

# BubbleCloud

~ For Private LTE and Local 5G ~



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Chief Technology Officer



# We Bring FREEDOM to Wireless Networks

- We free networks from the cost, complexity and vendor dependency of legacy approaches
- “Click-to-deploy” millions of networks in every home, building, office, factory, smart city, island, village or hamlet
- Provide indoor coverage to the 80% of places where Private LTE and 5G will primarily be used
- Founded in 2005 and headquartered in Italy
- 15 years of leadership in software-based and cloudified networks
- World’s first production deployment of a fully virtualised core network for a mobile operator in 2010 – HUTCHISON 3G

THE SOFTWARE IS THE NETWORK





# Digitalization is driving a paradigm shift ...

**INDUSTRIAL INTERNET  
INTERNET OF THINGS  
CONNECTED HEALTH & EDUCATION  
GOVERNMENT & PUBLIC SAFETY  
OTHER DEMANDING VERTICALS**

**VIRTUAL & ENHANCED REALITY  
CONNECTED & AUTONOMOUS CARS  
SMART CITIES & SMART GRIDS  
BRIDGING THE DIGITAL DIVIDE  
NARROWBAND - IOT**

Needs millions of localised LTE and 5G networks instead of a handful of monolithic national ones



...but held back by complexity of legacy networks

**COST**

**COMPLEXITY**

**LACK OF AGILITY**

**NO DISTRIBUTED SCALABILITY**



# Athonet Connectivity Platform

**FREEDOM**

IT-FRIENDLY WIRELESS NETWORKS  
MADE SECURE & EASY TO CONTROL

**FLEXIBLE**

FUTURE-PROOF  
COST-EFFECTIVE  
ADAPTS TO YOUR NEEDS

**ENABLE**

PRIVATE LTE/5G

PUBLIC SAFETY &  
DEFENSE

OPERATORS

# Athonet unleashes the new paradigm

Over 100 connectivity platform deployments world-wide



World's First LTE Commercial Smartgrid / One of the world's largest IoT deployments for Enel (2011)



World's First LTE commercial deployment for public safety – Italian Earthquake (2012)



Early LTE rural networks in USA (2014) and early CBRS trials (2017)



First underground mining LTE network in Americas at Americas' deepest mine (2018)



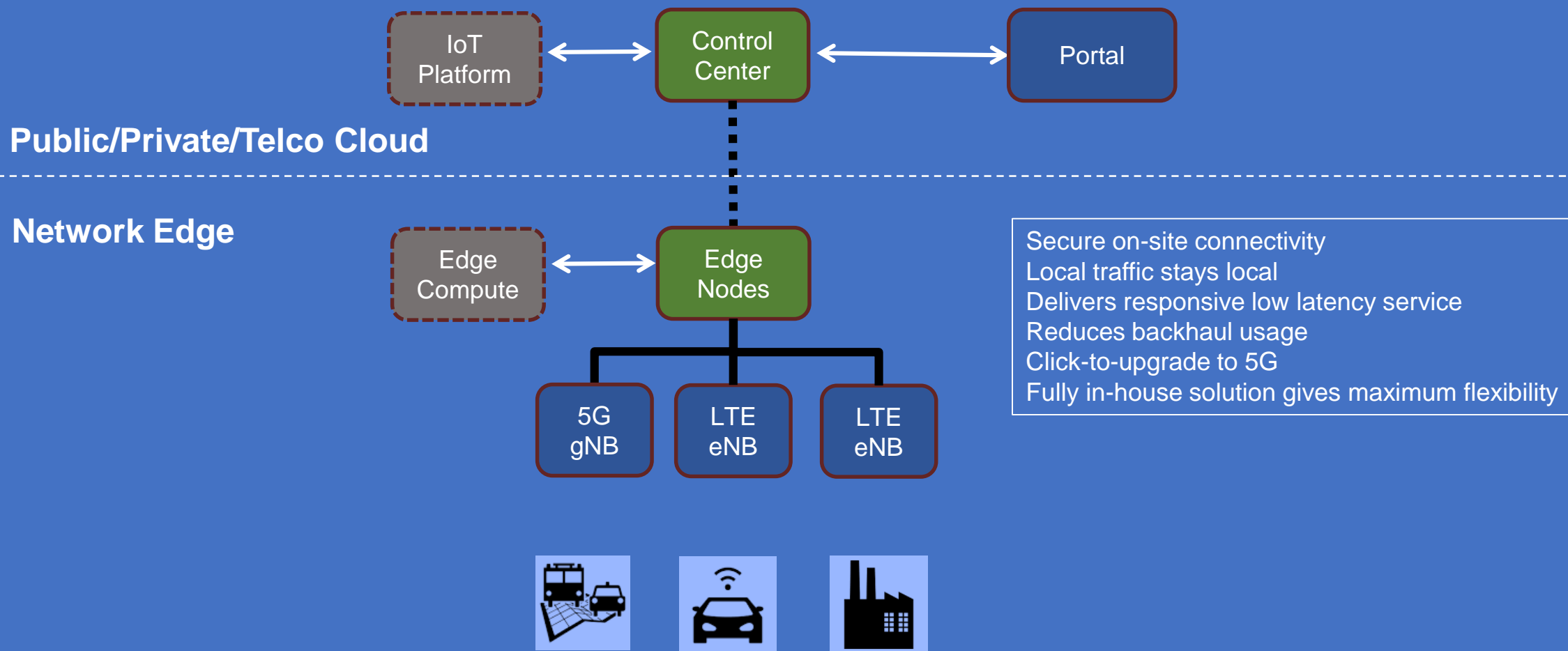
World's first commercial LTE MVNO for public safety – Government of Finland 2015



