



IOT CONNECTIVITY PURE PLAY

Making IoT Connectivity Great Again!

Karlsruhe, 2019

powered by 



JAN SULAIMAN

Product Manager IoT @1NCE



ABOUT ME

Joined 1NCE: October 2018

Studied: B.S. Business Informatics @ DHBW Mannheim,
Nanodegree – Machine Learning Engineer @ Udacity,
M.S. Data Science & Business Analytics @ Hochschule Aalen (in progress)

Previously: Innovation Manager & Big Data Specialist
@ HeidelbergCement AG

Technical

Background: Big Data, Data Analytics, Machine Learning, Cloud,
Serverless Architecture

Hobbies: Cooking, Traveling and Golfing
DJ & Licht Designer/Operator

1NCE is an IoT CONNECTIVITY ONLY PROVIDER

DISRUPTIVE PRICE MODEL

- 1NCE Lifetime Fee - Pre-paid model for IoT devices
- IoT Flat Rate
- All necessary features (SIM card, Data plan, SMS etc.) included, no extra costs
- Fully transparent pricing (OPEX to CAPEX)

IOT NATIVE

- Focus on IoT connectivity
- All products and service developed for IoT purpose only
- Management Team with 20 years of M2M and IoT experience
- Company belief driven by disruptive mindset

ABOUT

Founded: 2017

Team: 50

Investors: Management Team, Deutsche Telekom AG

Offices: Cologne (HQ), Hamburg (DE), Riga (LV), London (UK), Paris (FR), Amsterdam (NL), Rome (IT)

WARUM UP – POP QUIZZ

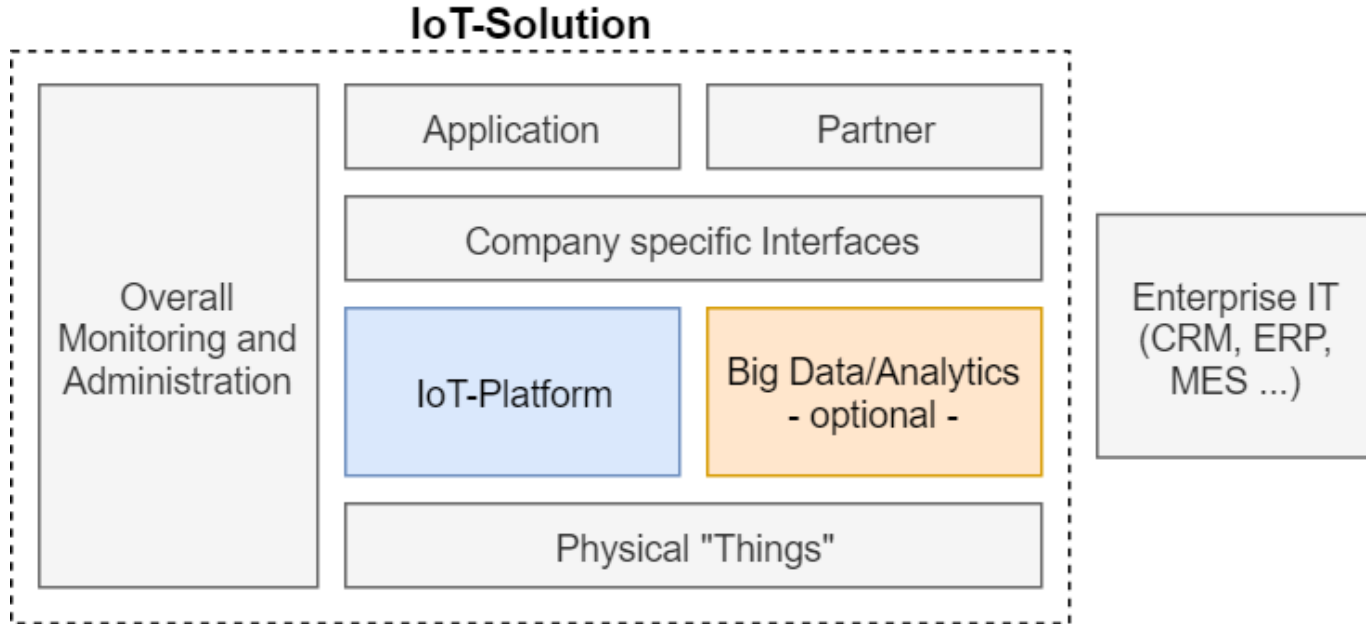
“Who has already **worked on an IoT Solution** which actually went productive? ”

