



Turn on 5G

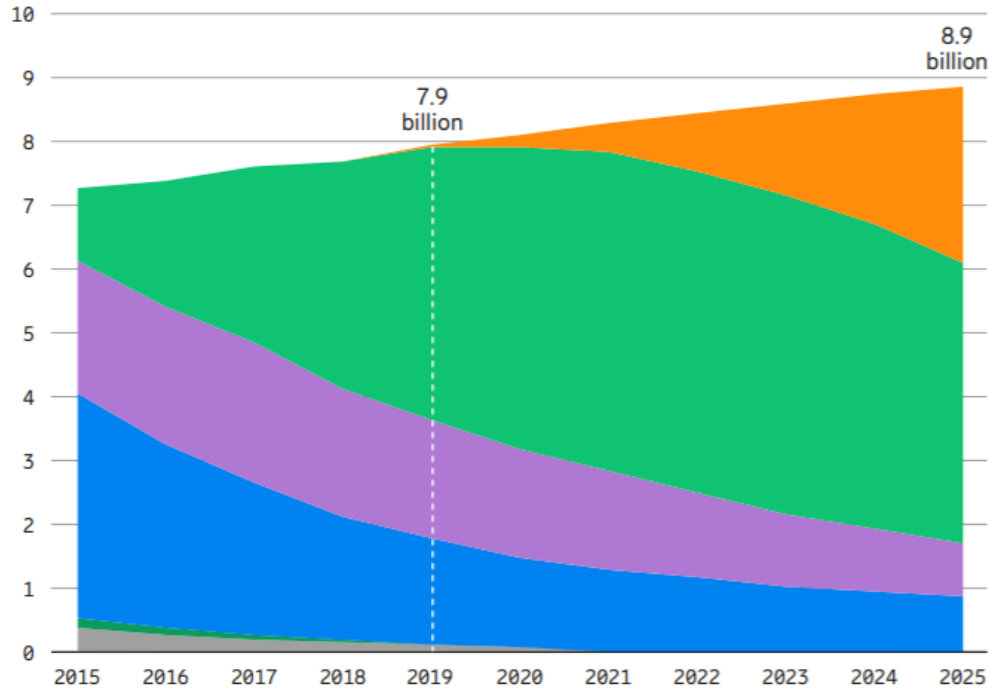
Mauricio Nastta
Technical Sales LATAM South
December 2020



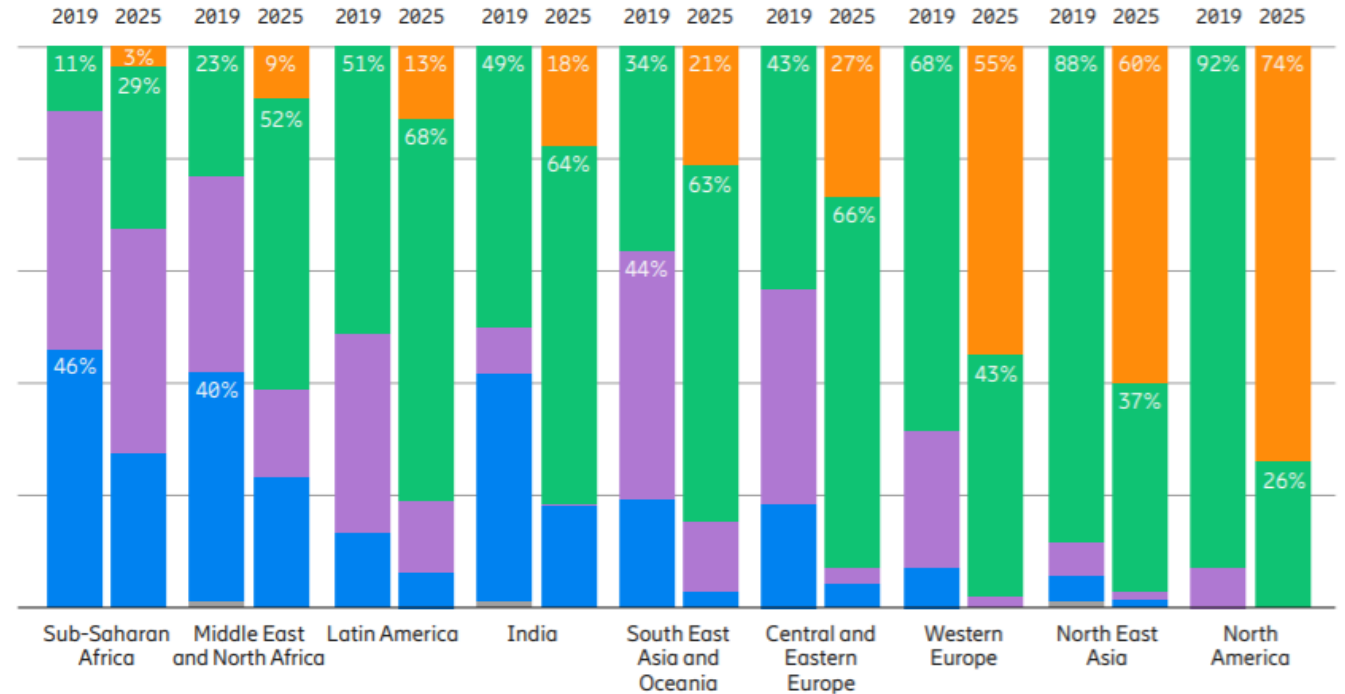
5G subscriptions in 2025



Mobile subscriptions by technology (billion)



Mobile subscriptions by region and technology (percent)



75

Around 75 service providers around the world have switched on 5G

190 million

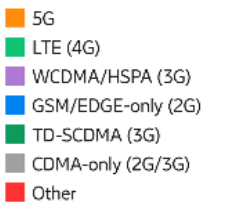
190 million 5G subscriptions expected end of 2020

