5G- A Game Changer for Cx and Energy Management

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Field Application Engineering

Cx ENERGY 2019 CONFERENCE & EXPO

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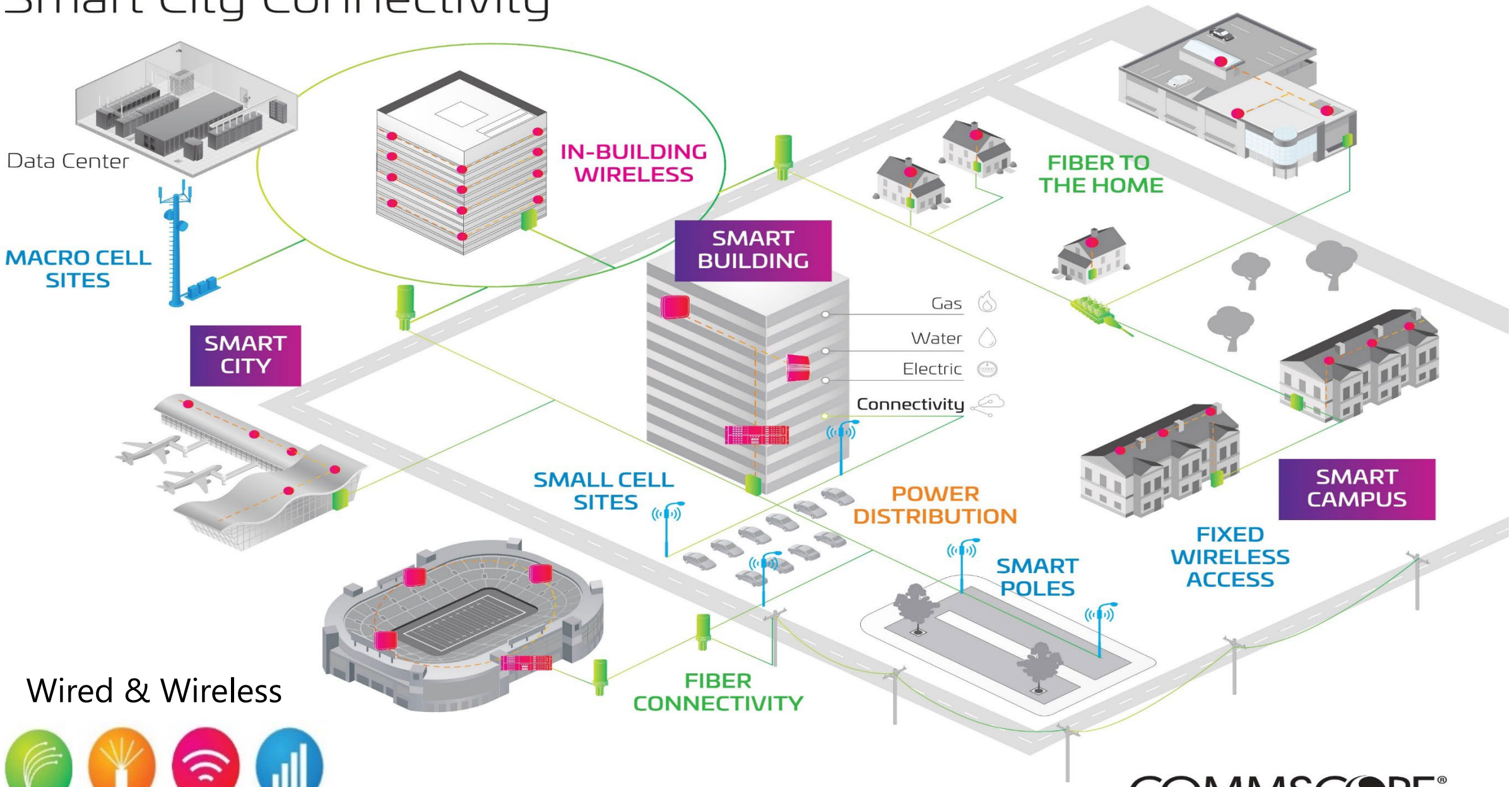
Smart City Connectivity



Wired & Wireless

COMMSCOPE®

CONNECTIVITY IS EVERYWHERE.

