

# 5G Futures Summit

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## Welcome

**Session moderator**



**Barbara Pareglio**  
Senior Technical Director  
GSMA

# Session 2

Powering the next wave of  
innovation with 5G-SA-Advanced

# Agenda

## Session 2 keynote speaker(s)

**Barbara Pareglio**, Senior Technical Director,  
GSMA

**Shkumbin Hamiti**, Head of Network  
Monetization Platform, Cloud and Network  
Services, Nokia



## Session 2 panel member(s)

**Patrick Castagnino**, Connectivity Business  
Development for Digital Aviation, Airbus

**Dr Neeraj Mittal**, Secretary, Department of  
Telecom, Ministry of Communications,  
Government of India

**Mikko Jarva**, Head of Portfolio &  
Architecture, Network Monetization Platform,  
Cloud and Network Services, Nokia

**Jurrie van den Breekel**, VP, Strategic  
Partnerships, Spirent Communications

# 5GSA deployments update

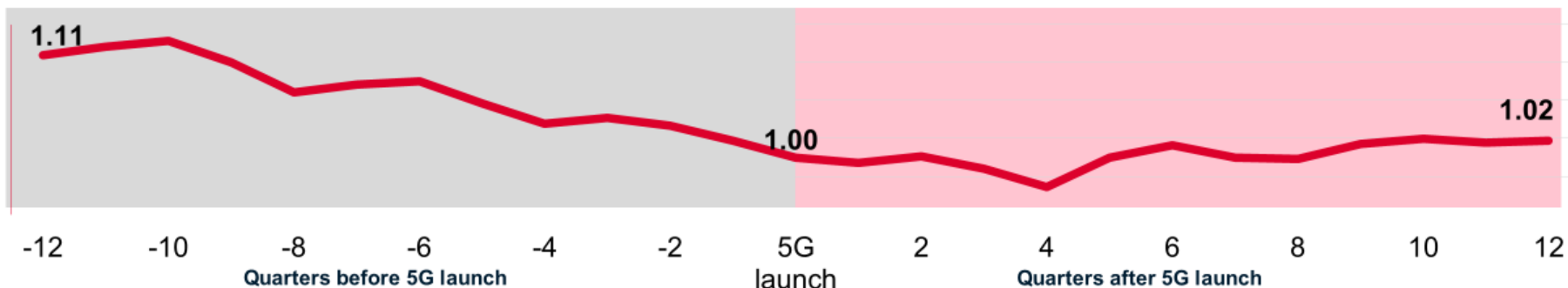
Where are we today?

# 5G reality check in 2023

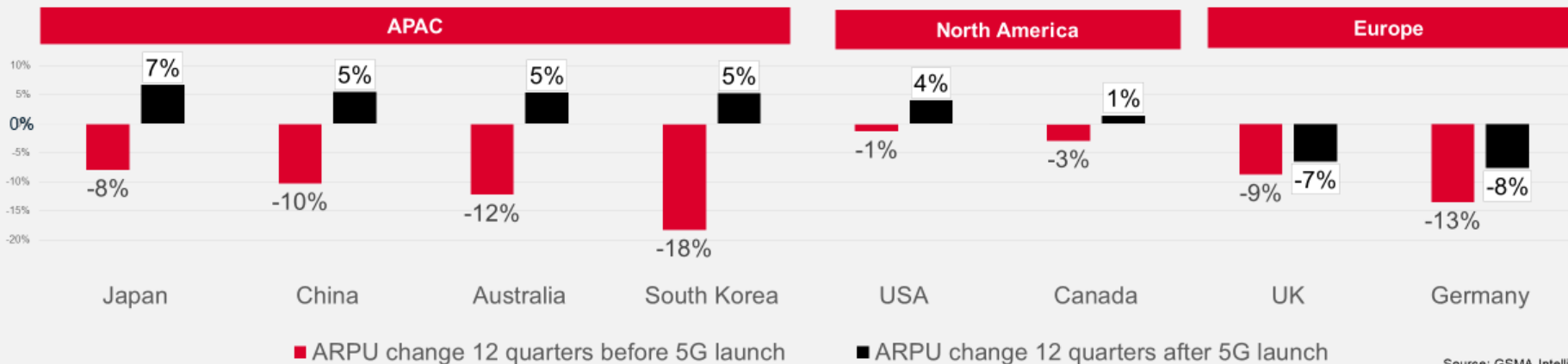
Is 5G having an impact on 5G? Where?