2.8 billion

2.8 billion 5G subscription in 2025

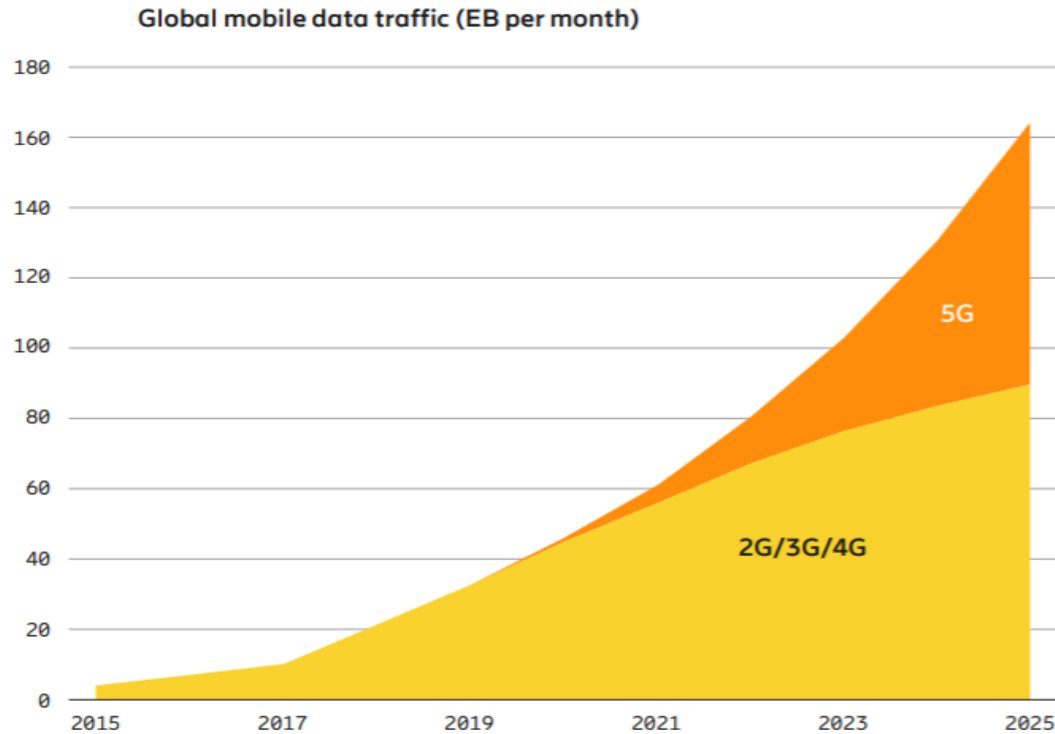
13%

13% of Mobile subscriptions in Latin America for 5G in 2025



Note: IoT connections are not included in this graph

5G Mobile Data Traffic in 2025



Note: This graph does not include traffic generated by fixed wireless access (FWA) services

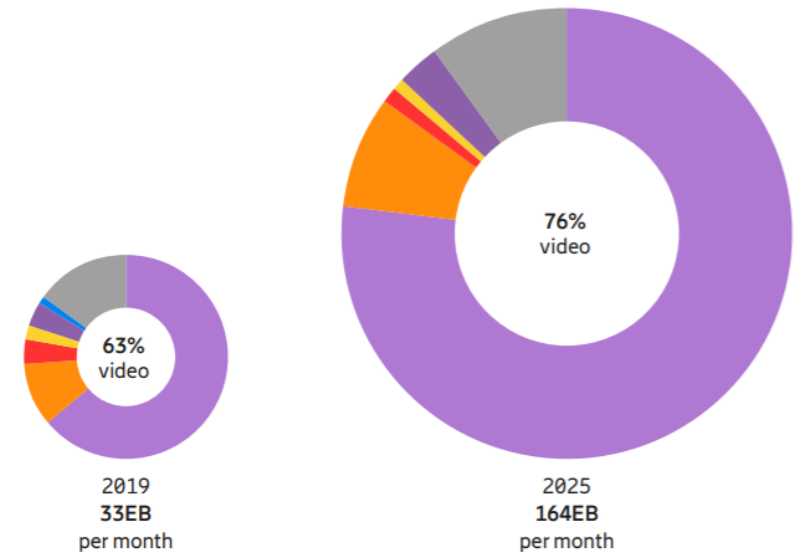
164
Total traffic predicted to reach 164 exabytes per month in 2025

45%
5G networks forecast to carry 45% of the world's mobile data traffic in 2025

76%
Video forecast to make up almost 76% of mobile traffic in 2025

Mobile traffic by application category per month (percent)

■ Video
 ■ Social networking
 ■ Web browsing
 ■ Audio
 ■ P2P file sharing
 ■ Software download and update
 ■ Other segments



- Main drivers:**
- Video in most online content
 - Growth of VoD services
 - Video streaming services
 - Changing user behavior
 - Increased segment penetration
 - Evolving devices
 - Increased network performance
 - Emerging immersive formats and applications

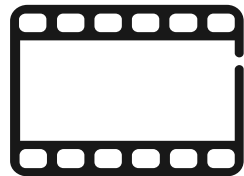
Drivers for growth



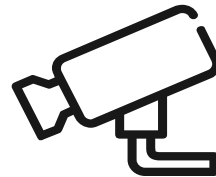
MORE PEOPLE



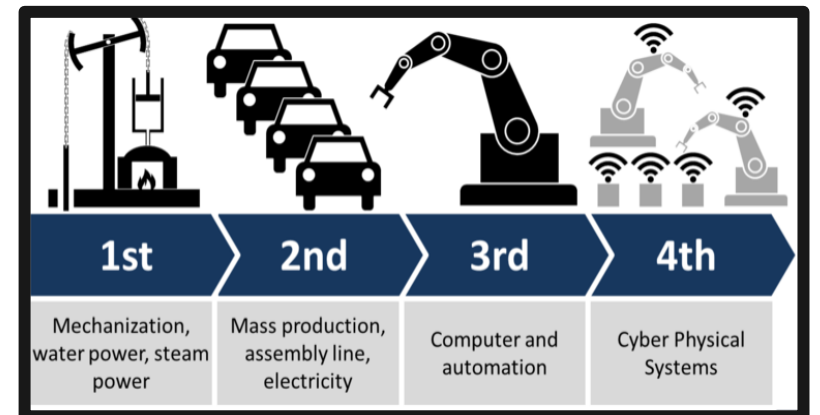
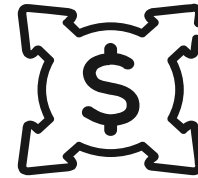
MORE USAGE