IN AN INTERNET MINUTE

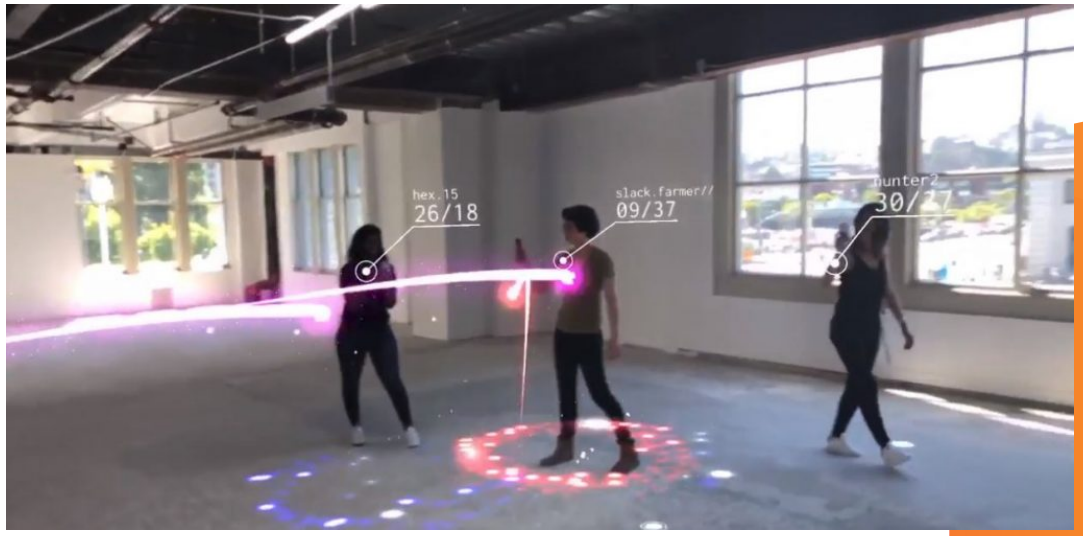
3.7 MILLION
GOOGLE SEARCHES

266,000 HOURS
NETFLIX VIDEO WATCHED

$900,000 USD
SPEND ONLINE