5

Mobile ARPU: before and after 5G launch (aggregate, indexed trend)



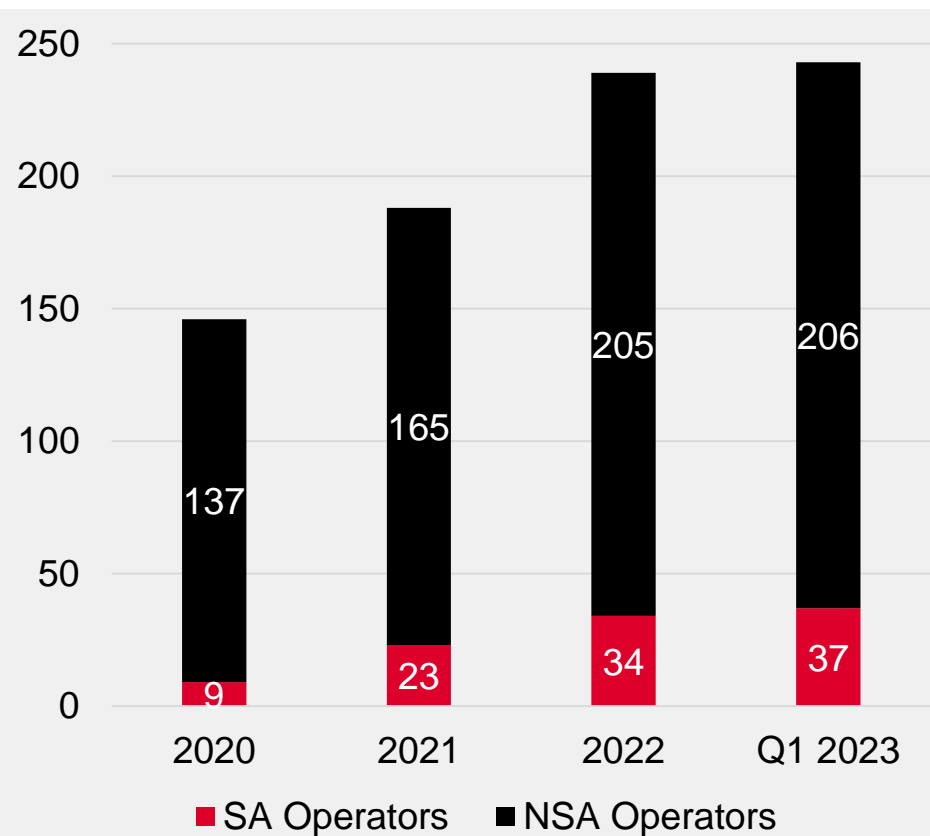
Mobile ARPU: before and after 5G launch (regional trend)



