

IOT SECURITY

BEST PRACTICES

SECURING A BETTER FUTURE SEMINAR

3 lessons learned to secure E2E

Network, Best Practices and Adaptability



Rely on cellular network

- LTE network is secured by design and provides strong security for most use cases
- Device isolation and network monitoring is key



Apply IoT security best practices

- Do not reinvent the wheel, rely on existing frameworks
- Collaborate with the industry promoting transparency

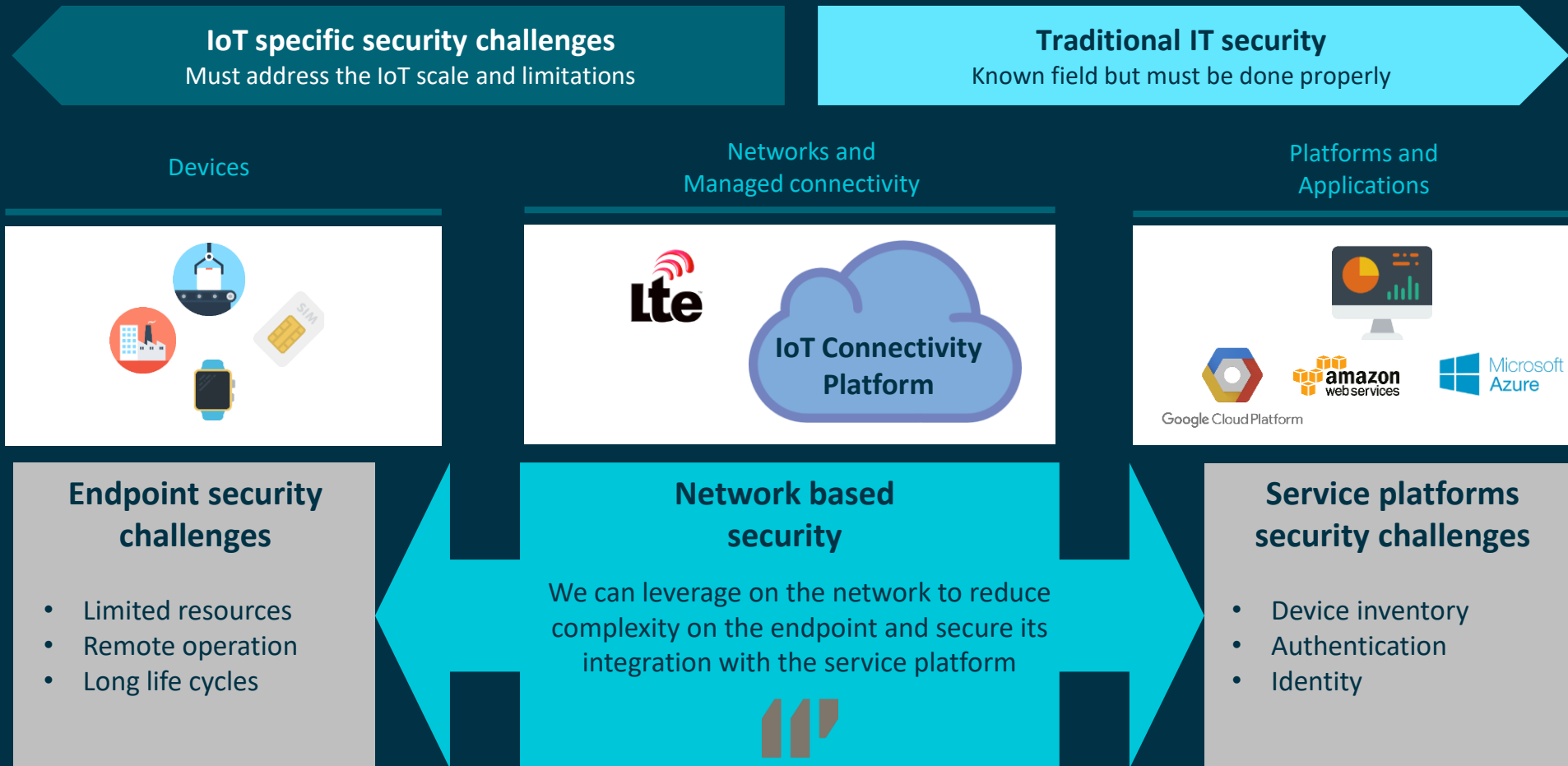


Adapt measures to use case

- Different business have different security needs, no one size fits all
- No silver bullet, a flexible framework is needed

The role of the telco

Our network can reduce complexity on the device and simplify the connection to the cloud



GSMA IoT Security guidelines and assessment

A complete and flexible structure to address different business



IoT Security
Assessment

Complete Checklist to perform a security audits or to give requirement our to providers