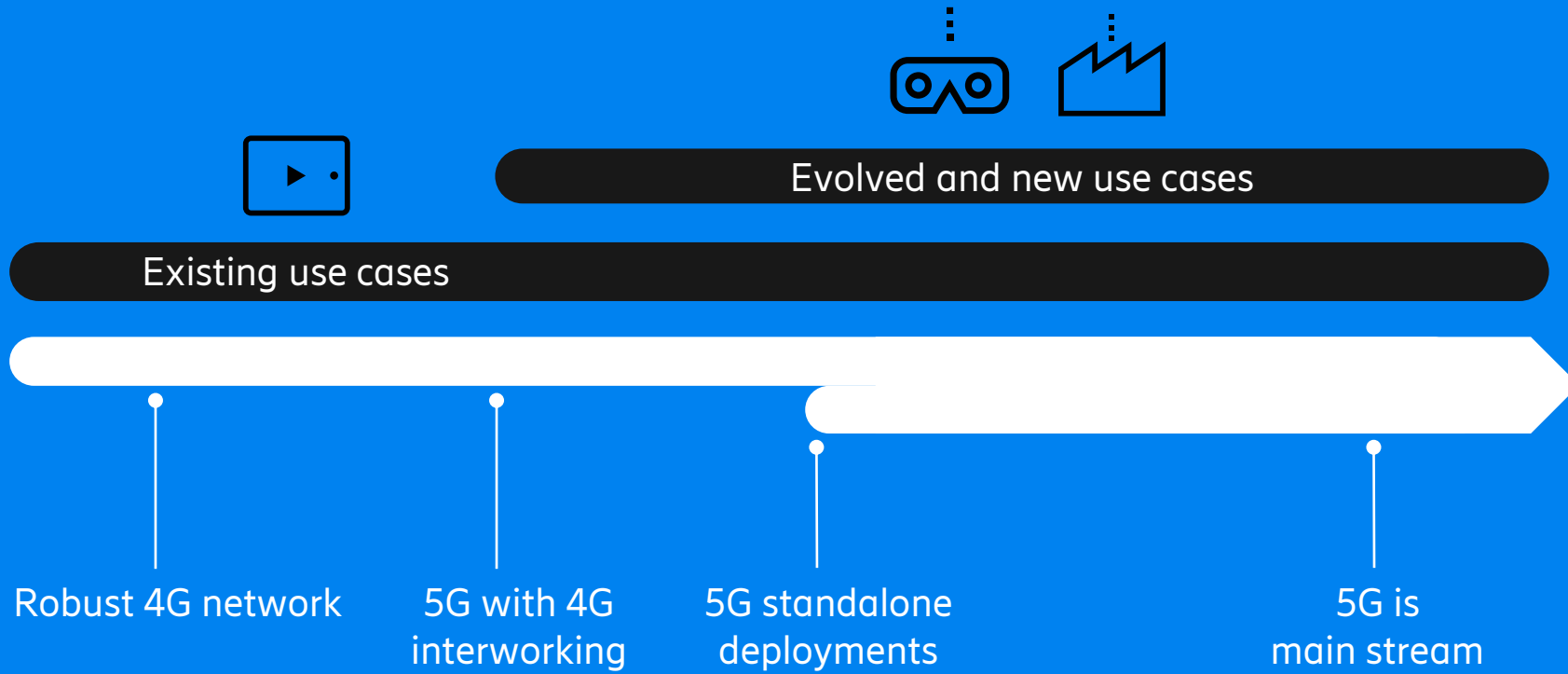
MORE THINGS



MORE BUSINESS



5G journey



5G platform serving all major use case categories



Massive Machine Type Communication

Low cost,
Low energy
Small data volumes
Massive numbers

Smart Metering

Fleet Management

Asset management

Critical Machine Type Communication

Ultra reliable
Ultra low latency
Very high availability

Traffic Safety & Control

Industrial Applications

Remote Manufacturing

Enhanced Mobile Broadband

Capacity
Cost per bit
Performance

VR/AR

Smartphones

UHD Video

Fixed Wireless Access

Underserved Home
Enterprised solutions

Home

Enterprise