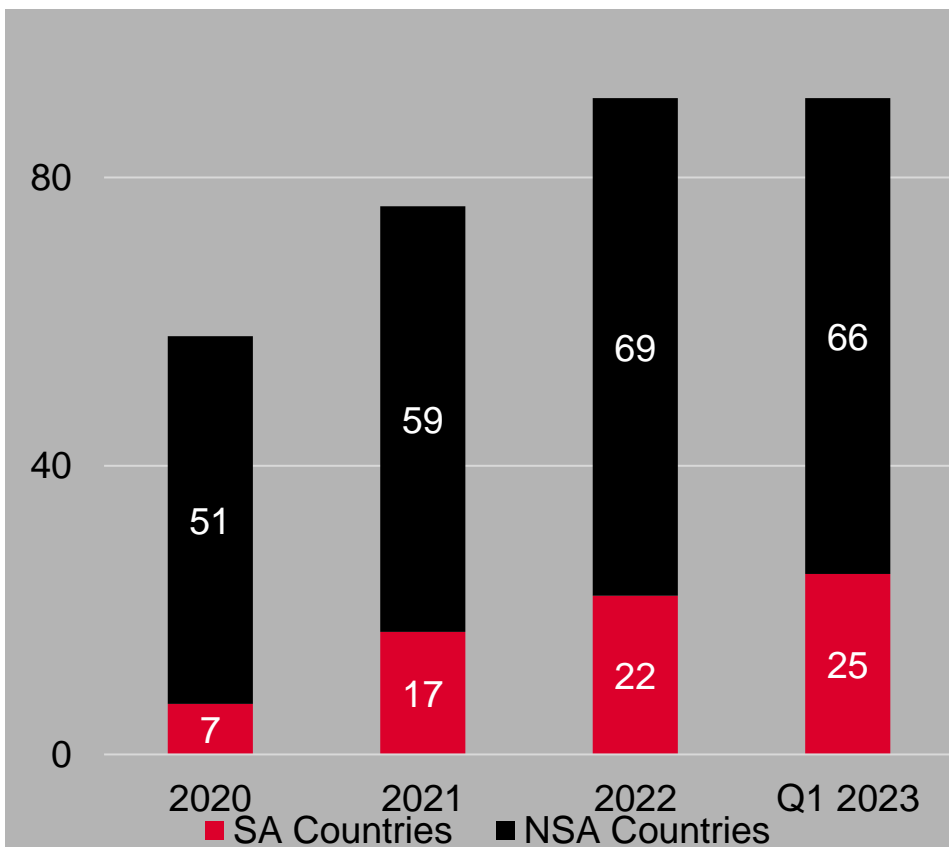
# 5G implications: NSA vs. SA

We know where we started. We know where we want to go.

## SA vs. NSA: Operator Launches



## SA vs. NSA: Markets w/ Support

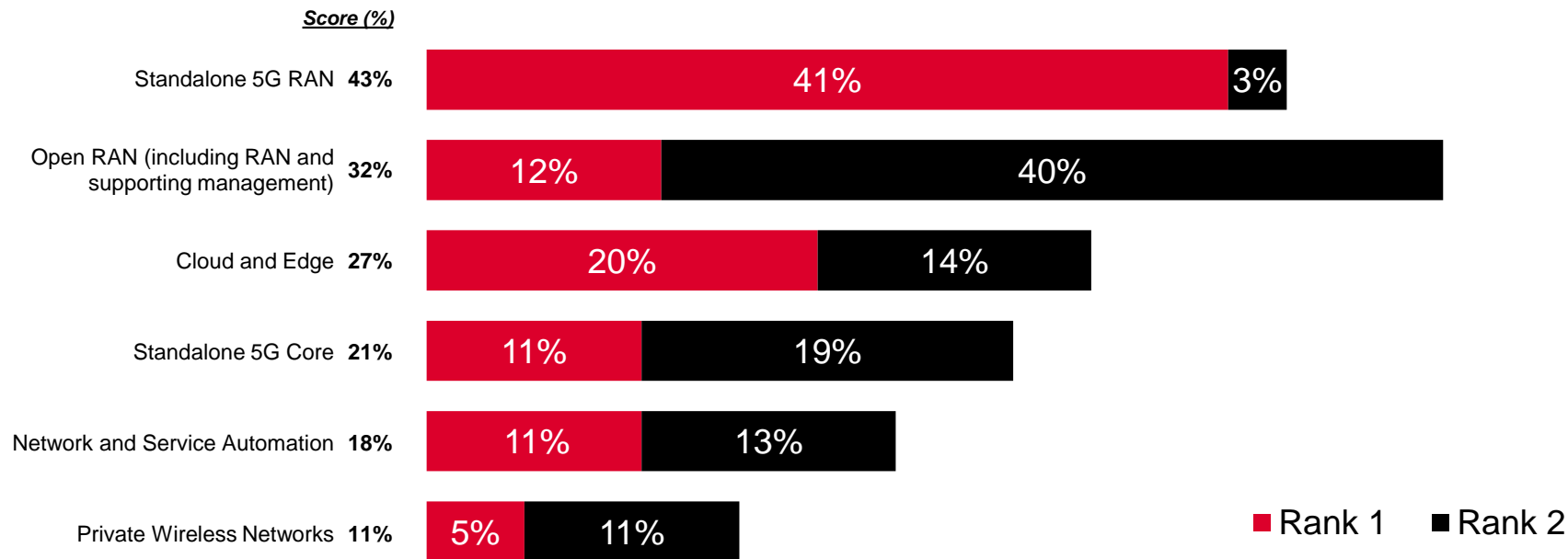


# 5G circa 2023: what we know

standalone 5G is (finally) beginning to get the attention it deserves

## Network Investment Priorities

*Over the next 24 months, in which technologies and capabilities do you expect to make the greatest network investment?*



