



5G fabric for a Brilliant Customer Experience

Φώτης Καρώνης , Managing Director Mobile, & Voice convergence





Heraclitos 535 – c. 475 BC

πάντα ῥεῖ

πάντα χωρεῖ καὶ
οὐδὲν μένει" καὶ "δὺς
ἐς τὸν αὐτὸν ποταμὸν
οὐκ ἂν ἐμβαίης"



BT Group

Business Unit	Scope	Revenue/ EBITDA
Openreach	<ul style="list-style-type: none"> Last mile Copper and fibre network 26.5m premises on Fibre 	£5.1bn/ £2.6bn
Consumer	<ul style="list-style-type: none"> Fixed line voice and broadband (9.4m lines) Mobile (30m connections) Pay TV (1.8m Subs) 	£10bn/ £2.2bn
Technology Service and operations	<ul style="list-style-type: none"> Design build and operate networks, platforms and IT 	NA
Business and public sector	<ul style="list-style-type: none"> Communications services & IT 1.2m customers 	£4.8bn/ £1.5bn
Wholesale & Ventures	<ul style="list-style-type: none"> 1400 Fixed network communication service providers 30 MVNO's 	£2.1bn/ £0.8bn
Global Services	<ul style="list-style-type: none"> Global business communications & service provider to 5500 multinationals in 180 countries 	£5.5bn/ £0.5bn

Group revenue £24bn
EBITDA £7.5bn

106,000 Employees

Employees by division

28% Openreach

4% Wholesale and Ventures

8% Consumer

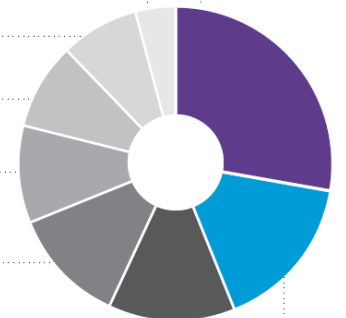
9% EE

10% Business and Public Sector

12% TSO

13% Group Functions

16% Global Services



Mobility is driving the customer experience

100% Coverage



Built to connect:

- Remote diagnose issues on vehicles
- Monitor Supercharger and Storage health and usage
- Update firmware and add features
- Register car and integrate with ERP

Autopilot and the Future



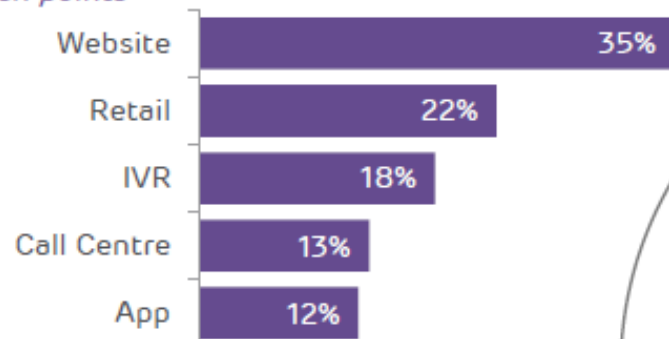
Mobility is key



There are four parts to becoming #1 for customer experience...