“What **possibilities of connectivity** for an IoT solution come to your mind? ”

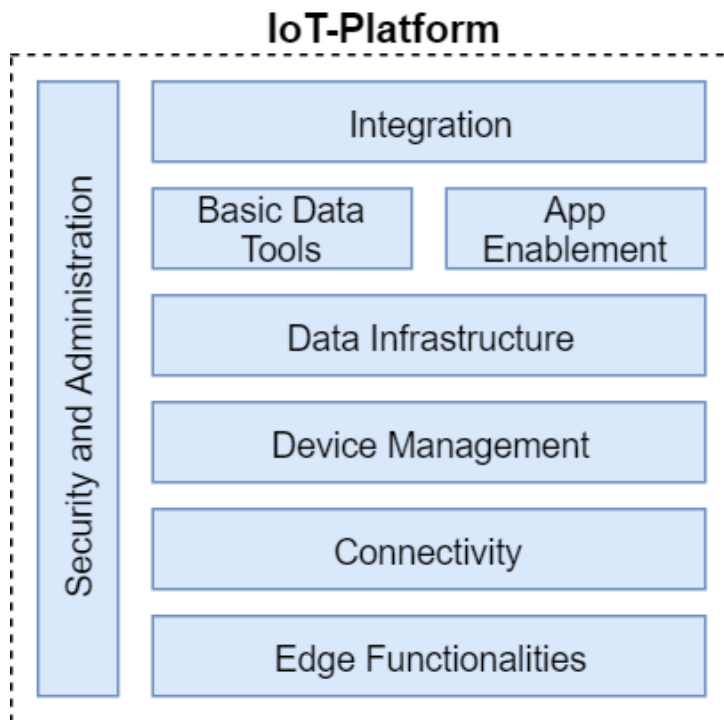


IoT Solutions **TODAY**

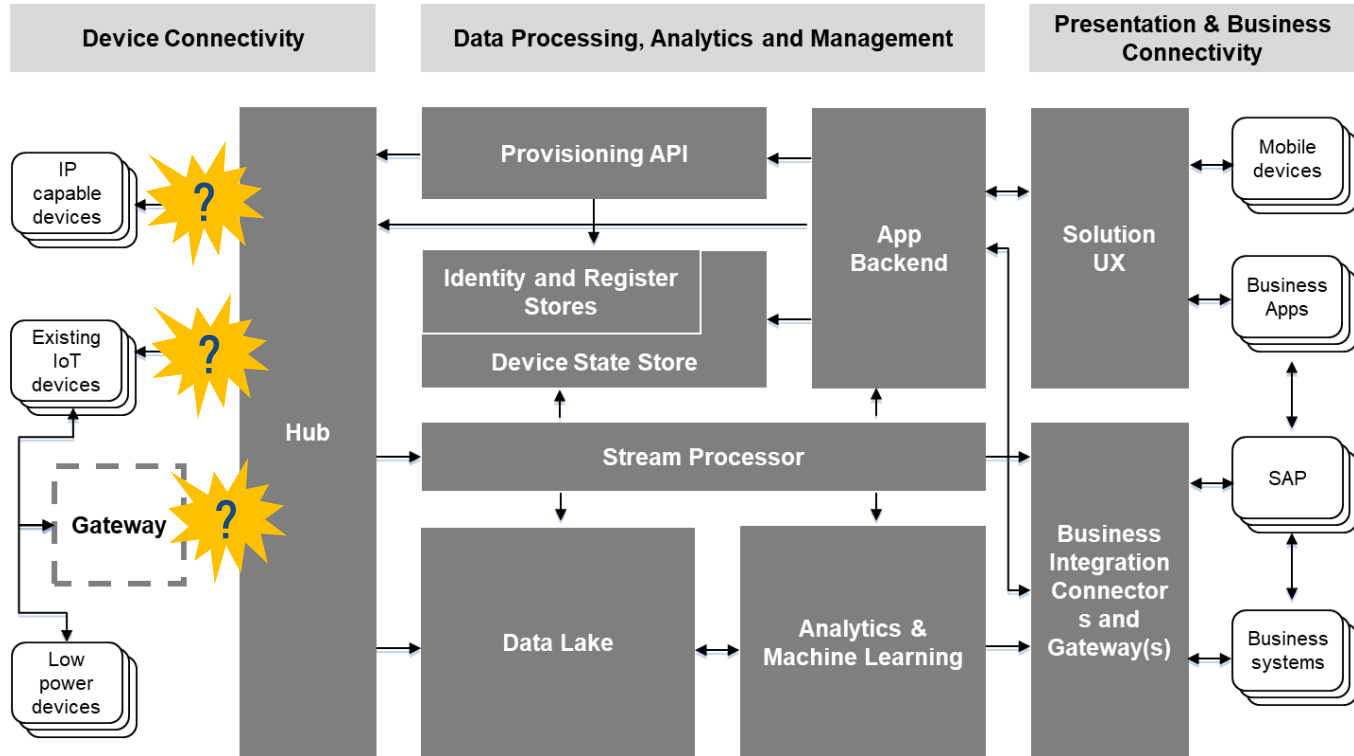
IOT-SOLUTIONS combine various major components to ensure value delivery