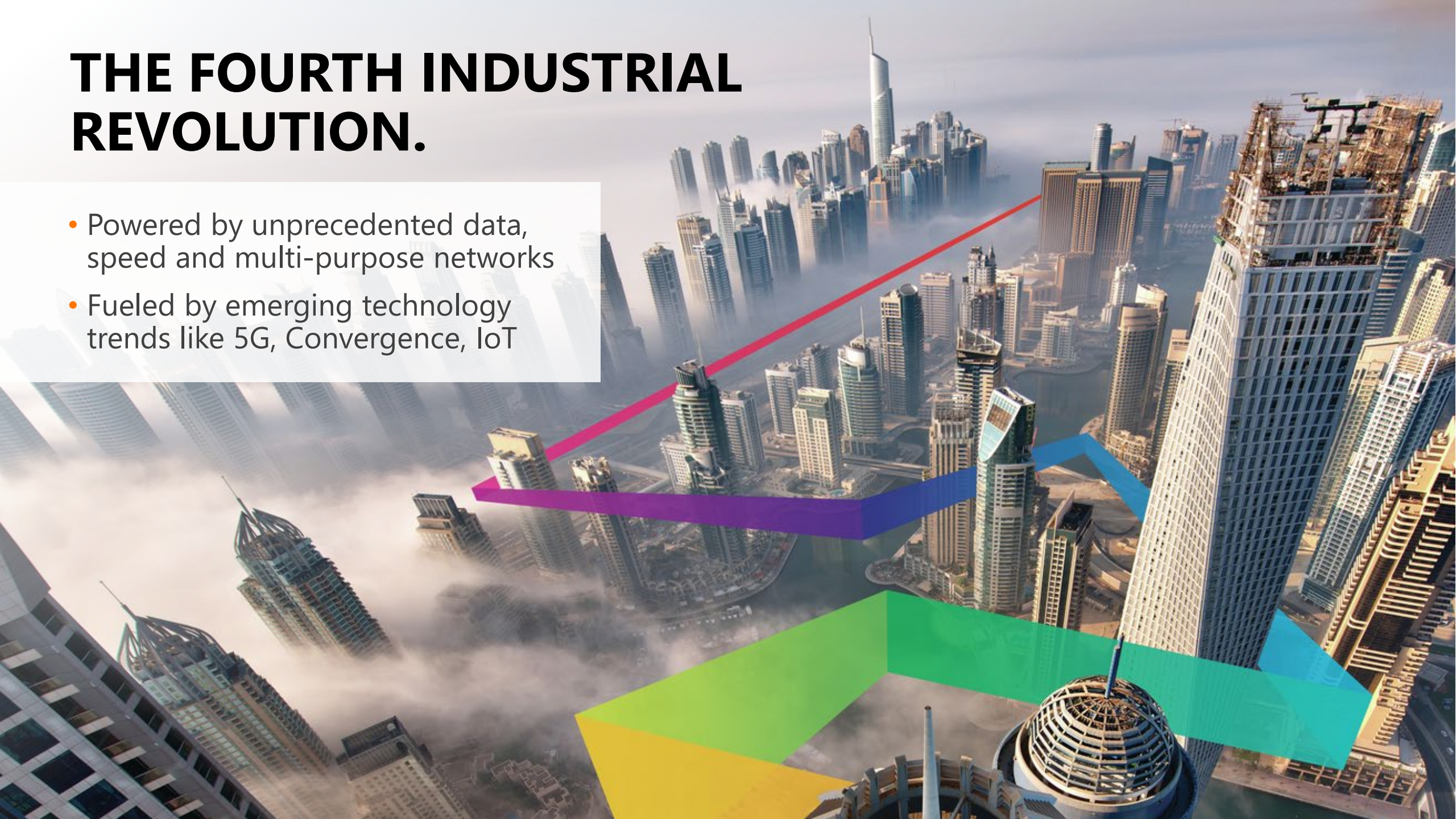
>1 MILLION
SWIPES

Another Reality for Commissioning ?



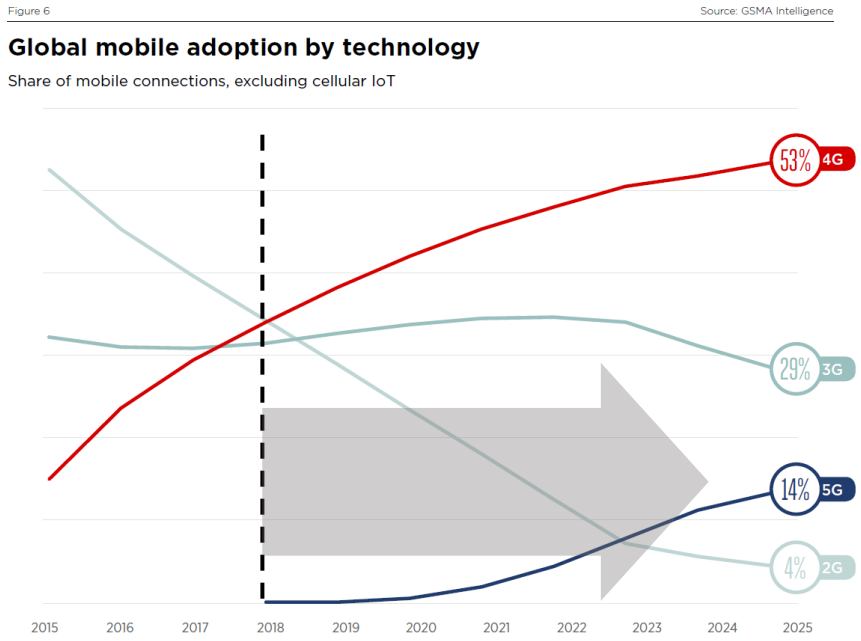
THE FOURTH INDUSTRIAL REVOLUTION.