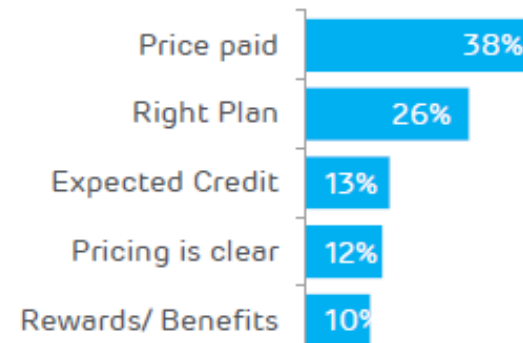
1. Ease

Giving a personal, simple and brilliant service across all our touch points



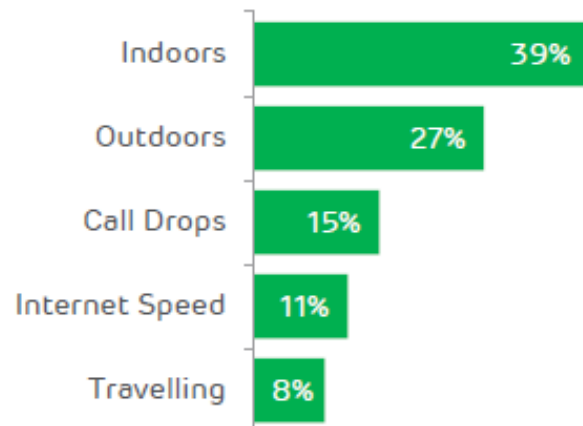
2. Value

Making sure our customers receive excellent value for the price they pay



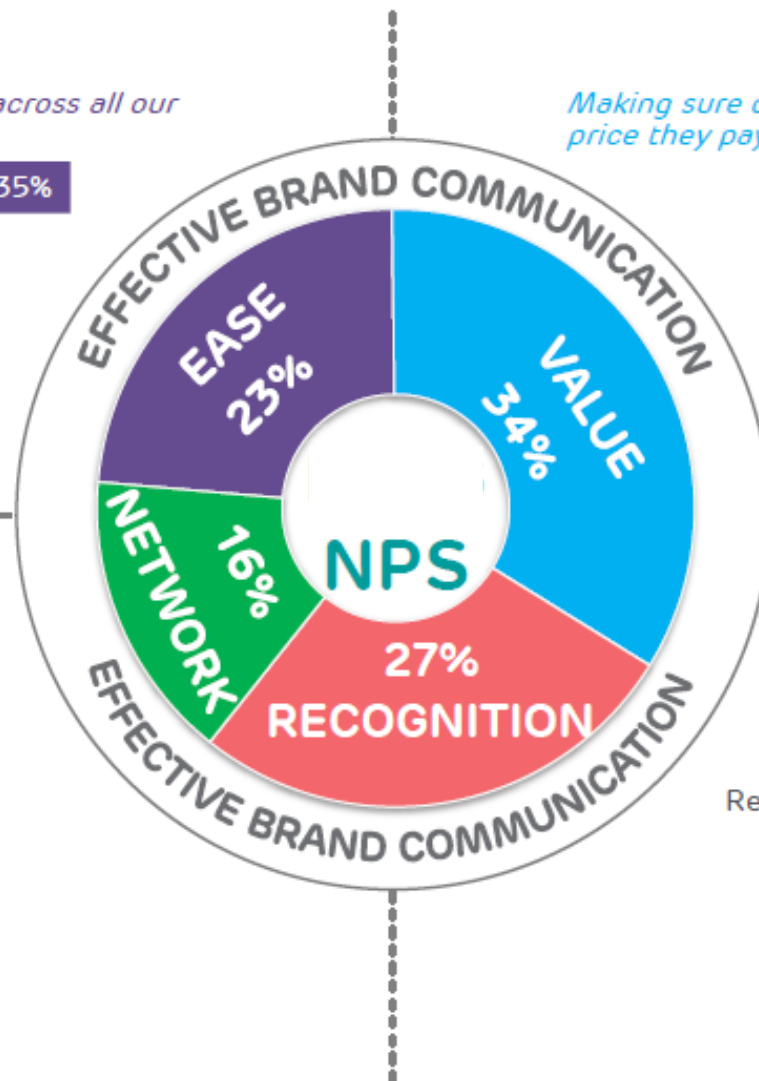
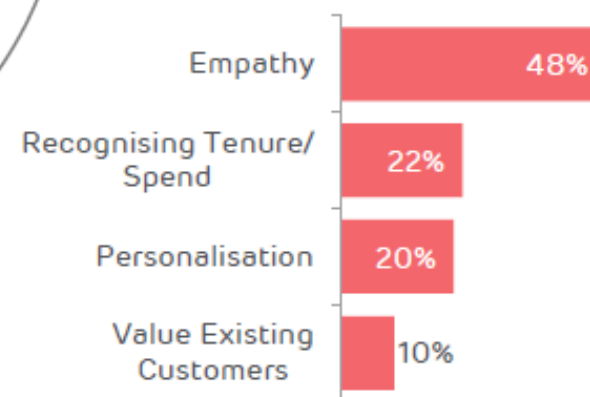
3. Network