IoT Security Guidelines
device, network, platform

Flexible framework of security recommendations that can be applied to many industries

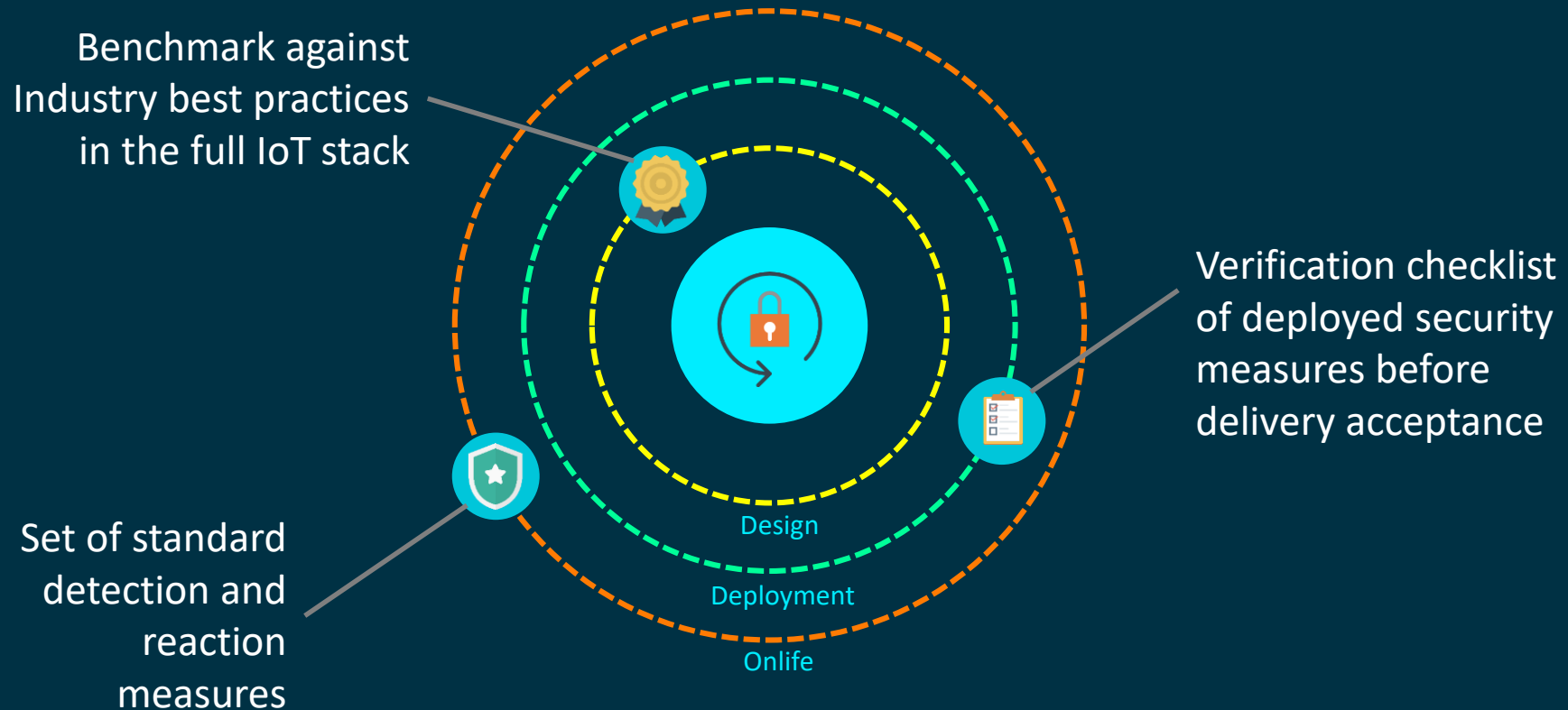


IoT Security Principles

Set of general IoT security principles that provide guidance designing the security solution