CONNECTIVITY is just one building block for a functional IOT-PLATFORM



TODAYS solutions lack the focus on whats important and the independancy to other systems



Connectivity Challenges **TODAY**

Challenges for Internet of Things Applications **TODAY**

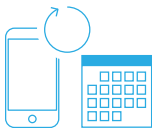
Internet of Things Characteristics



Large volumes of devices

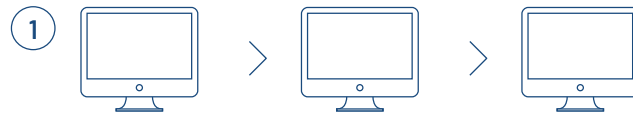


Low value assets / devices



Long device lifecycles

Customer Pain Points



High maintenance



High connectivity costs (OPEX)



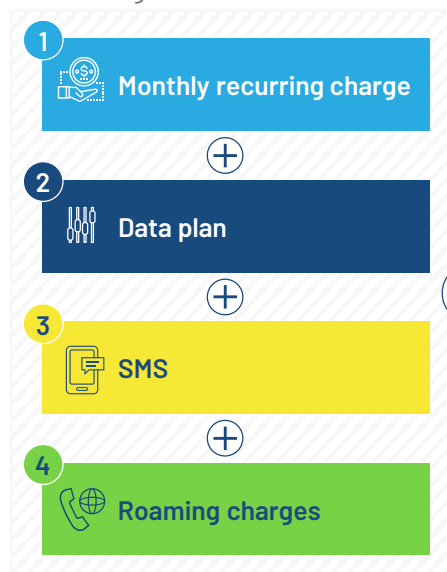
Choose future proof technology

IoT pricing today is still **CONSUMER ORIENTED** instead of addressing the needs of IoT customers

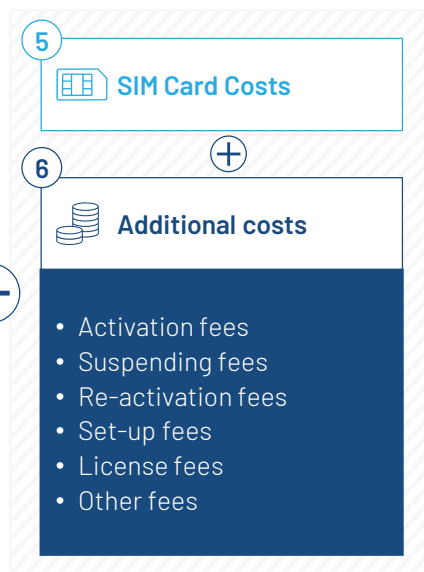
High connectivity costs (OPEX)

① ② ③

Recurring fees



One time fees



Problem:

- Final TCO (Total Cost of Ownership) very high and difficult to predict
- Connectivity costs treated as operational
- Customers need to know required amount of data for SMS
- Often many hidden additional fees