Providing coverage for 100% of our customers, 100% of the time



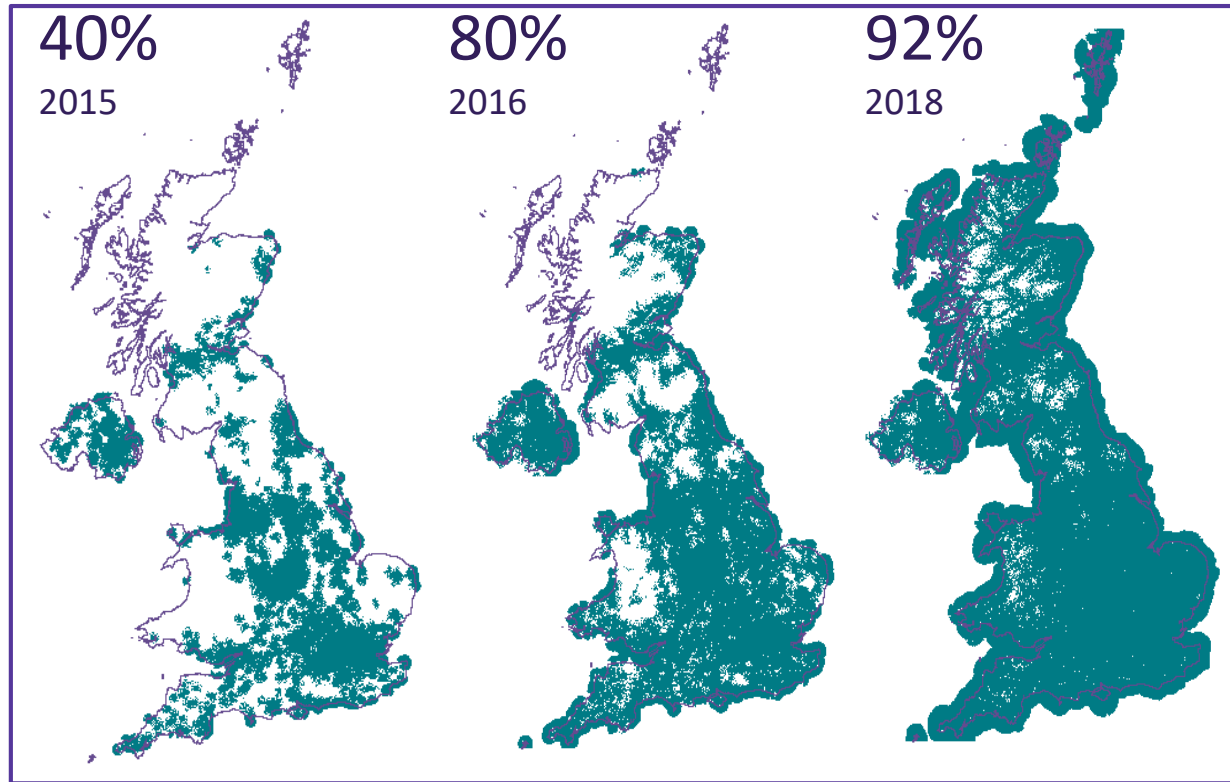
4. Recognition

Making sure we recognise and reward customers for their loyalty



4G coverage and performance

Building to 95% geographic coverage by 2020



RootMetrics® RootScore®
Award Winner

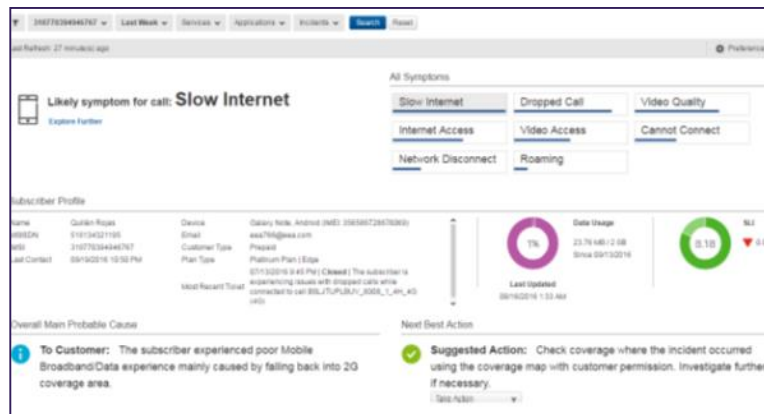
Winner of overall
network performance
every year since EE
Launched in 2012.