One Network, multiple use cases, multiple industries

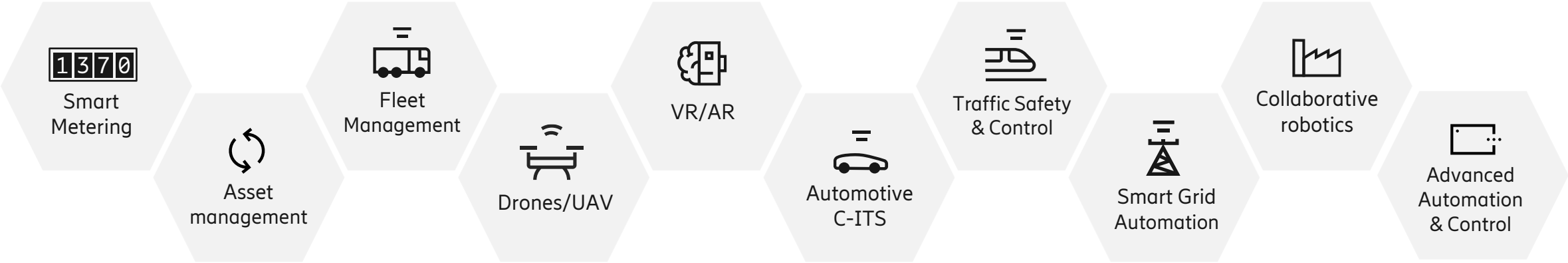


Massive IoT

Broadband IoT

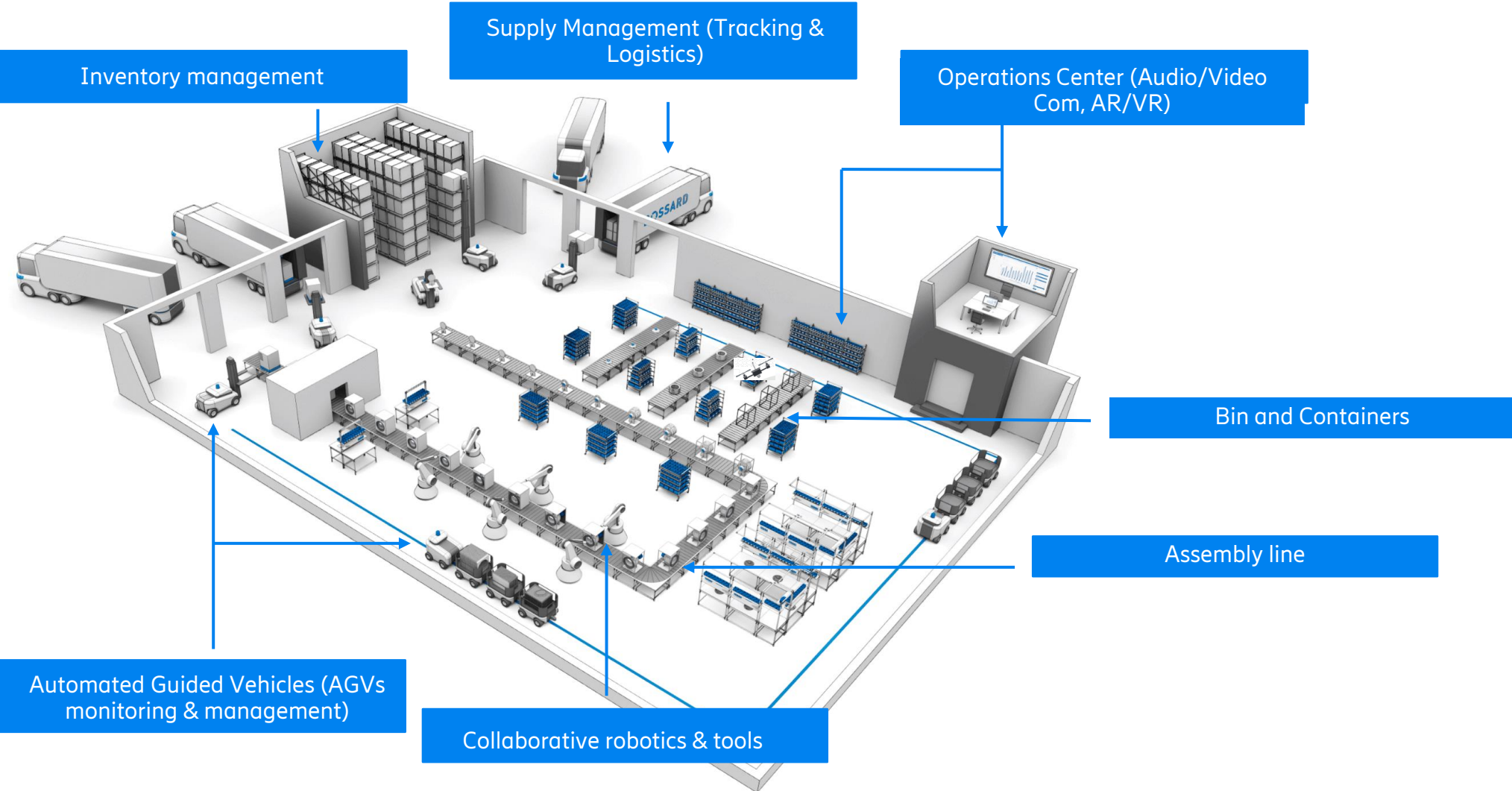
Critical IoT

Industrial Automation IoT

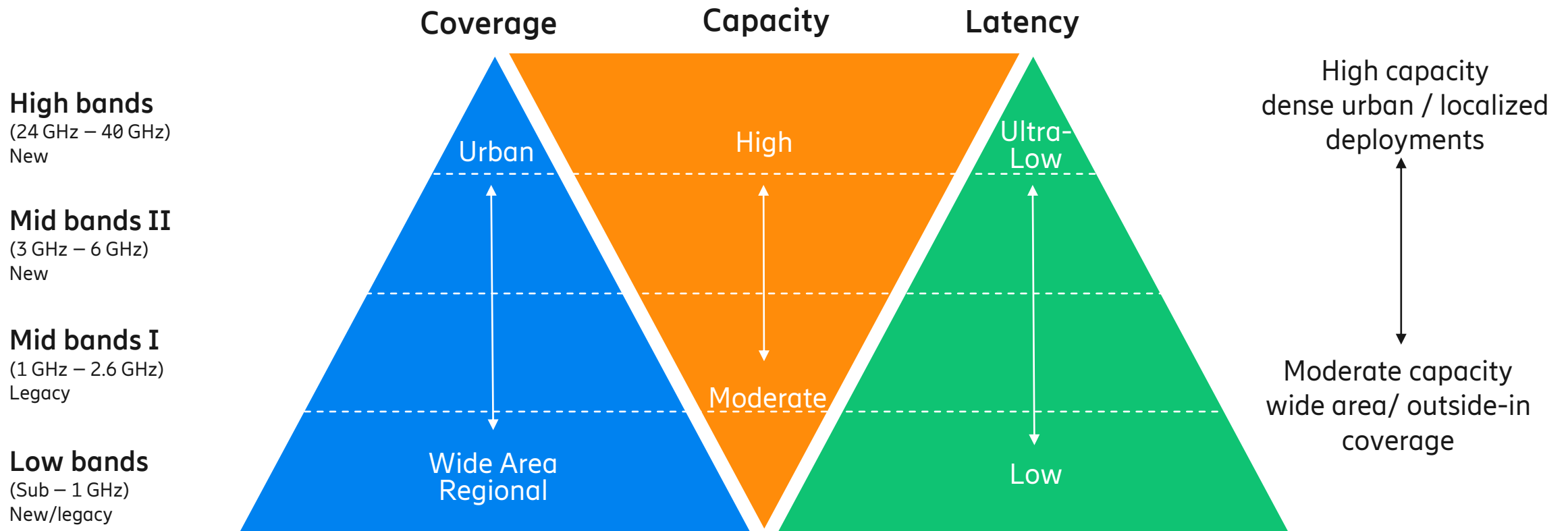


Low cost devices, low energy Small data volumes Massive numbers NB-IoT/Cat-M1 (LTE and NR)	High throughput Low latency Large data volume LTE + NR	Ultra reliability Ultra low latency Very high availability NR	Industrial protocols Time sensitive networks Precise indoor positioning NR
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Smart Manufacturing use cases