MAINTAINING IoT connectivity today

High Maintenance



Set-up and Configuration



Activation and authentication of every SIM, hassle with PIN or PUK

Consumer-centric
Not B2B friendly

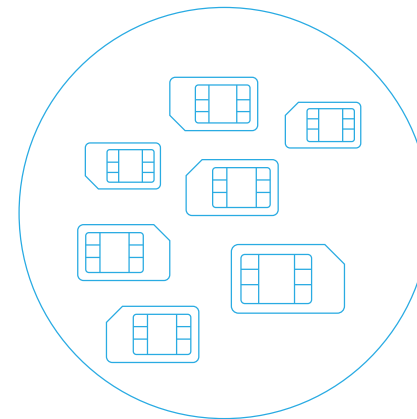
Cost checking



Continuous monitoring of consumption and costs

Efforts and cost not in relation to business case

Thousands of devices



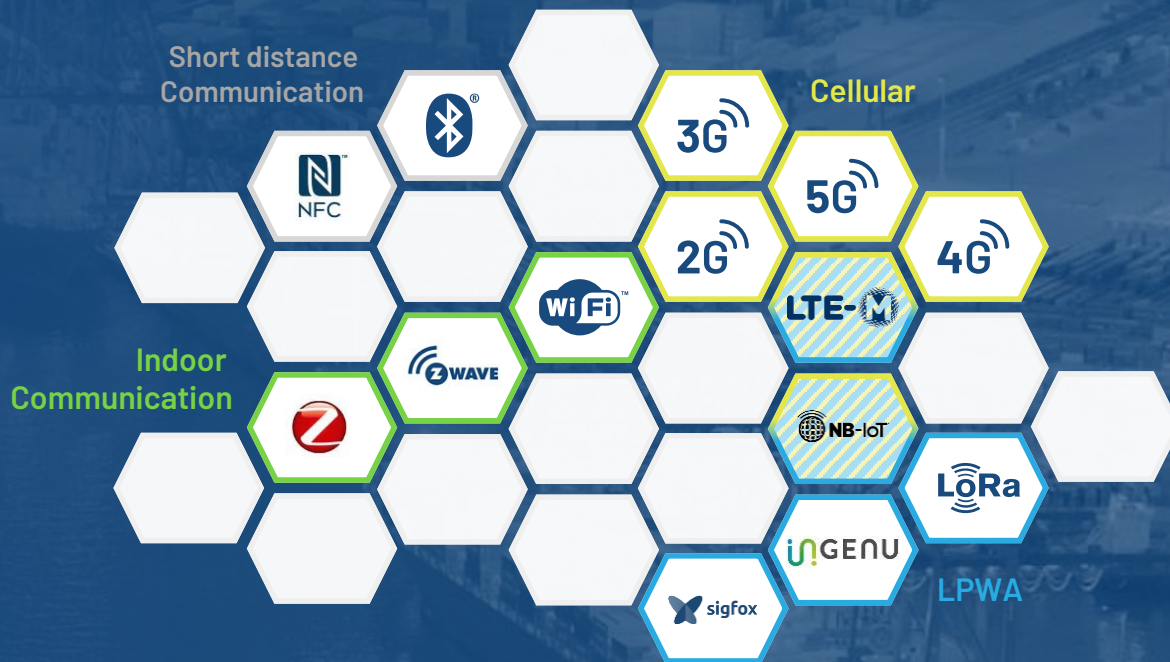
Activate, monitor and manage thousands to millions of devices

Scalability to ramp up deployments not given

Too many options

IOT CONNECTIVITY TECHNOLOGIES

Future-proof and secure technology



Too many options Customers need to know:

- Availability / Coverage?
- Longevity?
- Suitability for solution?
- Most secure technology?