Real-time Intelligent Network

Big Data Network Analytics has the ability to deliver new 'customer led' capabilities

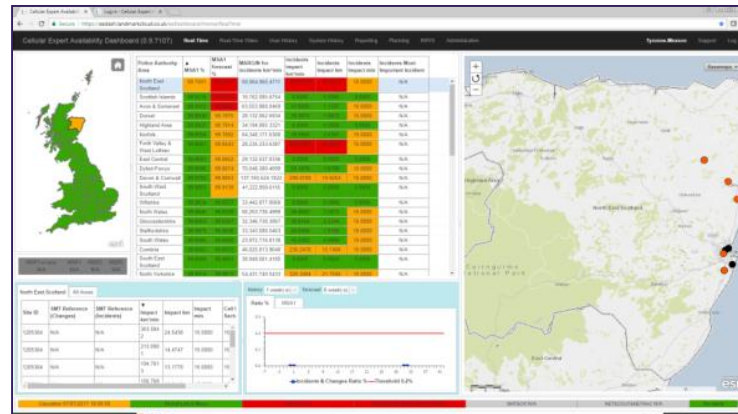
Customer Experience Management

- Real-time service view
- Reliable usage and experience data
- Reduce PTC and improve NPS



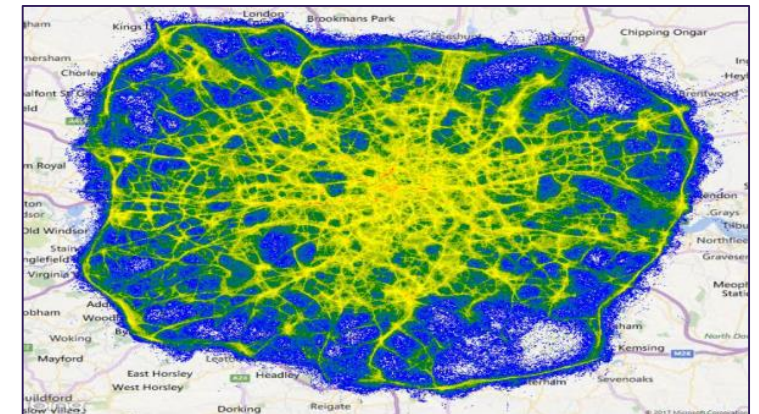
Real-time operations

- Use AI/ ML for real-time anomaly detection
- Proactive/ early detection of incidents
- real-time correlation (reduce volume)
- Predictive maintenance



Automation and orchestration

- Proactive optimisation
- Real time policy enforcement in 5G Core network
- Autonomous NW slicing
- Real-time traffic shaping





EMERGENCY SERVICES NETWORK

- Better coverage
- More reliable
- More resilient



4G IN MORE PLACES



We're the first UK network to measure our network on geographic coverage not just population coverage. After all, it's often the remotest places where you need a good 4G signal the most.

We're working towards covering 95% of the UK with 4G by 2020. In 2016 alone we added 4G coverage to an extra 25% of the UK. Our 4G is now available in more places than any 3G network, just four years after launch, making it the UK's fastest network expansion ever.



WE'RE ALL OVER THE PLACE. BUT IN A GOOD WAY.

4G COVERAGE IN MORE PLACES THAN ANY OTHER NETWORK. END OF.



RootMetrics® RootScore®
Award Winner

Join the UK's biggest, fastest and most reliable network.

Mobile only. Subject to coverage. Speeds depend on location & number of users. Compatible device required. 4G coverage in more places: Comparison based on 4G coverage data published by mobile networks (Feb - Apr 2014), for more information see ee.co.uk. Fastest and Most Reliable network: based on RootMetrics® UK RootScore® Report for mobile performance as tested on best available plans and devices on 4 mobile networks across all available network types (Jul-Dec 2013). The RootMetrics award is not an endorsement of EE. See rootmetrics.co.uk for details. Other terms apply, see ee.co.uk.