- Powered by unprecedented data, speed and multi-purpose networks
- Fueled by emerging technology trends like 5G, Convergence, IoT



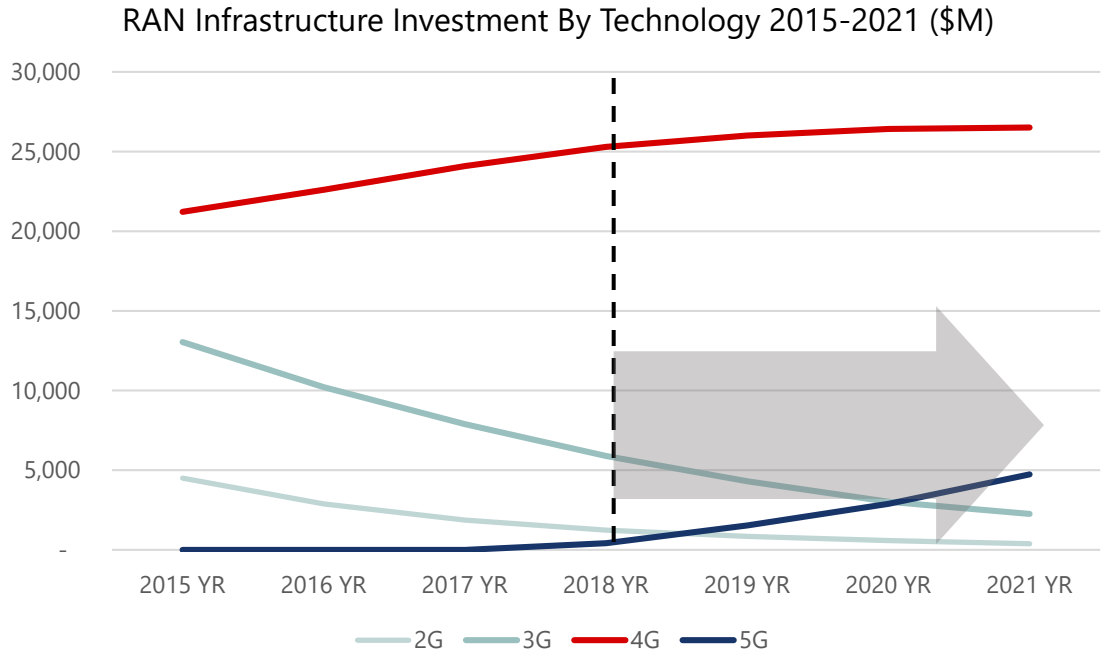
We're not done with 4G

Connections



Source: GSMA, *The Mobile Economy*, March 2018

Infrastructure



Source: Gartner, *Communications Service Provider Operational Technology Worldwide*, December 2017

