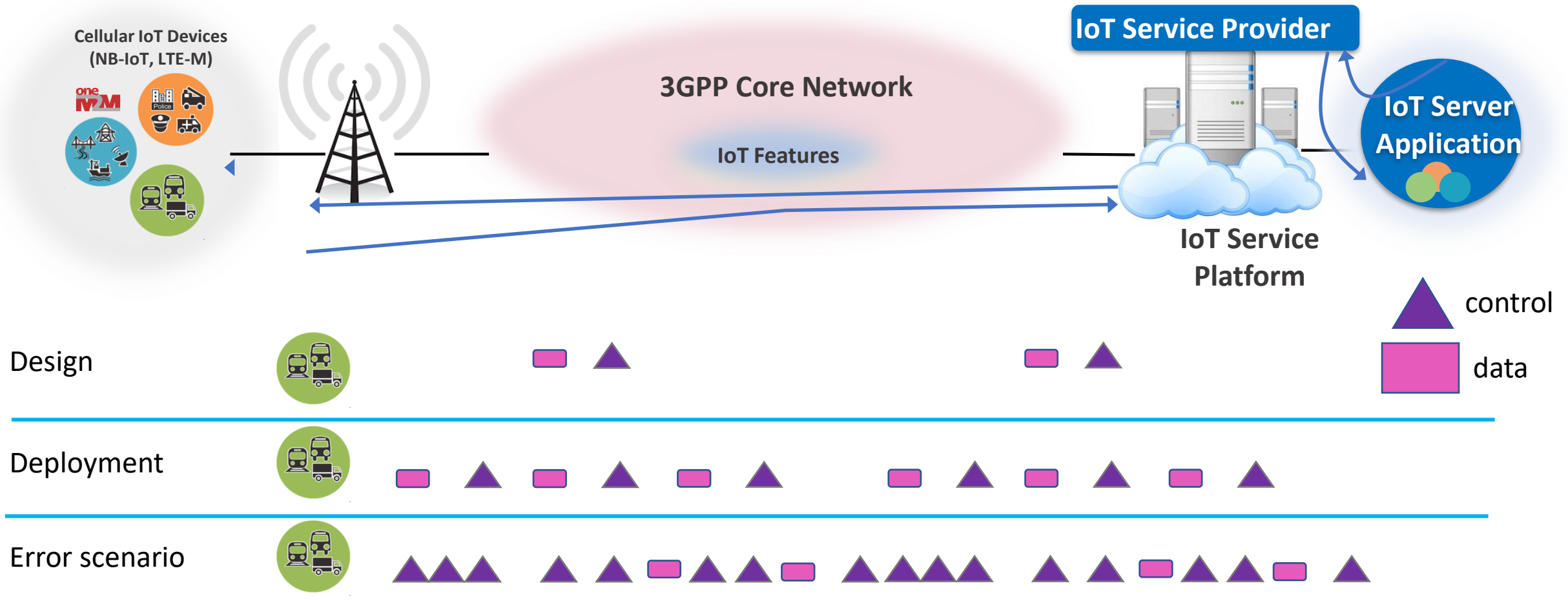
How oneM2M Standard-Based IoT Solutions Protect Mobile Networks

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Massive IoT Device Deployment





GSMA TS 34 IoT Device Connection Efficiency Guidelines

IoT Service Provider – The provider of IoT services working in partnership with a network operator to provide an IoT service to an end customer. The provider could also be an MNO.

Mobile Network Operator – The mobile network operator(s) connecting the IoT device application to the IoT service platform.

IoT Device – The combination of both the IoT device application and the communication module.

IoT Device Application – The application software component of the IoT device that controls the communications module and interacts with an IoT service platform via the communications module.

Communication Module – The communications component which provides wide area radio connectivity

Communications Module Firmware – The functionality within the communications module that provides an API to the IoT device application and controls the radio baseband chipset.

Radio Baseband Chipset – The functionality within the communications module that provides connectivity to the mobile network.

UICC – The smart card used by a mobile network to authenticate devices for connection to the mobile network and access to network services.