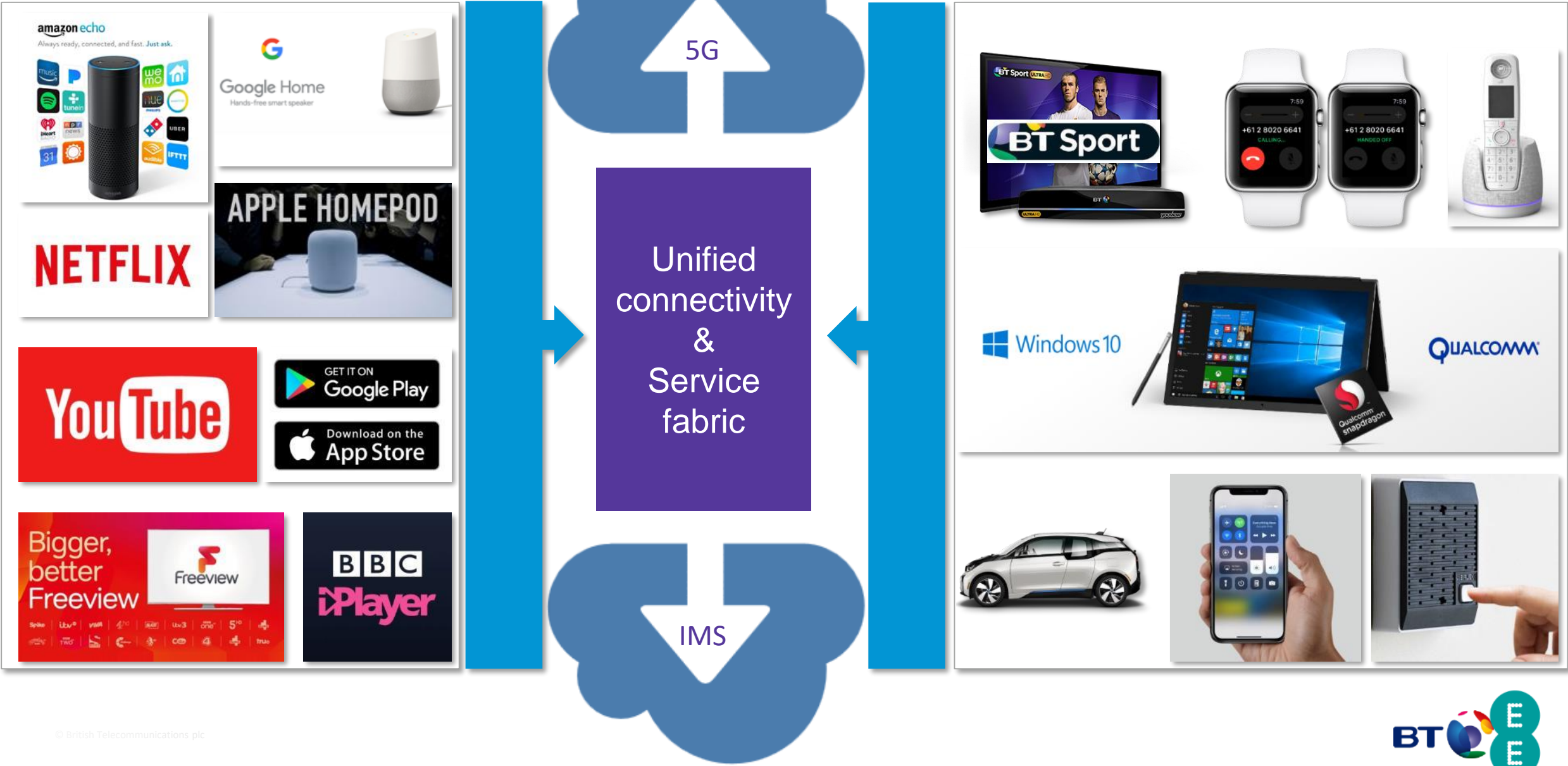
EE CAN DELIVER A REAL CLIFFHANGER MOVIE THROUGH NEW 4G

MOBILE phone supplier EE is using superfast mobile technology to put on cliff-edge performances for film lovers around the country...