Continuing 4G build-out must be 5G-ready from day 1

5G

The next network evolution is shaping up to be the next revolution

10GBPS THROUGHPUT PER USER

DENSER NETWORKS &
SUPER-LOW LATENCY SPEEDS

5G TRIALS AND PRE-STANDARD DEPLOYMENTS

5G will be a network of networks

1 Enhanced mobile broadband

UP TO **10** GBPS PER SUBSCRIBER

1-7 TYPICAL GBPS PER SUBSCRIBER

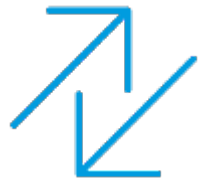
10-100x CONNECTED DEVICES

2 Internet of things

MORE THAN **20** BILLION THINGS

1,000x MORE BANDWIDTH

5x LOCATION DENSITY



3 Ultra-low latency

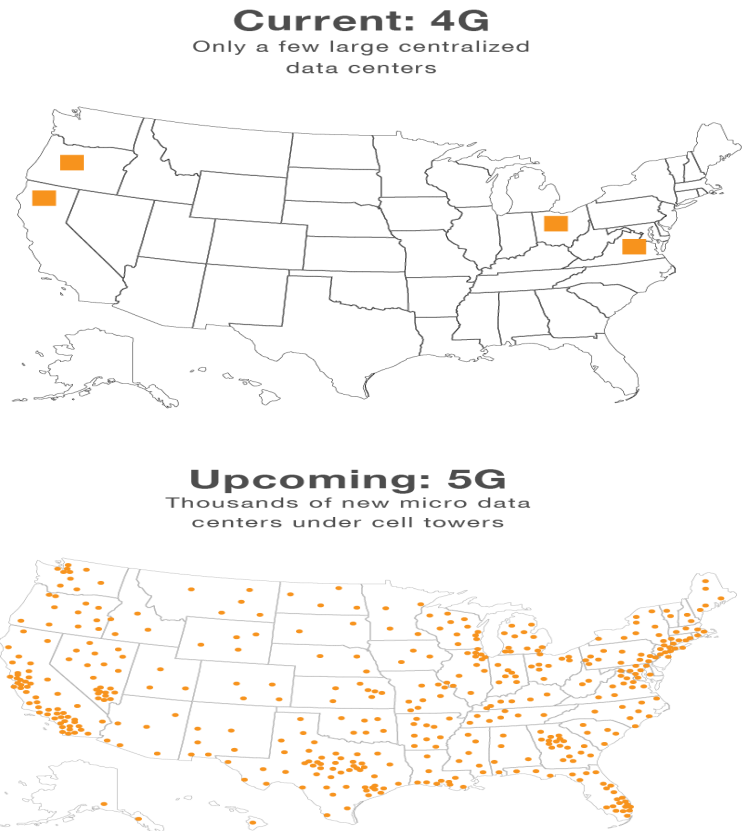
LESS THAN **5** MILLISECONDS

5% OF 4G

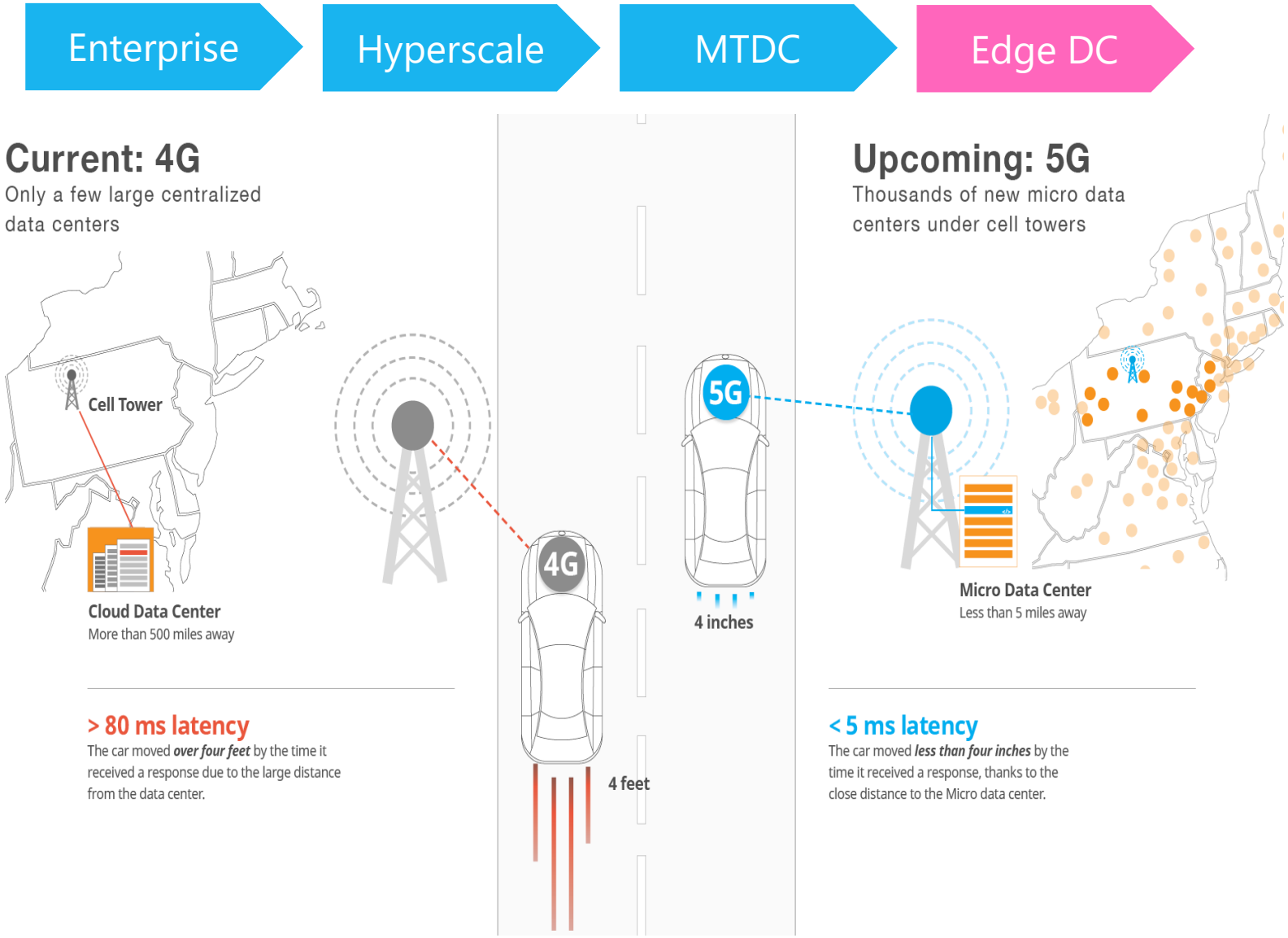
Data Centers– the brain of a smart community

Big data applications are driving:

- Speed & Size
- Microservices
- Location (moving to Edge)



Current Large Data Centers vs. Micro Data Centers near cell towers