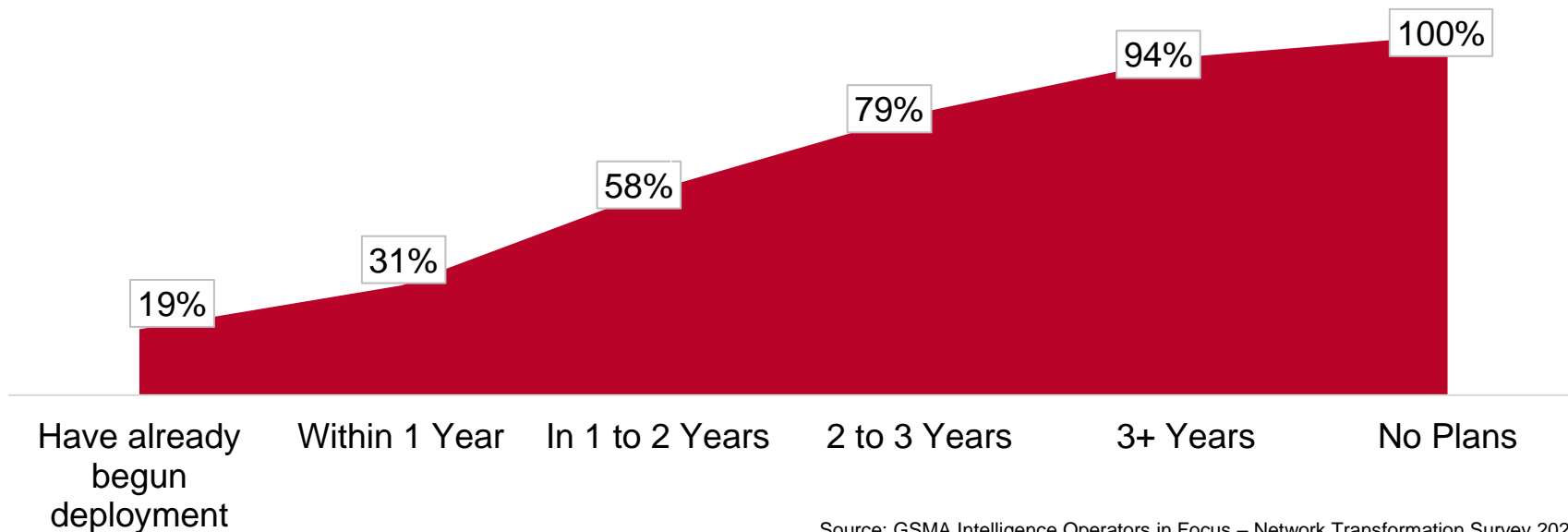
Source: GSMA Intelligence Operators in Focus – Network Transformation Survey 2023

# 5G Circa 2023: What we Know

early plans for Standalone deployment were overly-optimistic

## 5G Deployment Timing

*Considering your current 5G network assets and network strategy, when do you plan to deploy Standalone 5G?*



Source: GSMA Intelligence Operators in Focus – Network Transformation Survey 2023





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industry updates



# 5G Futures Summit

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5G-Advanced on  
the road to 6G