IoT Service

IoT Service Platform

IoT Service Provider Requirements: TS.34_6

3GPP Mobile Network

3GPP Connection Efficiency Features: TS.34_9

IoT Device

IoT Device Requirements: TS.34_3

IoT Device Application

IoT Device Application Requirements: TS.34_4

Communication Module

Communication Module Requirements: TS.34_5
Connection Efficiency Requirements: TS.34.7

Communication Module Firmware

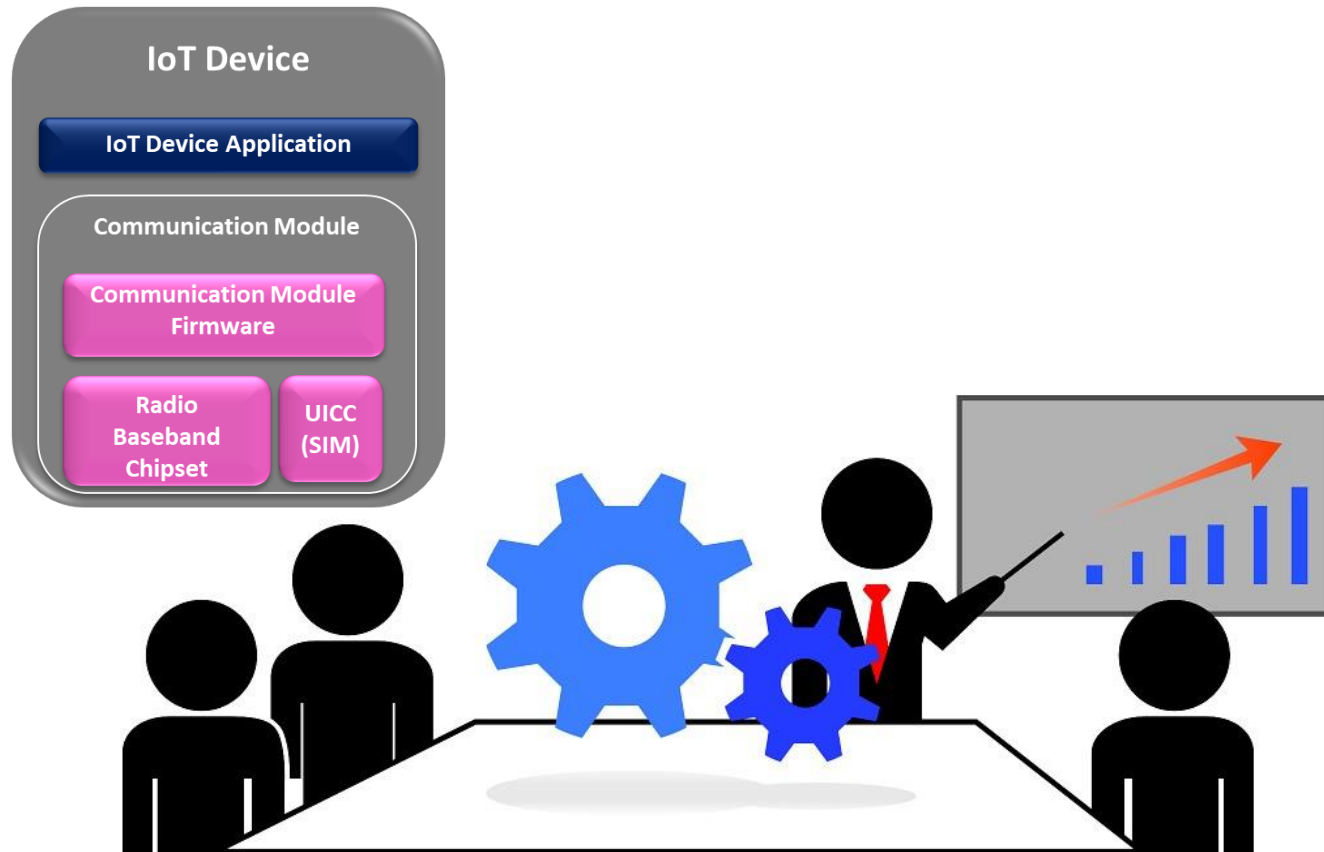
Radio Baseband Chipset

UICC (SIM)