Convergence





Faster connections
in congested areas



Make the most
of unlimited data

Gigabit LTE



Epic speed for connected
apps, cloud access to files



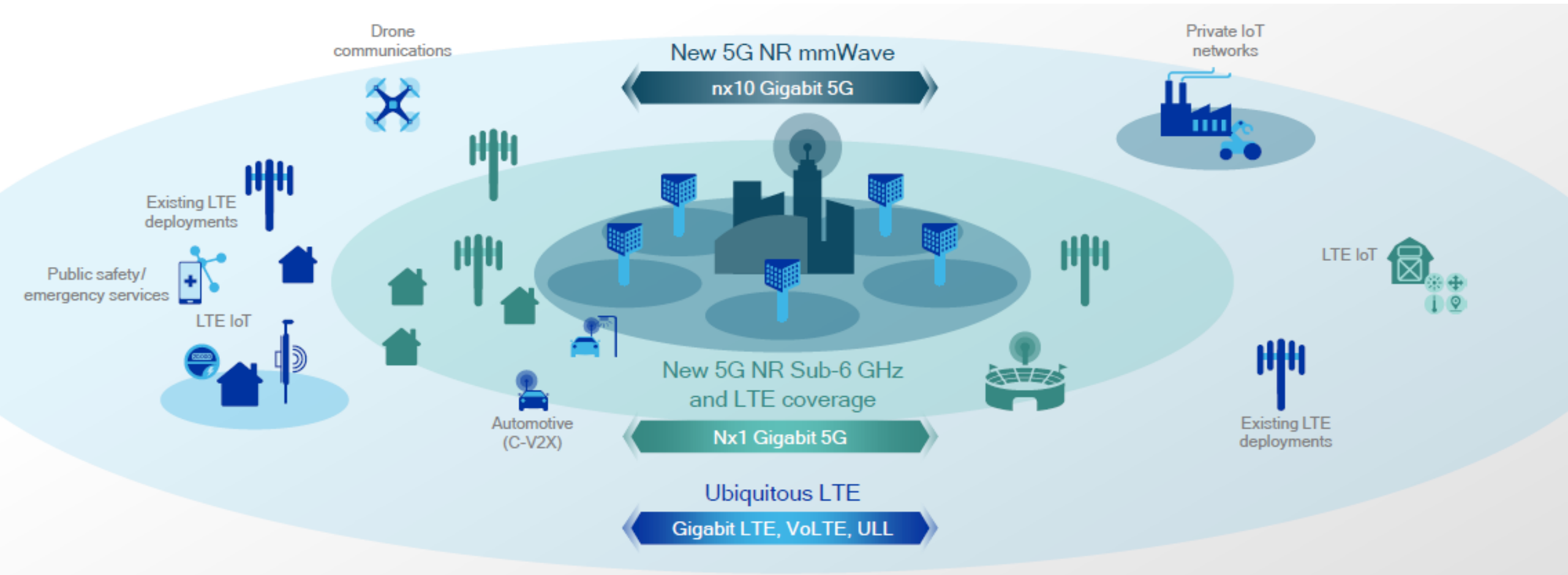
Double the antennas
for a strong signal

5G vision for a integrated connectivity fabric

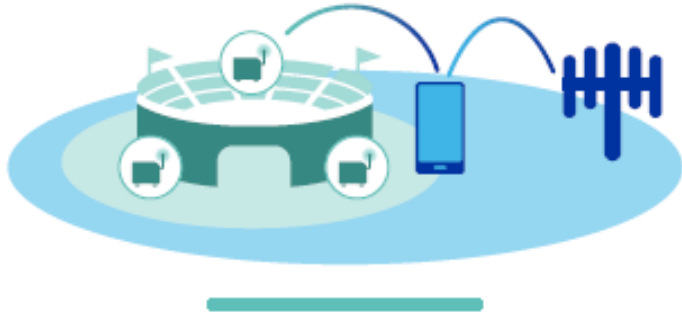


Unifying connectivity platform for future innovation
Convergence of spectrum types / bands, diverse services, and deployments

4G evolution is a fundamental part of 5G roadmap



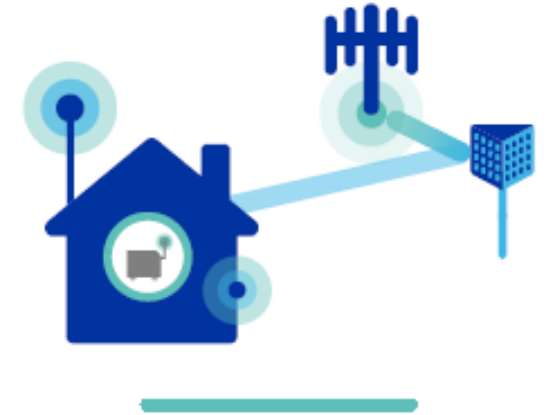
5G mmWave opportunities



Complementing LTE networks for extreme capacity & data-rates



Leveraging fixed networks to deploy hotspots in dense environments



Fixed-wireless replacement with integrated wireless back-hauling

5G in easy steps!

