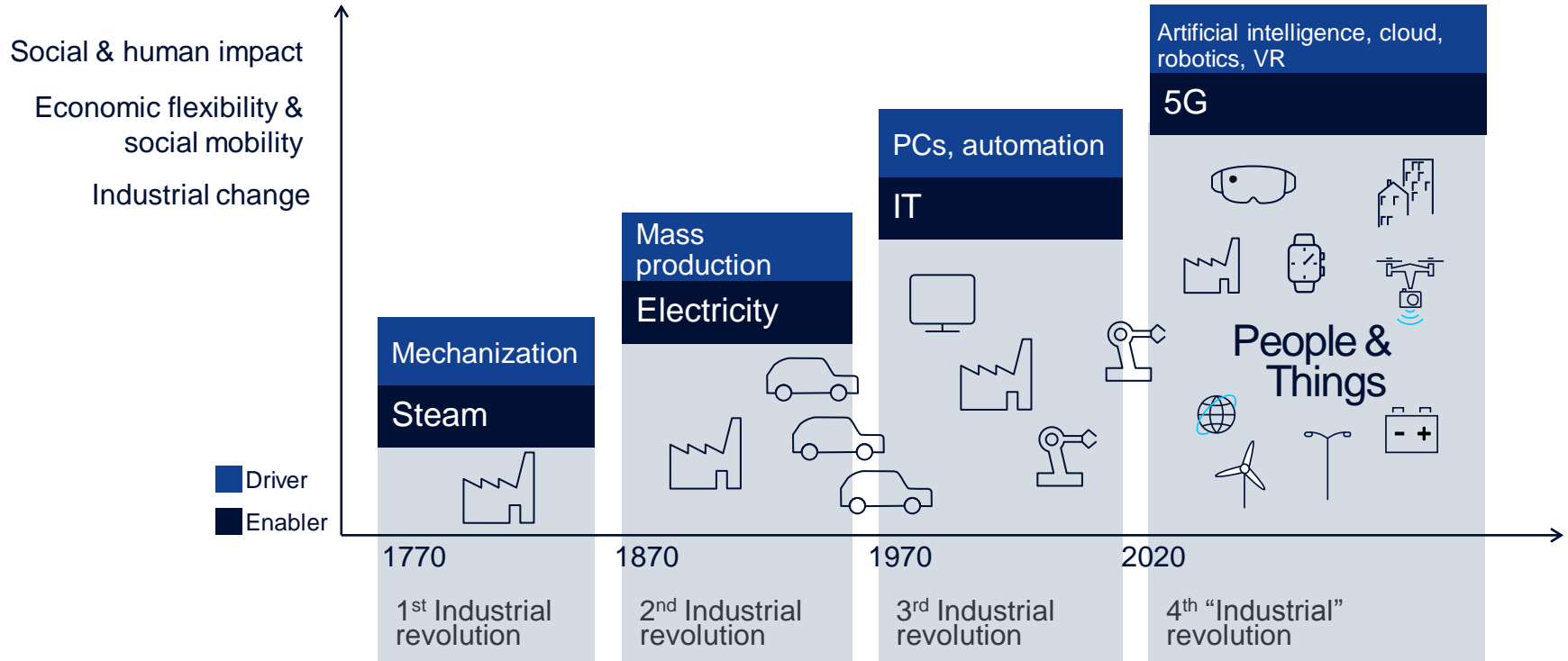


Nokia 5G Solution, the future gets simpler

NOKIA

Mohamed Khalil AKAKZIA
Nokia Radio Sales Manager

4th “industrial” revolution powered by 5G



Consumer 5G survey key findings

Need or would like faster connectivity on next smartphone

>86%

Likely to purchase a phone that supports 5G next

~50%

Top use case — use cellular connectivity everywhere



Willing to pay extra for 5G



Top 3 reasons for 5G:

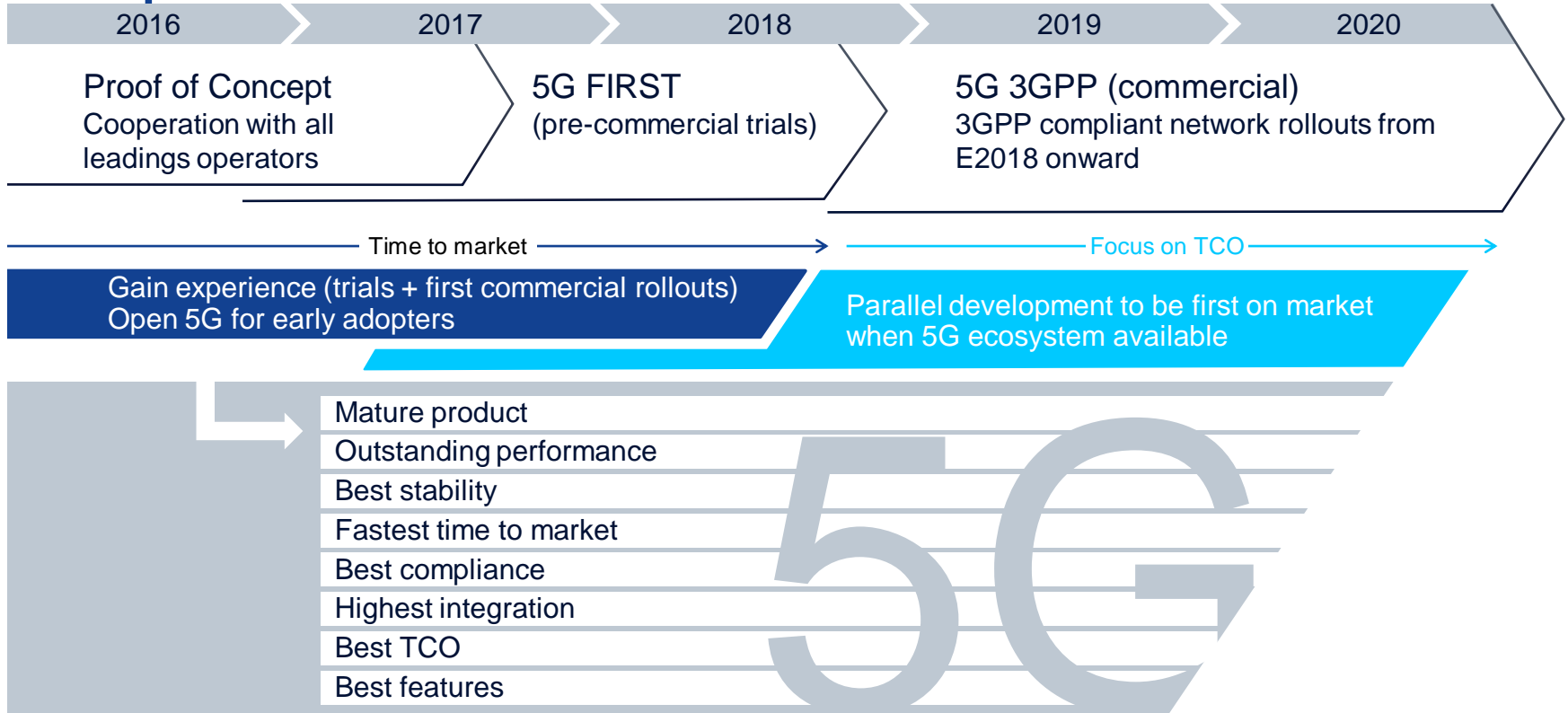
10x
faster
speeds

10x
quicker
response time

More
cost-effective
data plans



3GPP based solutions will benefit from experience made in pre-3GPP phases



5G Timeline & phasing

- There will be at least **two phases** for the normative work
 - The first release of the 5G specification will be completed by Sep. 2018/Release-15, addressing the more urgent subset of the commercial needs (eMBB)
 - The second release of the 5G specification to be completed by Mar. 2020/Release-16, for the IMT 2020 submission and to address other identified use cases & requirements
- With the following, tentative, release timing



Note: dates above refer to official 3GPP release freeze (ANS.1 freeze)

- Key requirement: NR design should be **forward compatible** so that features can be added in later releases in an optimal way

Release-15 targets

- Use cases
 - Enhanced Mobile Broadband (eMBB)
 - Some Low Latency and High Reliability capabilities (URLLC)
- Frequency ranges below 6GHz (mmWave later) (typical 700M, 3.5G)
- Next Gen Core (5GC): Benefit from Virtualization. Have a more evolutive architecture

The promise of 5G

- Explosion of possibilities – a fundamental business change
- An industry revolution: mobile networks will help transform other industries
- New apps requiring low latency, robust network availability, capacity

Growth in demand, driven by video and audio

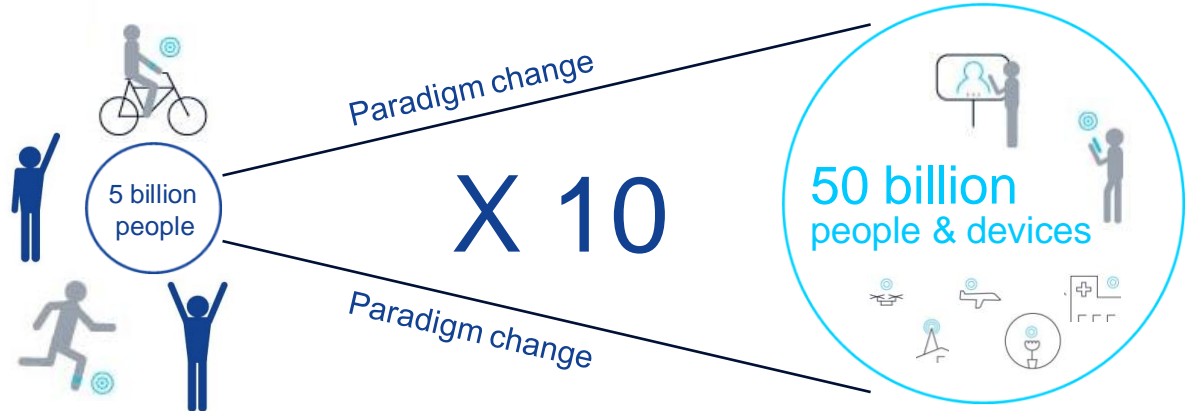
45x

Cellular IoT devices

4.6 billion

IoT connection requests daily

7 trillion



5G Future

Unleashing the 5G potential

x10k traffic
>10Gbps peak data



10 years on battery
1M devices/km²

<1ms latency
Ultra reliability

Optimization focus
Bit/s/Hz/m²/joule/\$

Architecture design
Cloud native
Scalable
Automated
AI driven
Open

Stay tuned under: www.nokia.com/innovation/5G

NOKIA