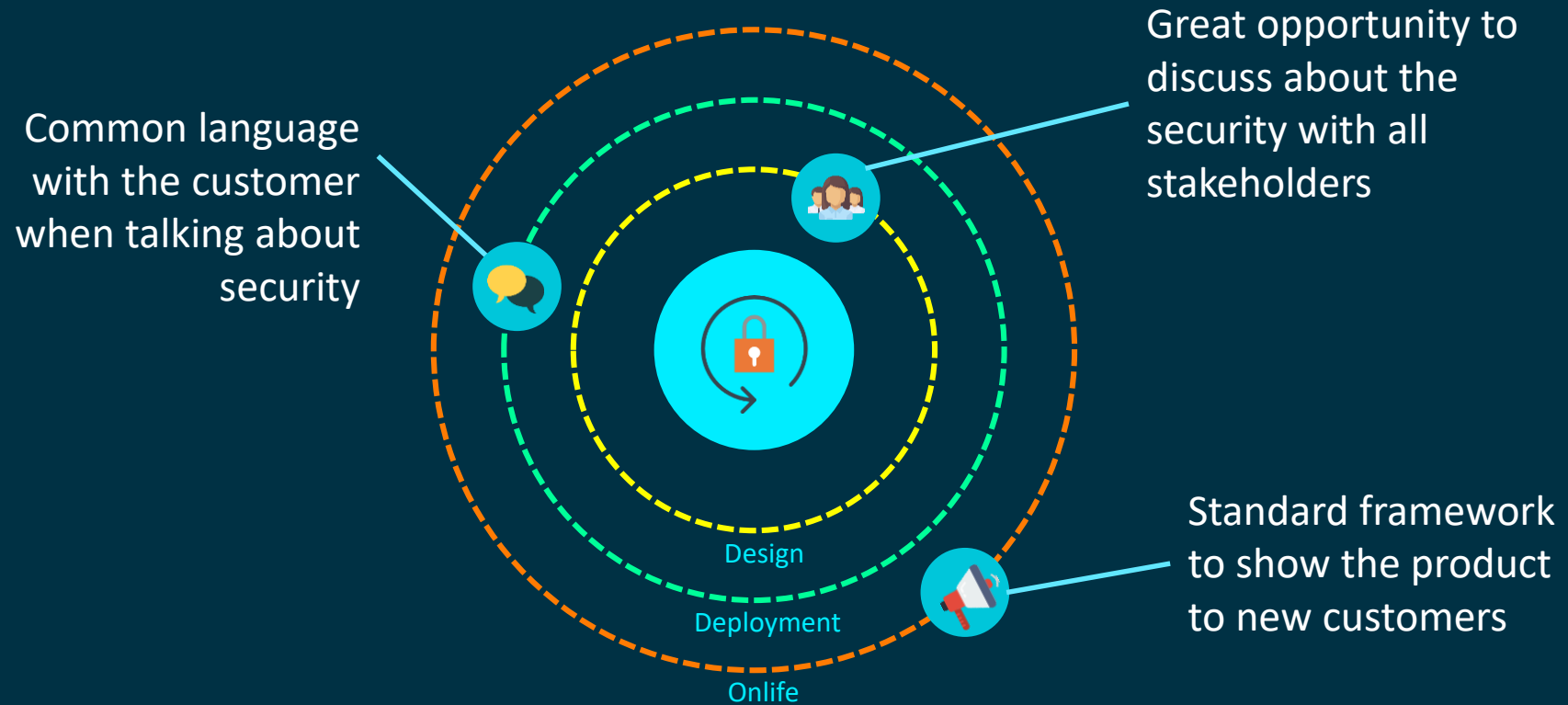
Using GSMA Guidelines - Benefits for our customers

Being sure that everything is considered



Using GSMA Guidelines - What we learned

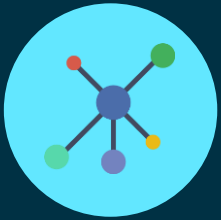
An opportunity to have a holistic conversation about security



Telefonica IoT Security Lab

An initiative to secure the End to End

Telefónica IoT and ElevenPaths are launching the IoT Security Lab, an initiative focused on creating an E2E IoT security value proposition



Create an E2E value proposition for customers

Provide customers guidance, not only a complete portfolio, adapting our offering to the different business needs.



IoT Security in the spotlight

Be reliable for our customers. Be relevant on key areas: industry sectors, standardization & OEMs. Raise awareness



Open to third parties

Selected partners: networks providers, chipset or device manufacturers, IoT Platforms or application providers, security specialists

MWC Showcase: Securing the IoT with the SIM

Provisioning credentials for AWS IoT on the SIM card over the air

The mission of the demo is to demonstrate how to securely provision over the air a digital certificate in an IoT device via SIM card. This certificate will be used to connect to AWS IoT

The customer pain Device credentials set up at IoT scale

Provisioning different device credentials massively in a secure bootstrapping process avoiding manual provisioning or insecure configurations.



The solution Cellular identity and standard SIM OTA

Identify the SIM card details using Smart M2M and sending OTA the corresponding X.509 certificate to the SIM card using standard 3GPP SIM RFM capabilities.



The showcase Energy meters connected to AWS IoT

To showcase this technology Telefónica has collaborated with Amazon Webservices EMEA team and Ikerlan to provision credentials on cellular enabled energy meters.



Telefonica

Take things further



INTERNET OF THINGS