Spectrum trade-offs between capacity, coverage and latency



5G is a reality



Americas

- HB Spectrum with commercial 5G from 2018 (main band for current deployments)
- LB spectrum commercial from 2019

1st 5G commercial network in the world

Oct 2018

High Band: 28GHz

Ericsson deployed in 2, out of 4 first 5G markets

Live North America

AT&T
GCI
Rogers
T-Mobile
US Cellular
Verizon

Live Latin America

Claro Brazil
DirecTV Colombia

LATAM

- MB main 5G candidate band in 2020-2021
- LB with commercial 5G from 2020
- MB & HB Spectrum auction is ongoing in Chile
- Currently 2 commercial 5G networks

EMEA

- HB Spectrum available 2020-2021
- MB Spectrum with commercial 5G from 2019 (main band for current deployments)
- LB with commercial 5G from 2020

Live Europe

Deutsche Telekom	Telefónica Spain
DiGi Romania	Telekom Slovenije
Elisa	Telenor Norway
EIR	Telia Norway
Magyar Telekom	Telia Sweden
O2 UK	Three Ireland
Orange Romania	TIM
Orange Spain	Vodafone Germany
Polkomtel	Vodafone Ireland
Play	Vodafone Spain
Swisscom	Vodafone UK
TDC	VodafoneZiggo

APAC

- HB Spectrum available 2019-2020
High interest from lead customers in China, South East Asia, Korea, Japan, Australia and Hong-Kong
- MB with commercial 5G from 2019 (main band for current deployments)
- LB with commercial 5G from 2020

Live North East Asia

China Mobile	KT
China Telecom	LGU+
China Unicom	SK Telecom
Chunghwa Telecom	SmarTone
Far EasTone	SoftBank
KDDI	

Live Middle East & Africa

Batelco	Omantel
Etisalat	STC
Mobily	Telma
MTN	Zain
Ooredoo	

Live South East Asia, Oceania & India

Optus
Telstra
True

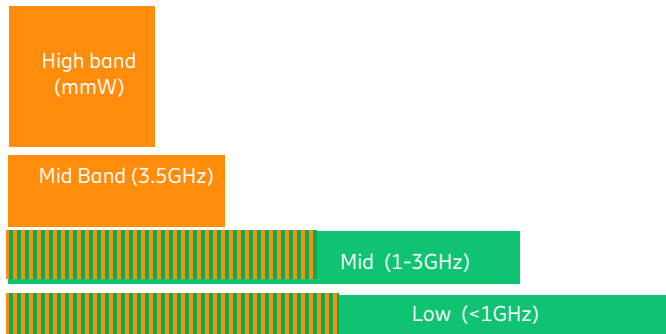
Spectrum for industries in e.g.:
Australia, Germany, Hong Kong, Italy, Japan, Malaysia, Netherlands, Sweden, UK, US.

