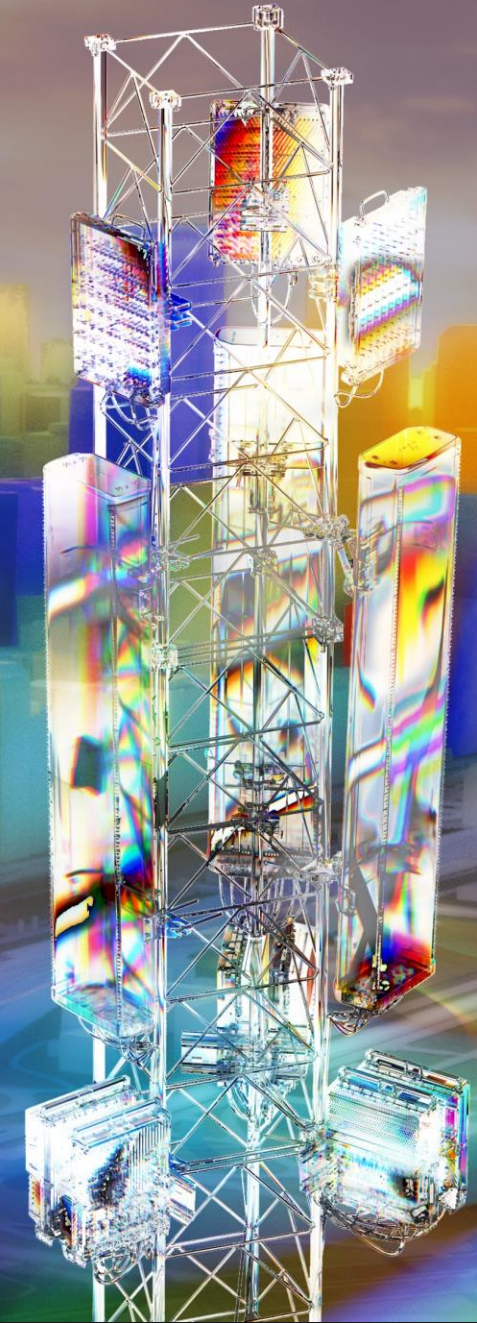# Neue Möglichkeiten mit 5G Advanced

Dr. Christoph Bach

CTO Service Providers

Ericsson GmbH

5G.NRWeek 2024 – Jahreskonferenz, 21. November 2024
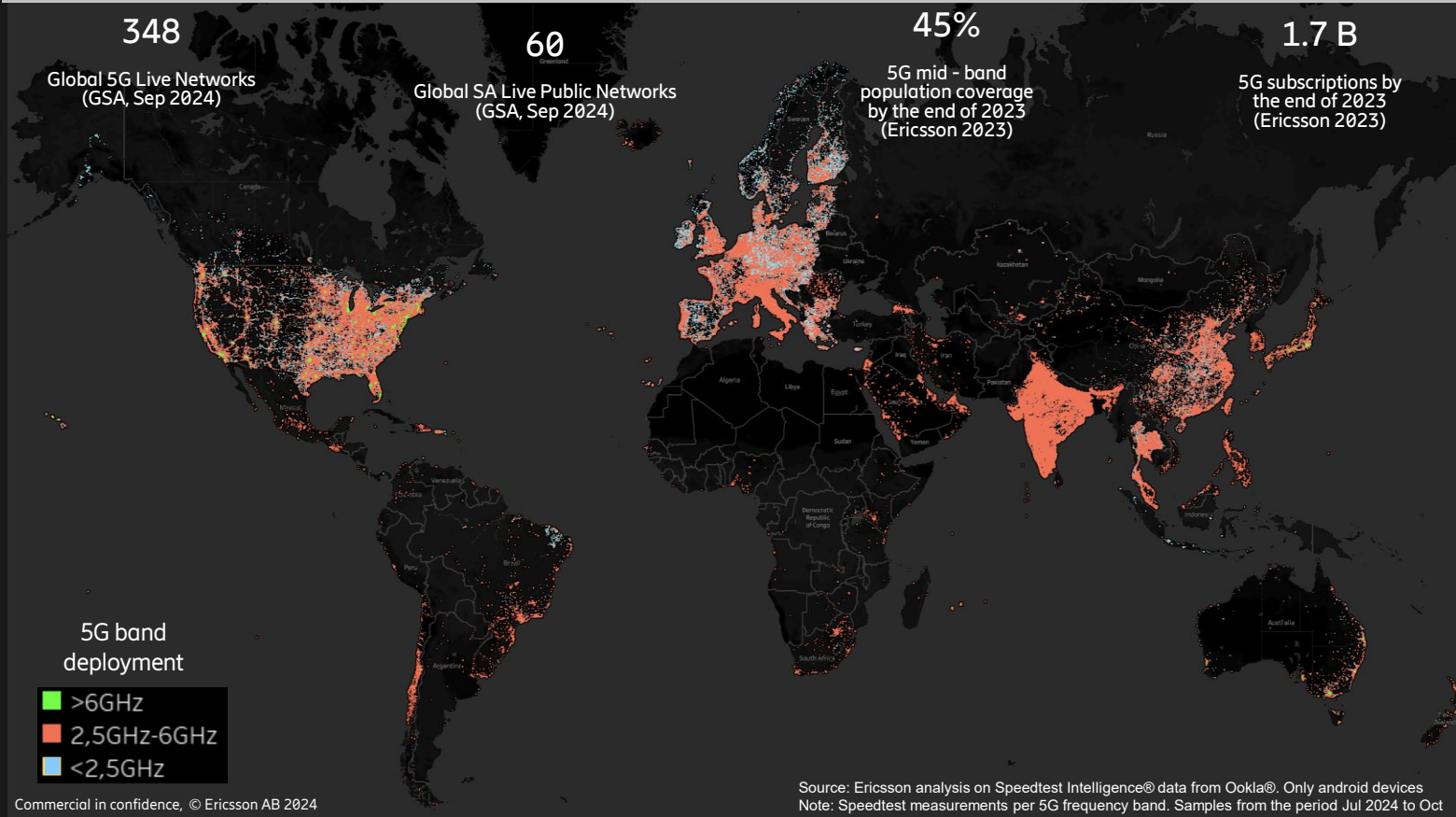
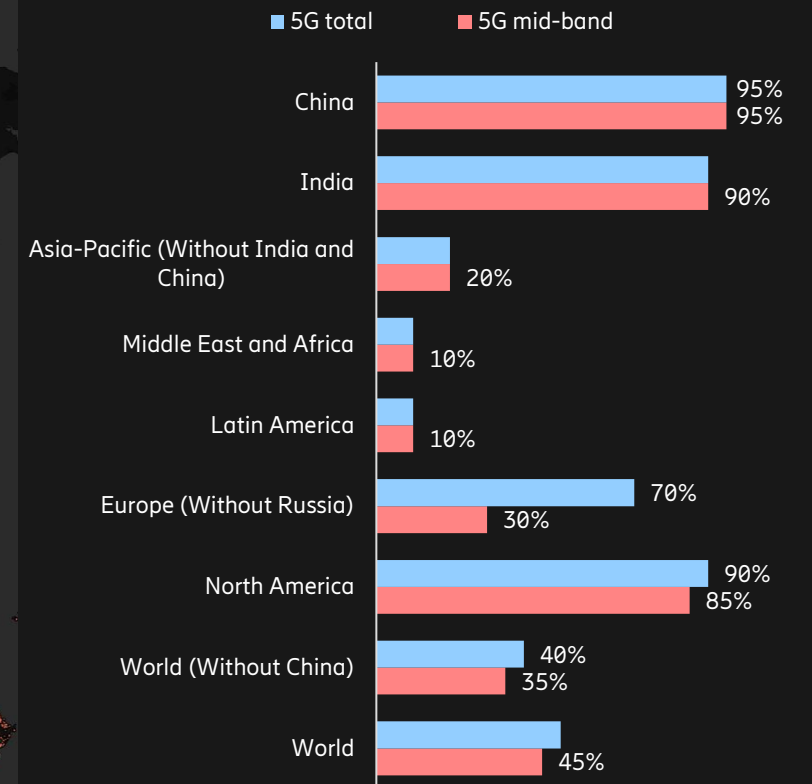# Globally, 5G mid-band population coverage has reached around 45%

Global 5G map showing 5G speed test samples per frequency range (Android devices only)

348
Global 5G Live Networks
(GSA, Sep 2024)

60
Global SA Live Public Networks
(GSA, Sep 2024)

45%
5G mid - band
population coverage
by the end of 2023
(Ericsson 2023)

1.7 B
5G subscriptions by
the end of 2023
(Ericsson 2023)

5G band deployment

- 🟩 >6GHz
- 🟥 2,5GHz-6GHz
- 🟦 <2,5GHz

Source: Ericsson analysis on Speedtest Intelligence® data from Ookla®. Only android devices
Note: Speedtest measurements per 5G frequency band. Samples from the period Jul 2024 to Oct 2024.

Mid-band population coverage, split by region

🟦 5G total 🟥 5G mid-band

Region	5G total	5G mid-band
China	95%	95%
India		90%
Asia-Pacific (Without India and China)		20%
Middle East and Africa		10%
Latin America		10%
Europe (Without Russia)	70%	30%
North America	90%	85%
World (Without China)	40%	35%
World		45%

*Source: Ericsson Mobility Report, June 2024

5G Advanced — what does it enable?