**Shkumbin Hamiti**  
Head of Network Monetization Platform,  
Cloud and Network Services  
Nokia



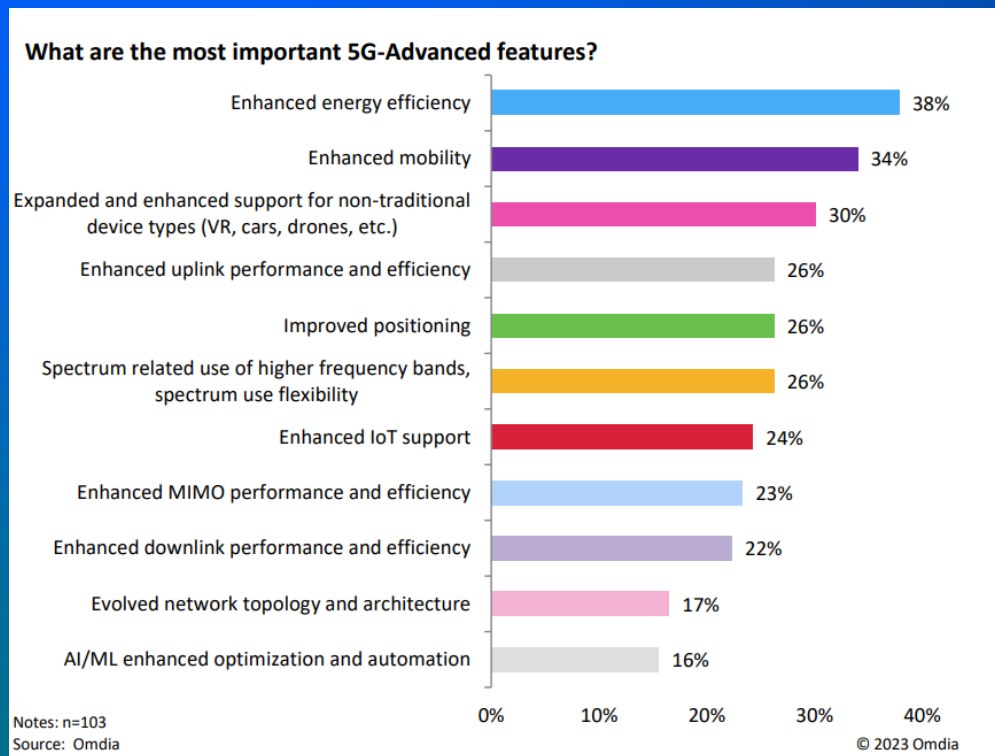
NOKIA

# Powering the next wave of innovation

Shkumbin Hamiti

26 September 2023

# What are the most important 5G-Advanced features?

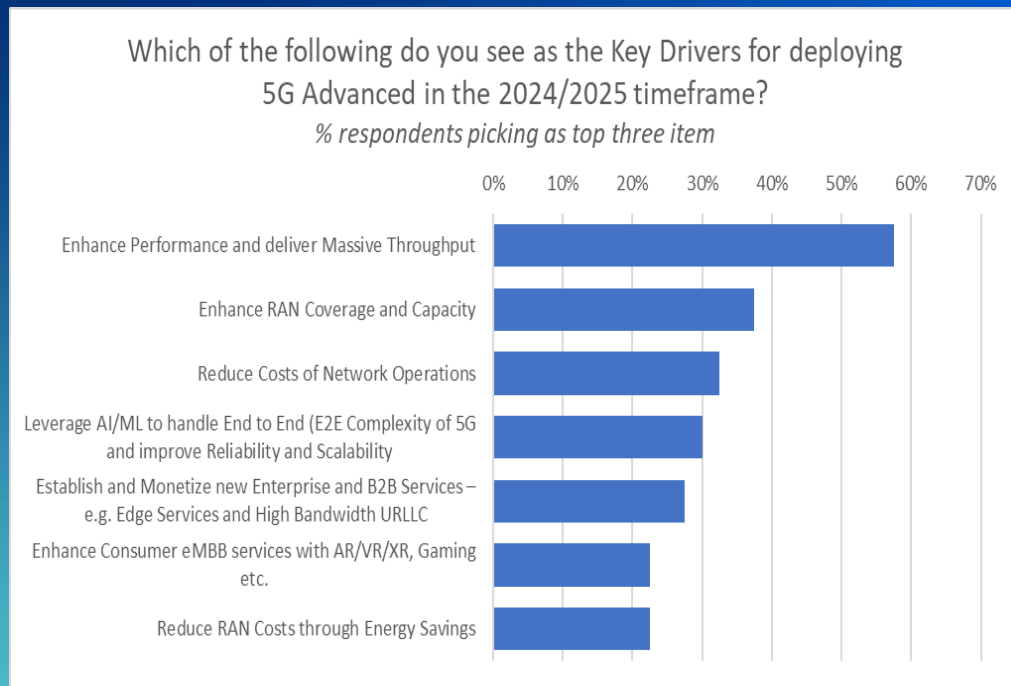


CSPs are looking at **network efficiency, performance** and **supporting new devices and services**

Source: OMDIA study 2023 – combined CSP and Vendor view

# 5G-SA Advanced deployment drivers

## Performance, Efficiency & Enterprise



On the consumer side 5G-Advanced is seen primarily as improving **performance** and **network efficiency**

**Enterprise** is the focus for new revenues in the mid/long term

Source: Strategy Analytics Survey commissioned by Nokia

# 5G-Advanced will increase 5G experience, operability and use cases

## Experience



XR traffic, latency and mobility



Uplink performance boost

## Operability



AI/ML Enhancements



RAN Energy Efficiency

## Use-cases



IoT Optimized RedCap



Uncrewed Aerial Vehicle



Non-Terrestrial Networks



“CSPs need a return on their substantial investment in 5G and the valuable properties they are building into their cloud-native networks. It is expensive to build feature-rich 5G and 5G advanced networks...”