Key enablers for 5G



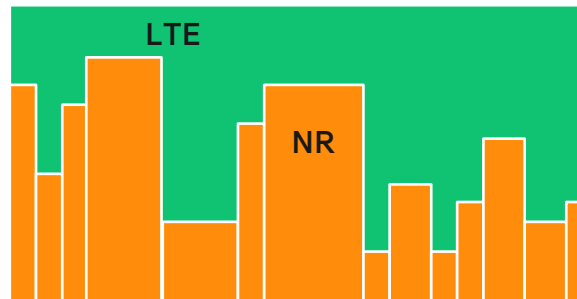
Spectrum Regulation

New 5G Bands
Allow NR in existing low/mid frequency bands



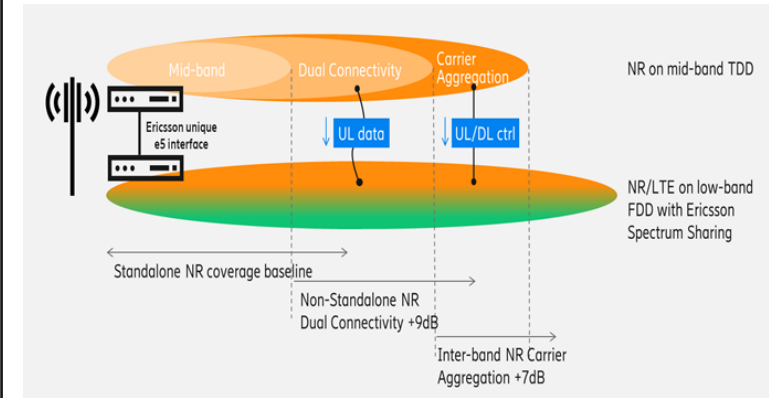
Spectrum Sharing

Efficient wide area 5G coverage quickly realized

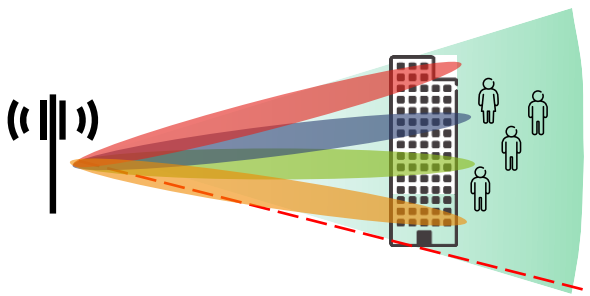


Carrier Aggregation

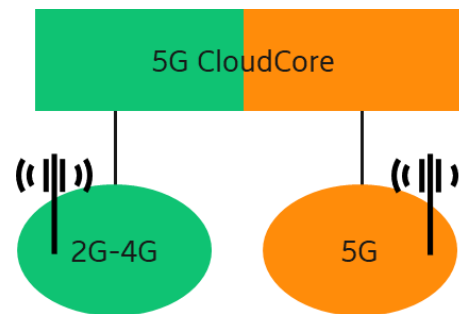
Cell range extension by 60%



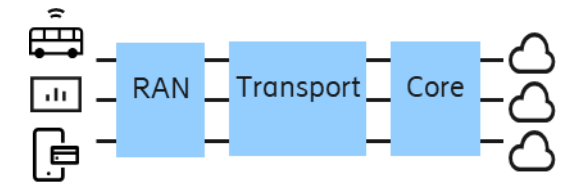
Massive MIMO



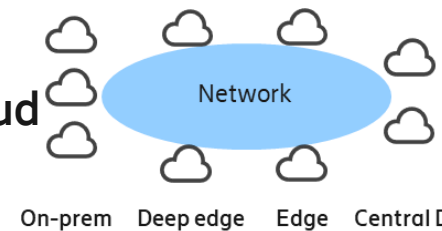
Dual-Mode Core



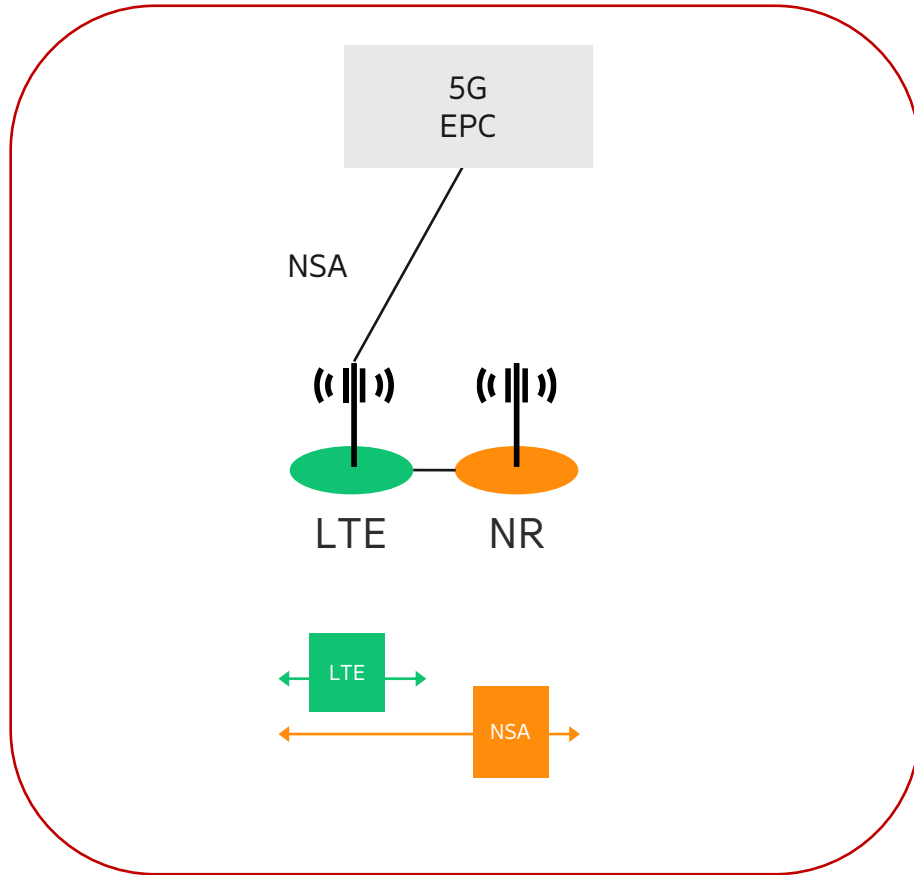
Network Slicing



Distributed Cloud

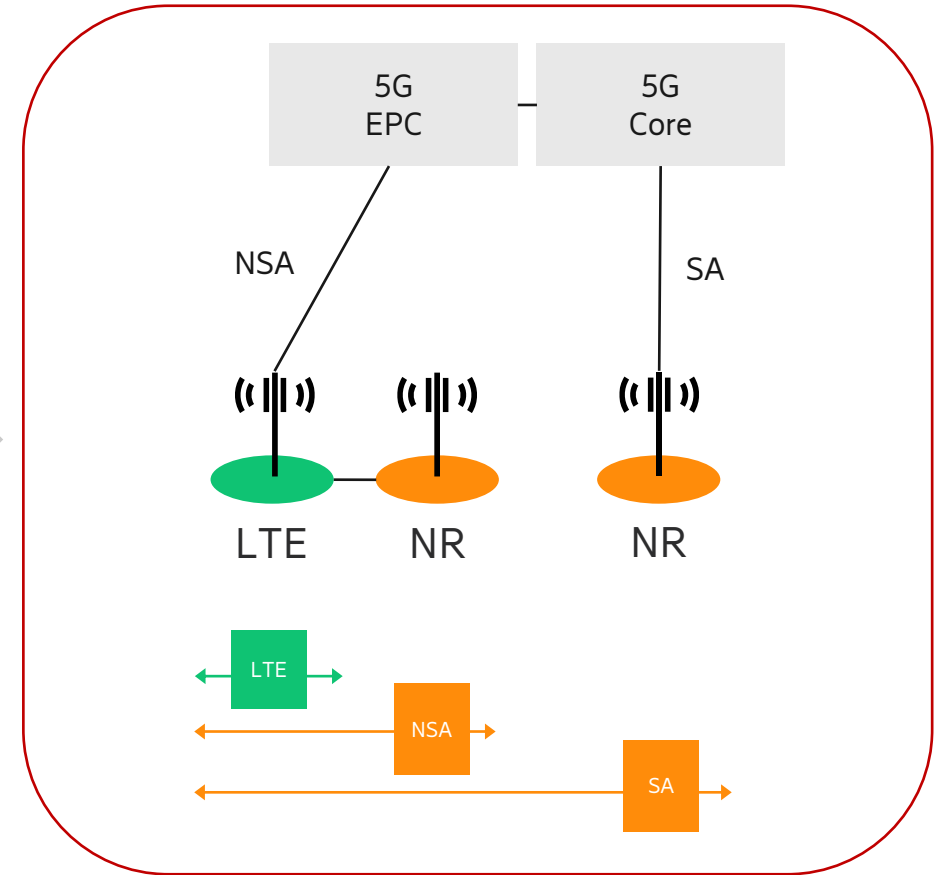
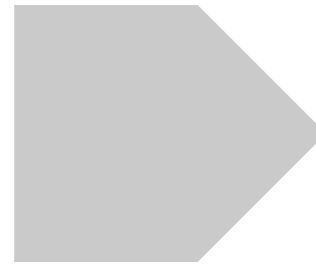