High-load scenario performance gain

🟠 Premium Network Performance

🟠 Premium Network Performance

Uplink heavy uses cases

Optimize energy consumption Secure QoS target

🟢 Energy Efficiency and Management

🟡 RedCap

New device types for mid-tier use cases with rightsized cost

Supporting advanced differentiation for high-value connectivity

🟡 RAN Differentiated Connectivity

🟡 Outdoor Positioning

Localization-based services with or without GPS assistance

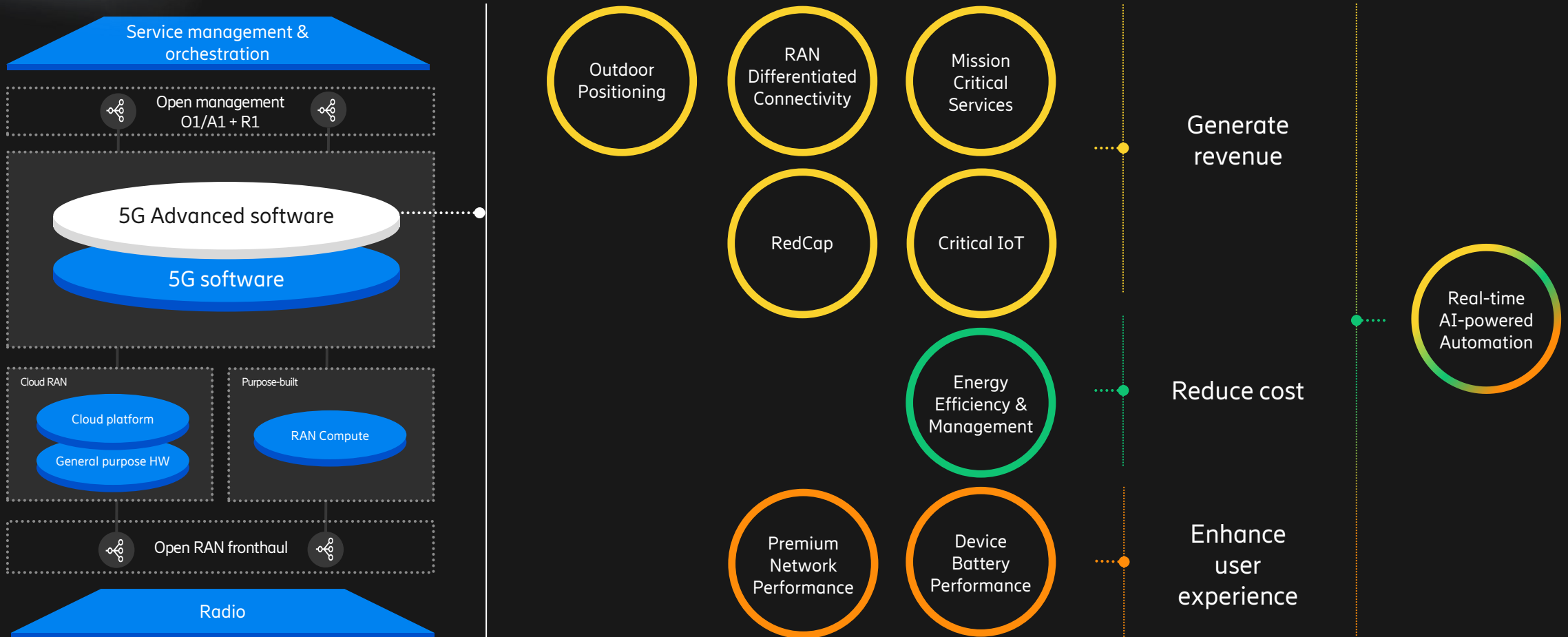## New services requiring consistent, reliable and bounded latency

🟡 Critical IoT

🟡 Mission Critical Services

Priority-based connectivity and tailored features

🟡 Generate revenue   🟢 Reduce cost   🟠 Enhance user experience

5G Advanced portfolio

Left stack diagram:

- Service management & orchestration
- Open management O1/A1 + R1
- 5G Advanced software
- 5G software
- Cloud RAN
  - Cloud platform
  - General purpose HW
- Purpose-built
  - RAN Compute
- Open RAN fronthaul
- Radio

Right circles:

- Outdoor Positioning
- RAN Differentiated Connectivity
- Mission Critical Services
- RedCap
- Critical IoT
- Energy Efficiency & Management
- Premium Network Performance
- Device Battery Performance
- Real-time AI-powered Automation

Categories:

- Generate revenue
- Reduce cost
- Enhance user experience

5G Advanced — today and tomorrow

Video conferencing

Cloud gaming

Cloud AR/VR

Mobile cameras

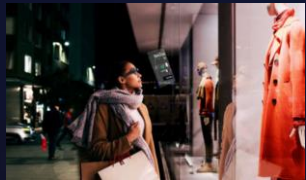**Integrated sensing and communication**

Unmanned aerial vehicles

Advanced driving assistance system

Autonomous mobile robots

RedCap

Remotely controlled driving and transport

Remote operations for ports

Remotely controlled drones

Remotely controlled machines

Non-terrestrial networks

Security

Uplink heavy use cases

Live broadcast

Localization-based services

Public safety services

Enhanced connectivity over rail

High-load scenario performance gain

Fragen ???