Radio Policy Manager Requirements: TS.34_8



Challenges of Massive IoT Deployments



Every product manufacturer has to implement the recommendations

- Manufacturer specializes in sensors, not mobile network communications
- Increased time-to-market and cost

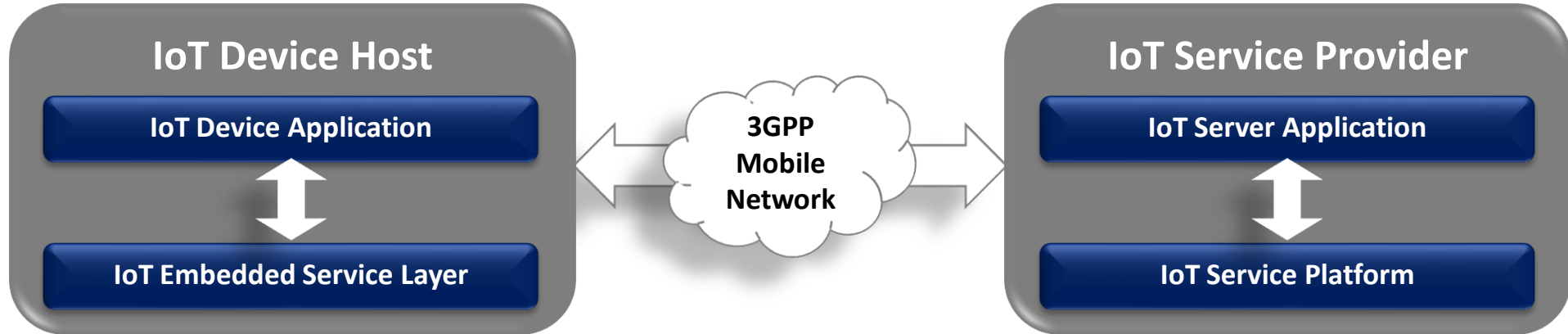
Mobile Network Operator has to verify each different implementation