The 5G architecture



Non-Stand Alone

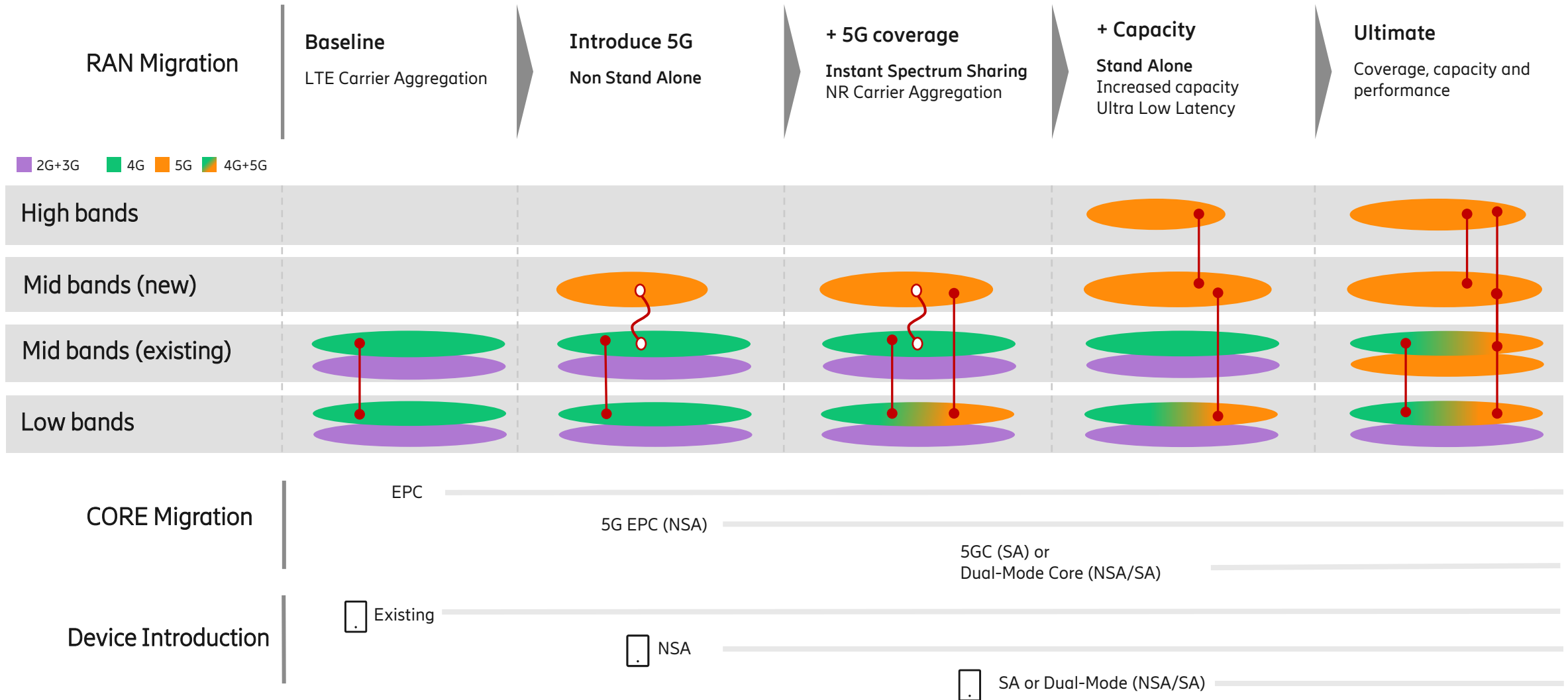
Quick, easy and smooth 5G introduction



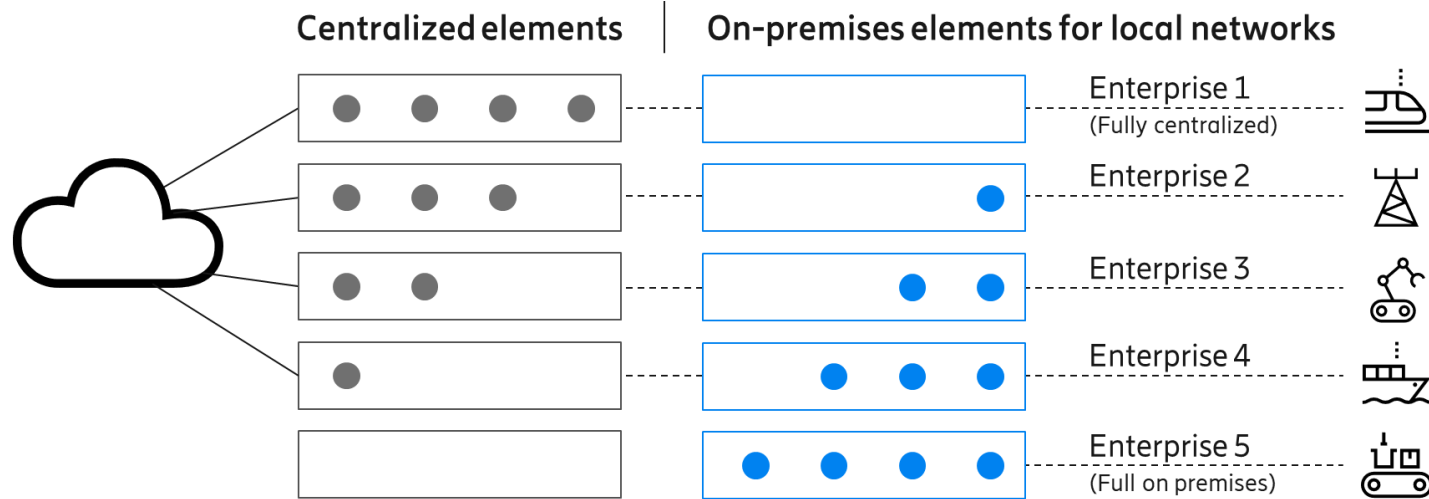
Stand Alone

Get the full 5G benefits

Example of 5G deployment scenario



Flexible Private networks deployments



Operator network

Network slicing + indoor
Macro network extension

E2E network slicing
Macro network extension

Indoor coverage
Macro network extension

Hybrid network

Survivability with full
communications

Survivability including
Push to Talk (PTT)