BT Pre-5G Demos, Vodafone 5G Mobility Lab, Italy 5G Trials (2017-18)



# The Athonet Connectivity Platform Solution

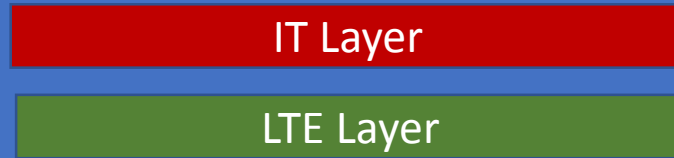


# IOT AppConnect – Deliver “Control”, Not “Bits”

## Legacy Approach



X.509  
TLS/SSL  
MQTT



X.509  
TLS/SSL  
MQPTT

SIM CARD



IT layer runs over LTE layer and duplicates functionality – no integration between IT and LTE domains - LTE just delivers “bits”

IT layer needs remote certificates, encryption, authentication at IoT device level

Raises cost and complexity as often cannot be supported by simple devices – need additional platform spending

Complex to manage, rotate and revoke certificates for millions of remote devices

## Athonet - IoT AppConnect



X.509  
TLS/SSL  
MQTT



SIM CARD



EPC communicates directly with IoT platform and manages connectivity to the IT domain – unites IT and LTE layers – LTE delivers “CONTROL”

Superior LTE protocols manage device level security and authentication

EPC provides simple centralised certificate management for millions of devices

Move from “dumb pipe” to “smart connectivity”