FEATURE COMPARISON

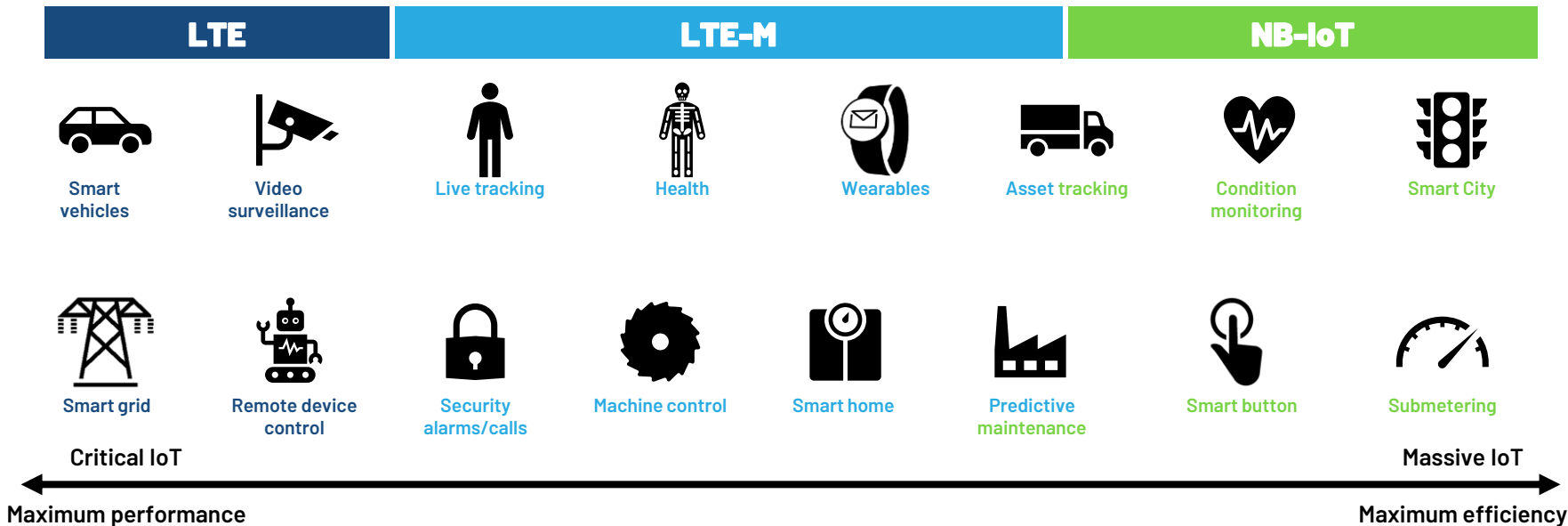
of wireless transmission standards

LICENSED SPECTRUM BASED STANDARDS

UNLICENSED

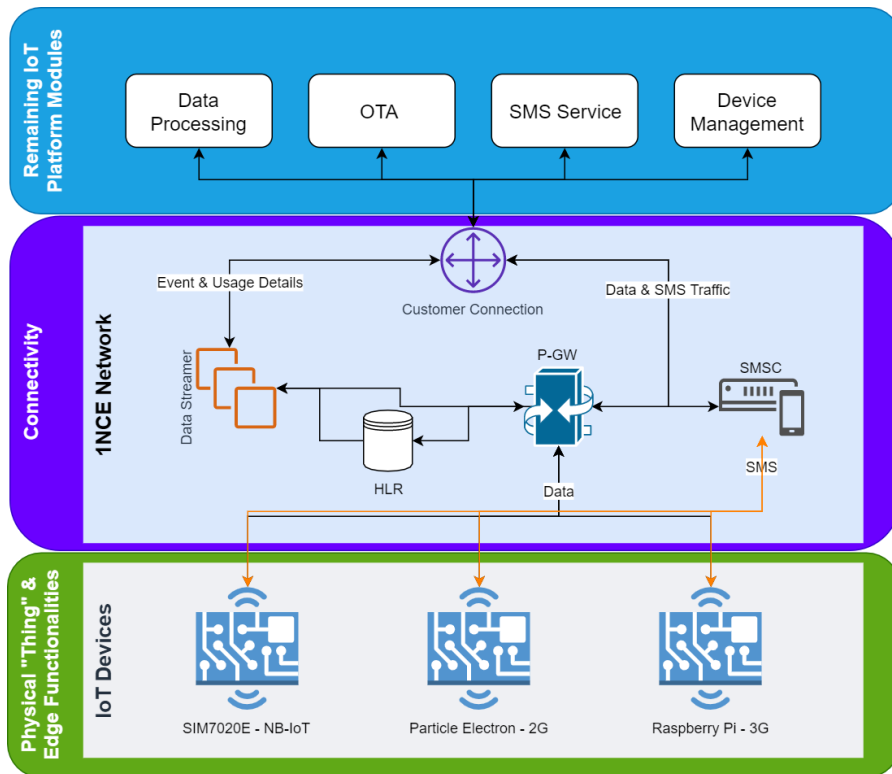
| | 2G / 3G | LTE-M | NB-IoT | LoRa | SigFox |
|-------------------|-----------------|----------------------------------|------------------|------------------|------------------|
| Frequency | GSM Band | LTE-Band | GSM / LTE Band | 868 MHz (EU) | 868 MHz (EU) |
| Link budget | 144dB | 156dB | 164dB | 150-168dB | 156dB |
| Duplex mode | Full | Full or Half duplex ⁴ | Half | Half | Half |
| Transmission (DL) | 53,6-384 kbit/s | 1.000 kbit/s | 250 kbit/s | 50 kbit/s | 0,1 kbit/s (EU) |
| Roaming | Yes | Yes | Not yet | Not yet | Yes |
| Mobility | Cell handover | Cell handover | Cell reselection | Cell reselection | Cell reselection |
| Battery life time | ~ 3 years | ~up to 5years | ~up to 10 years | ~up to 10 years | ~up to 10 years |