Local control and survivability

Standalone private network

Premium full network
Unified communications and OSS

Off-the-shelf network in a box

5G Devices



Smartphones



CPE (FWA)

Gemtek Indoor FWA
WLTFDQ-154AX



Gemtek Outdoor FWA



Huawei FWA Pro 2
Ballong 5000



FRITZ! 6850 5G



Nokia Fastmile 5G



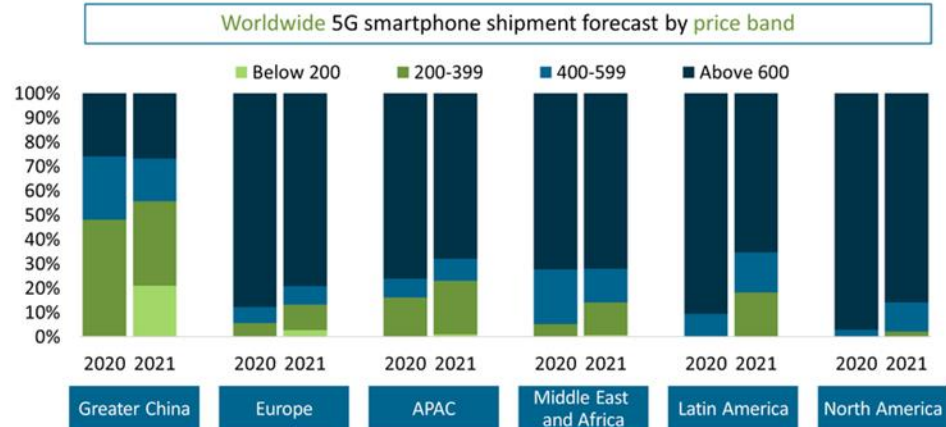
ZTE MC801



Askey
RTL0200



Sub US\$400 almost 60% of Greater China volume

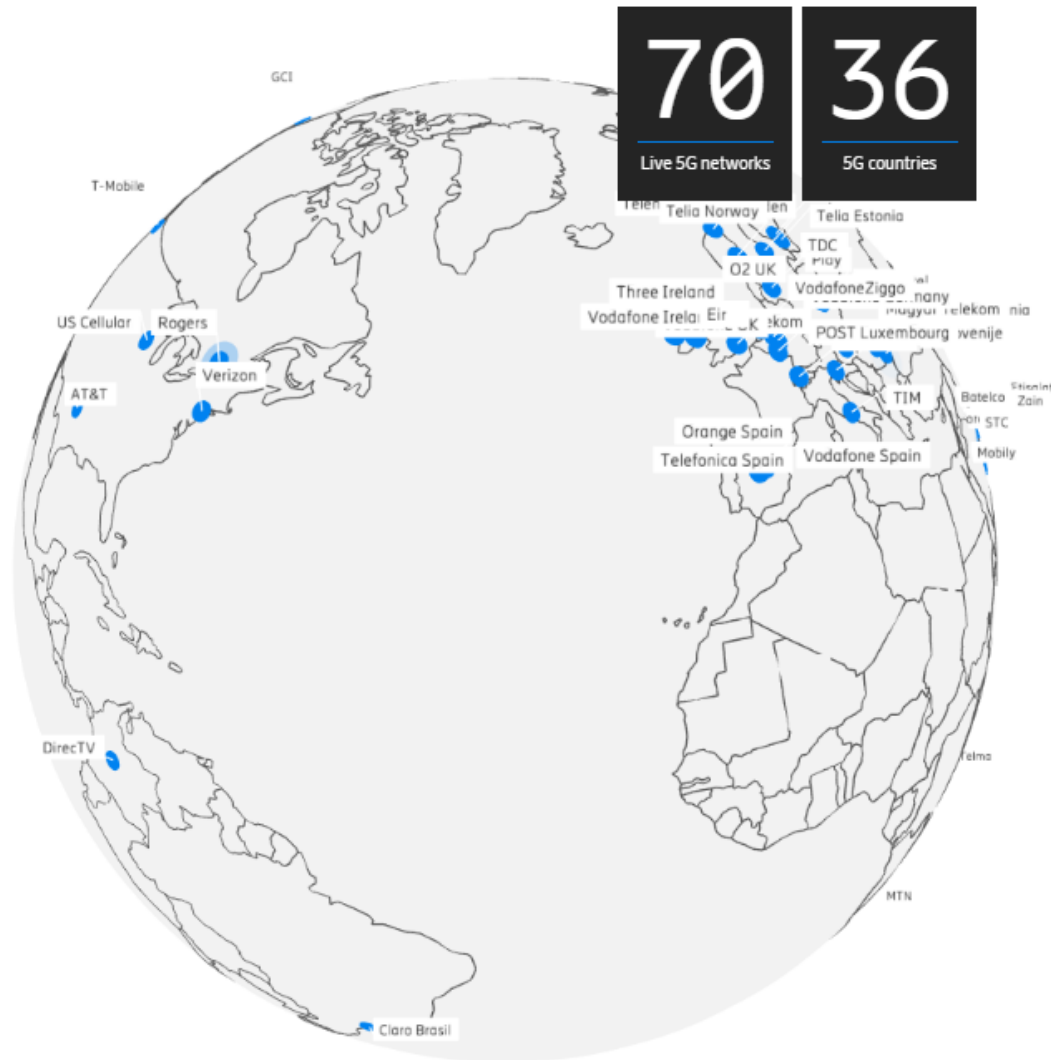


Source: Canlys estimates, Smartphone Analysis, September 2020



Industrial Modules

Ericsson's 5G



70
Live 5G networks

36
5G countries

117
Commercial 5G agreements

67
Publicly announced 5G contracts