# Pathway to 5G

15 years of 5G-orientated architecture

10 years of cloudification experience

15 years of fully in-house developed software stack

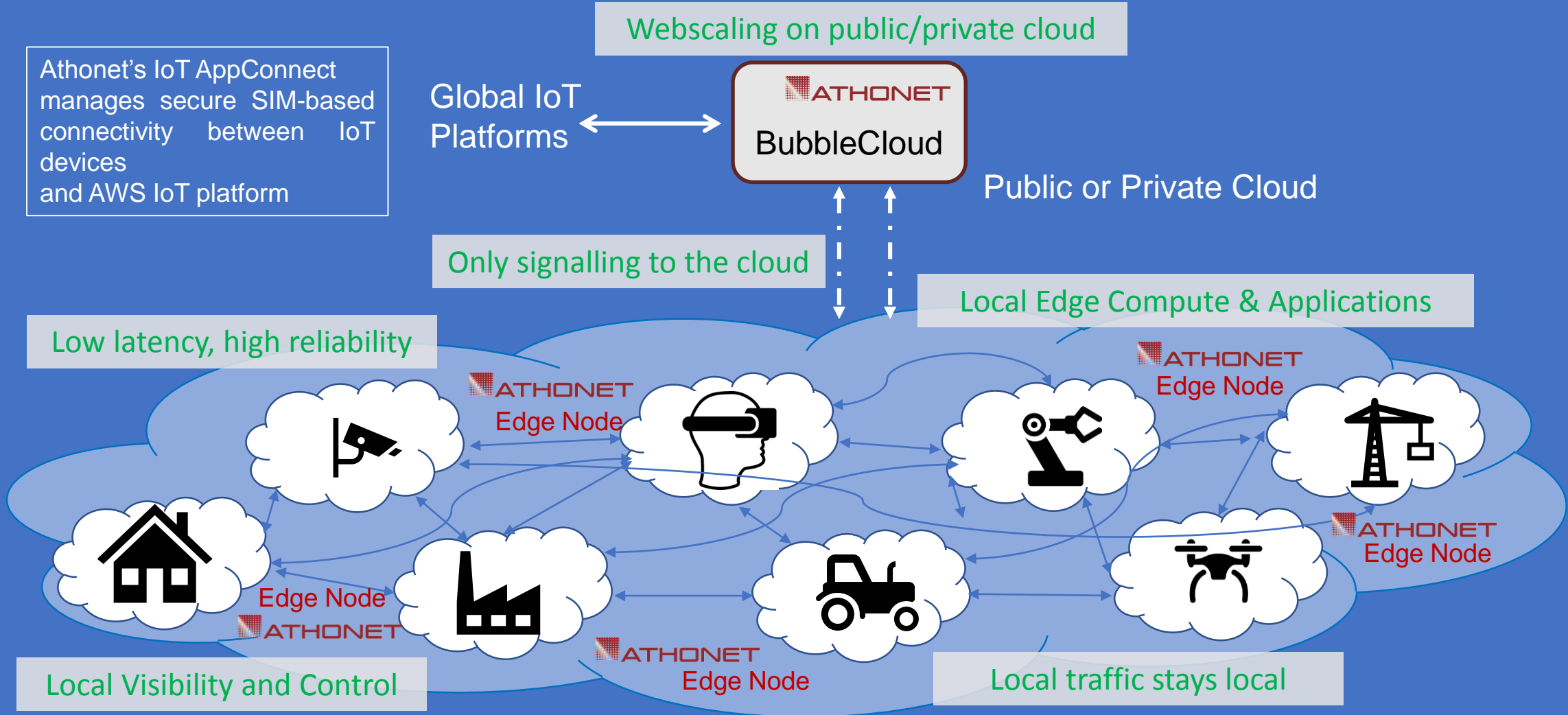
5G is NOT a change in our approach – just a software update

**FIRST 5G STAND-ALONE NEW CORE ON PUBLIC CLOUD**

Presented at MWC 2019

# THE NEXT GENERATION SOLUTION

## Millions of distributed networks connected by the cloud



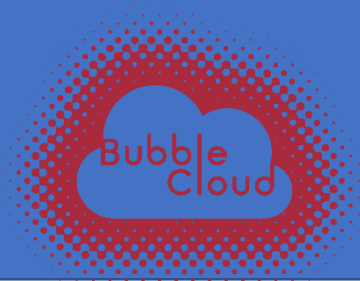


# Industry Recognition – MWC 2019

Record 4 GLOMO Awards for single product

- CTO'S CHOICE – Outstanding Mobile Technology
- Best Innovation for Enterprise
- Best Mobile Technology Breakthrough
- Best Network Software Breakthrough

“[Athonet] BubbleCloud just won a record four GLOMO awards, that's particularly impressive because it was only nominated in three categories. The fourth was a special CTO's Choice award. **That's as many as [names of legacy vendors removed] combined**” - Dave Burnstein in Edge Reporter



Secure LTE & 5G as simple as WiFi !

Watch the demo video here:

<https://static.athonet.cloud/saas/CBRS.mp4>

Please see the demonstration here!!