Technology blocks

- 1 Multi-connectivity devices (5G New Radio & LTE, plus WiFi)
- 2 New spectrum
- 3 New Radio (flexible Air interface & BBU/RU split)
- 4 New Core infrastructure (Software Defined Network with Virtualised network functions)
- 5 New Core architecture (Granular network functions combined to create Network slices)

2 **Transform**
Cloud RAN
Cloud Core
eMBMS
v2x
Nb-IoT

3 **Launch** 5G
Services &
significant
coverage &
compelling
consumer
Devices and
Service

Programmable converged
network and services for
multi-brand
and partners

2020

2018

2016

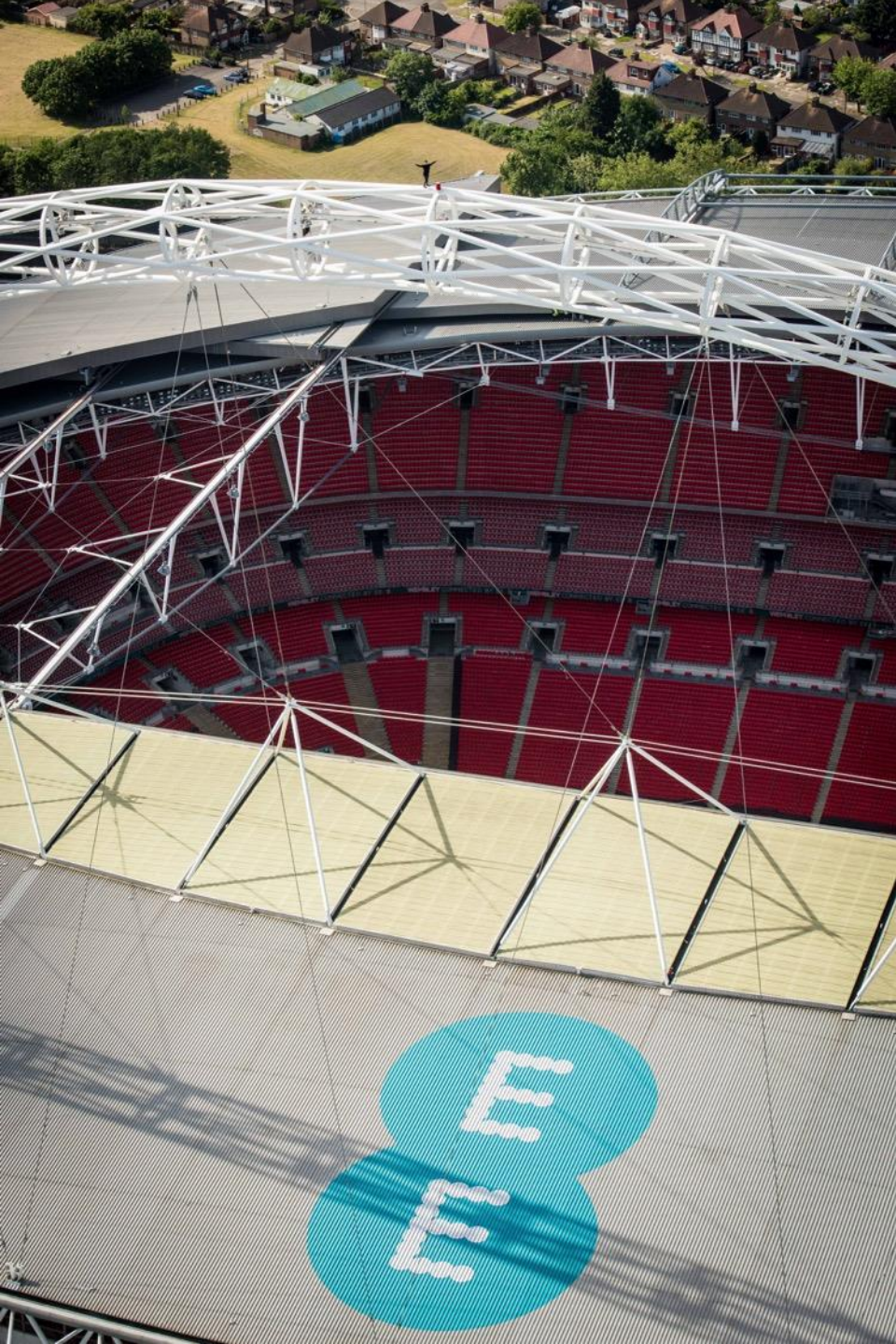
1 **Evolve**
Gigabit LTE

Design the network to
provide demonstrable
improvement in customer
experience between LTE & 5G

Culture

- **Ambition**
- **Very best people**
- **Design decisions**
- **Partners**
- **Inclusive**
- **Agility, agility, agility**
- **Innovation**





Σας Ευχαριστώ