- Increased time-to-market and cost

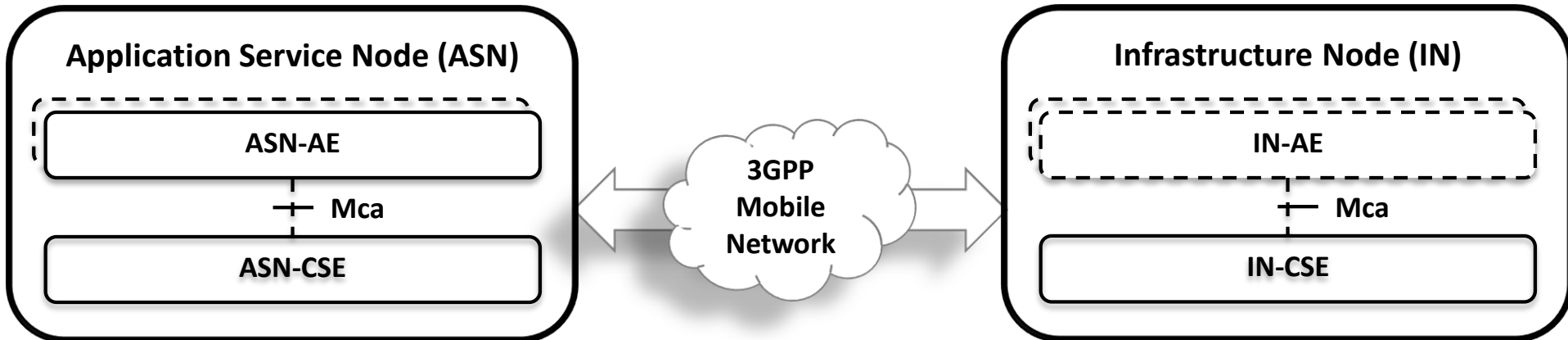


GSMA recommends a better way

GSMA Evolved Architecture

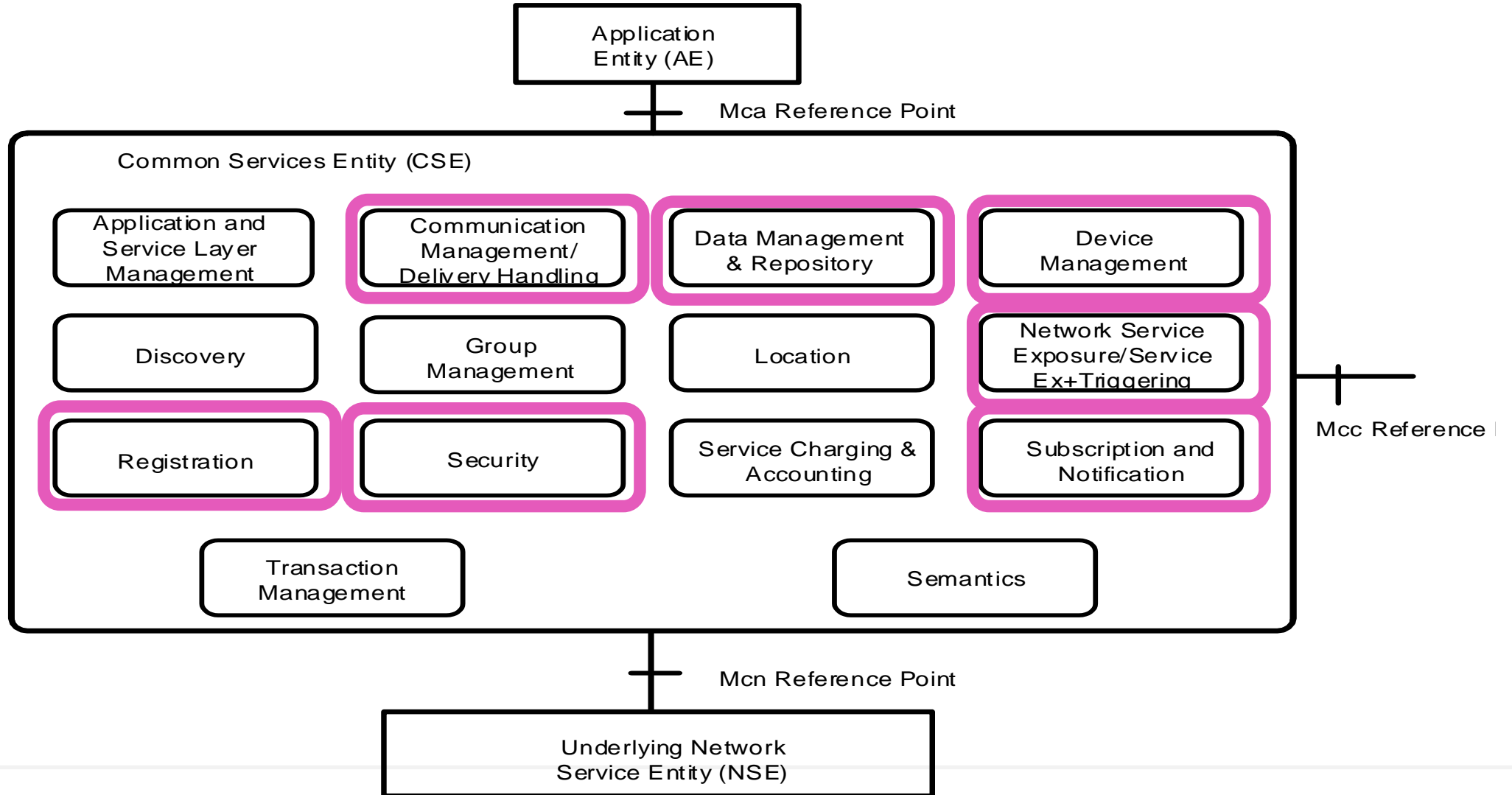


oneM2M Architecture

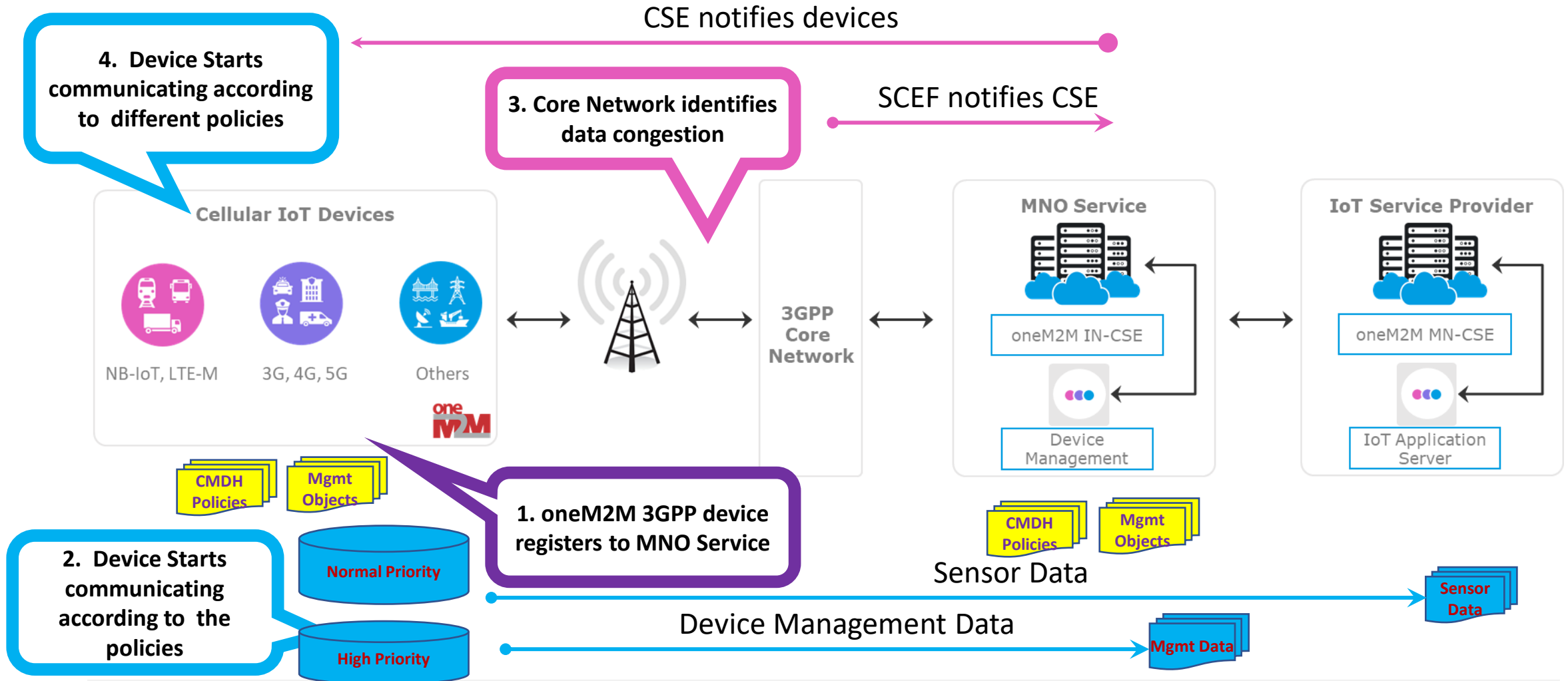




What does this oneM2M ASN-CSE look like



MNO Deployment





oneM2M Certification Process

Product requirements

- Driven by market and manufacturers

Profile definition

- oneM2M

Conformance Testing

- TTCN3
- Automated test suites

Global Certification Forum

- Since 1Q 2019
- Authorized Test Labs in Asia, Europe, North America



Summary

Large scale deployments of IoT devices have the risk of negatively impacting the mobile network

GSMA created a list of recommendations to help ensure “No Harm To the Network”

oneM2M can implement the TS34 requirements in a ASN-CSE

GCF Authorized Test Labs can verify and certify devices

Fast time to market with safe and reliable solutions using open standards based on oneM2M!

Thank You

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