Latency differences between 4G & 5G infrastructure, with supportive use case — Source: Mutable.io

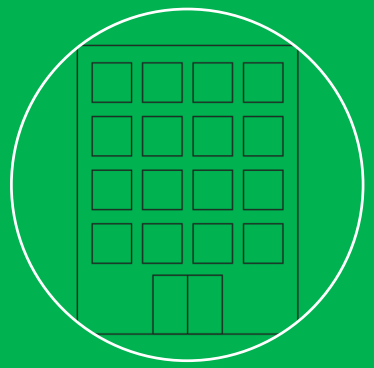
Building the foundation for 5G

Macro Cell Sites

- Antenna and RF path solutions
- Higher frequency bands
- Higher-order MIMO

Metro Cell Sites

- Densification enabler: antennas, concealment, power, connectivity
- Smart city enabler

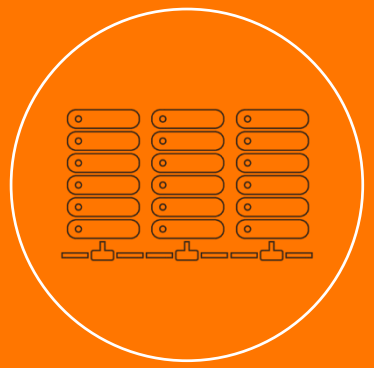


In-building

- Small cell and DAS on IT infrastructure
- Connectivity and PoE power distribution and management
- Automated infrastructure management

Outside Plant

- Cloud RAN enablement
- High-speed fiber connectivity
- Powered fiber



Data Centers and Central Offices

- High speed fiber connectivity with intelligence
- Edge data centers
- CO/ DC convergence


A brighter future
is built on smarter
networks
Thank YOU!
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