Different Technologies for DIFFERENT PURPOSES



IoT & Connectivity Great Again
TOMORROW

Putting **USABILITY AND INTEGRATION** potential first for the Connectivity



Addressing **THE NEEDS**

Customer demand for IoT connectivity

A

Fair pricing for
small IoT devices

B

Predictable costs
over the lifetime
of the IoT device

C

Ease of use
and low
maintenance

D

Provide
future-proof
technology

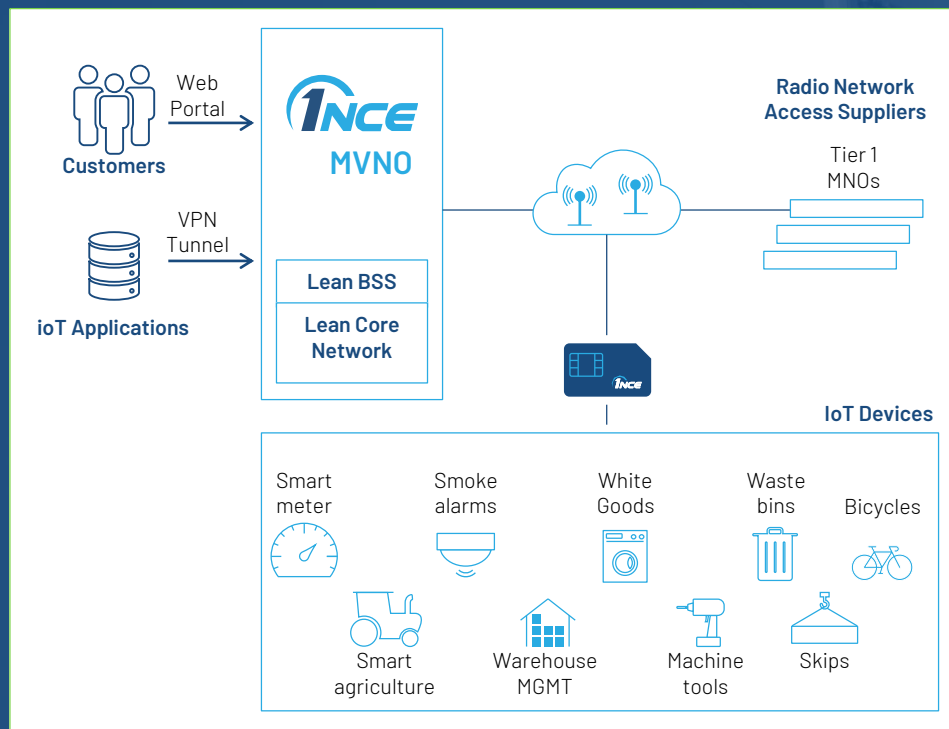
E

High
coverage and
availability

F

Secure and
reliable

1NCE CORE Network



CORE NETWORK OPTIMIZED FOR IOT CONNECTIVITY

LEAN CORE NETWORK

- Virtually and cloud-hosted
- Secure and reliable
- Single system with multiple core network elements

AUTOMATED PLATFORM

- IoT focused feature set
- Self service oriented
- Short implementation time

THANKS FOR ATTENTION.