February 2023

Driving value from telecoms networks  
beyond CPaaS: the opportunity to  
revolutionize application delivery

# The course of action:

## Transforming to capitalize on the new capabilities

### Transformational

#### Consumability

Exposure and consumption of technology (generated data, network functions) via well defined APIs.

#### New Devices, Use case enablers

RedCap IoT, Device2Device sidelink relay, UAV / NTN, space-to-ground, location and sync aaS

#### Intent-based Operations

Managing and hiding complexity with zero-touch, autonomous networks and holistic network slicing

#### XR / AR and the EDGE

Metaverse baseline for consumers, enterprises and industry – realized with efficiently located network functions

### Foundational

#### Security

Foundational to critical networks

#### Semiconductor

System-on-Chip combined with own AI/ML and own SW is key for differentiating performance

#### Sustainability

Green networks, maximizing handprint, minimizing footprint

#### Innovations

Next generation mMIMO – Coverage improvements – Mobility - AI/ML “everywhere”

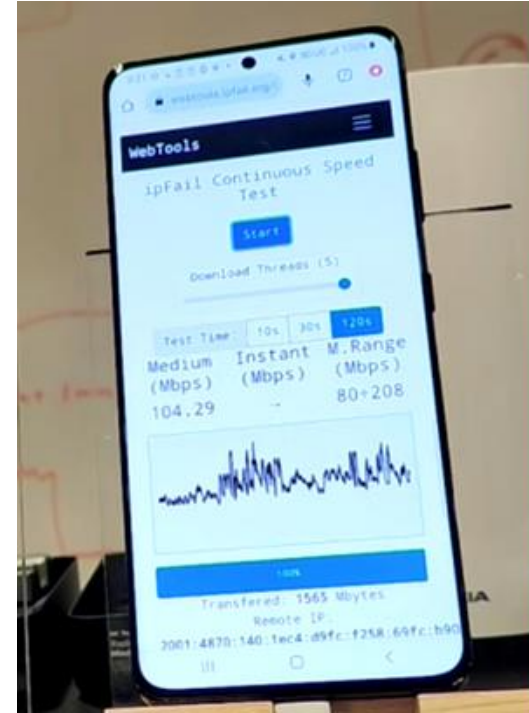
New use cases offer new opportunities

Evolve to 5G-Advanced concepts



# Joint innovation to drive new use cases & monetization

## Application-driven Network Slicing modification



# 5G-Advanced key take-aways



5G-Advanced builds on the evolution of mobile technologies delivering rich capabilities

→ Expand the 5G foundation



Enhanced performance, lowered costs, improved energy efficiency

→ Cost efficiency



New ecosystems to evolve new services beyond connectivity

→ New use cases



# Join us at the GSMA Programs:

# OPEN GATEWAY DEVCON



Wednesday, September 27:  
10:00 AM – 4:00 PM



The HUB Innovation Stage –  
Exhibition Hall **booth 1540**

The image features the Nokia logo in white, centered horizontally. The background is a vibrant blue gradient. A series of glowing, wavy light trails in shades of blue and white sweep across the lower half of the frame, creating a sense of motion and technology. The trails are composed of many thin, parallel lines that curve and flow from the bottom left towards the right.

NOKIA

## Panel moderator



**Barbara Pareglio**  
Senior Technical  
Director  
GSMA

## Panel members



**Patrick Castagnino**  
Airbus



**Dr Neeraj Mittal**  
Government of India



**Mikko Jarva**  
Nokia



**Jurrie van den Breekel**  
Spirent Communications



# 5G FUTURES SUMMIT

## SESSION 3

Unlocking a world of opportunity  
with Open RAN



<sup>NTT</sup>**docomo** **Radisys**

