

# Nokia's views and priorities for Release 19

NOKIA

Taipei, June 15-16, 2023

Agenda Item: 4

Source: Nokia, Nokia Shanghai Bell

# Outline

Release 19  
overview

Release 19  
timeline

Towards 6G



# Release 19 continues to complement 5G-Advanced

At the same time important preparation towards 6G

For many areas vital to have solid foundation for 6G (coverage, AI/ML...)

Complementing work already started in Release 18 (XR, mobility...)

Focus on implementable enhancements → better market success

Some topics better to stop after Release 18



# 5G-Advanced Release 19 RAN candidates

## Extension to new 5G use cases:

- Uplink Coverage Enhancements
- NTN for RedCap
- Sidelink Evolution (PC5/Relay)
- NR <5MHz enhancements
- Femto
- Low power WUS/WUR
- Ambient IoT study

## Expansion beyond connectivity:

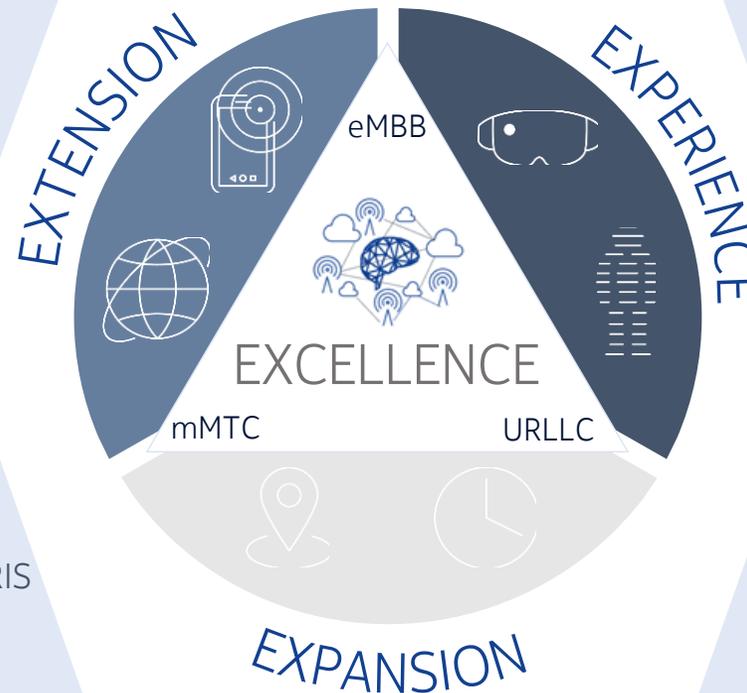
- Sidelink Positioning
- AI/ML based positioning
- Channel modelling for 7-24 GHz, sensing & RIS

## Experience enhancements:

- XR Enhancements
- Multi-TRX requirements
- Mobility Enhancements
- MIMO/BF Enhancements
- Duplex Operation
- Enhanced MBS

## Excellence in operation:

- Network energy efficiency
- AI/ML for air interface
- AI/ML NG-RAN enhancements
- SON/MDT
- QoE



# Release 19 key 5G-Advanced key topics



## Enhanced mobility

More robust and faster handovers with shorter interruption time



## Enhanced coverage

A-MPR reduction for CA, considerable reduction of MPR of up to 2 dB for high data rate services.



## MIMO performance

Better beam management & CSI acquisition  
Multi-TRX UE



## XR (AR, VR, gaming)

More capacity and improved service awareness



## AI/ML for air interface

AI/ML for air interface with testability and reliability



## 5G for dedicated spectrum follow-up

Enhancements for 5G with <5 MHz support for dedicated spectrum



## Channel model for 7-15 GHz and sensing

Channel model for 7 – 15 GHz & sensing to enable future studies



## Energy Efficiency

gNB-DU autonomy for cell, beam, channel shutdown, SSB/SIB1 TX optimization etc. Incl. related AI/ML enablers



## Duplexing

Enable CLI management and measurement  
UE enhancements for SBF



## AI/ML NG-RAN

AI/ML automation and data management

# Further open items for Release 19

Low power WUS/WUR

To make work item market relevant, it should be ensured that the specified solution should easily be supported by existing network deployments

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Ambient IoT

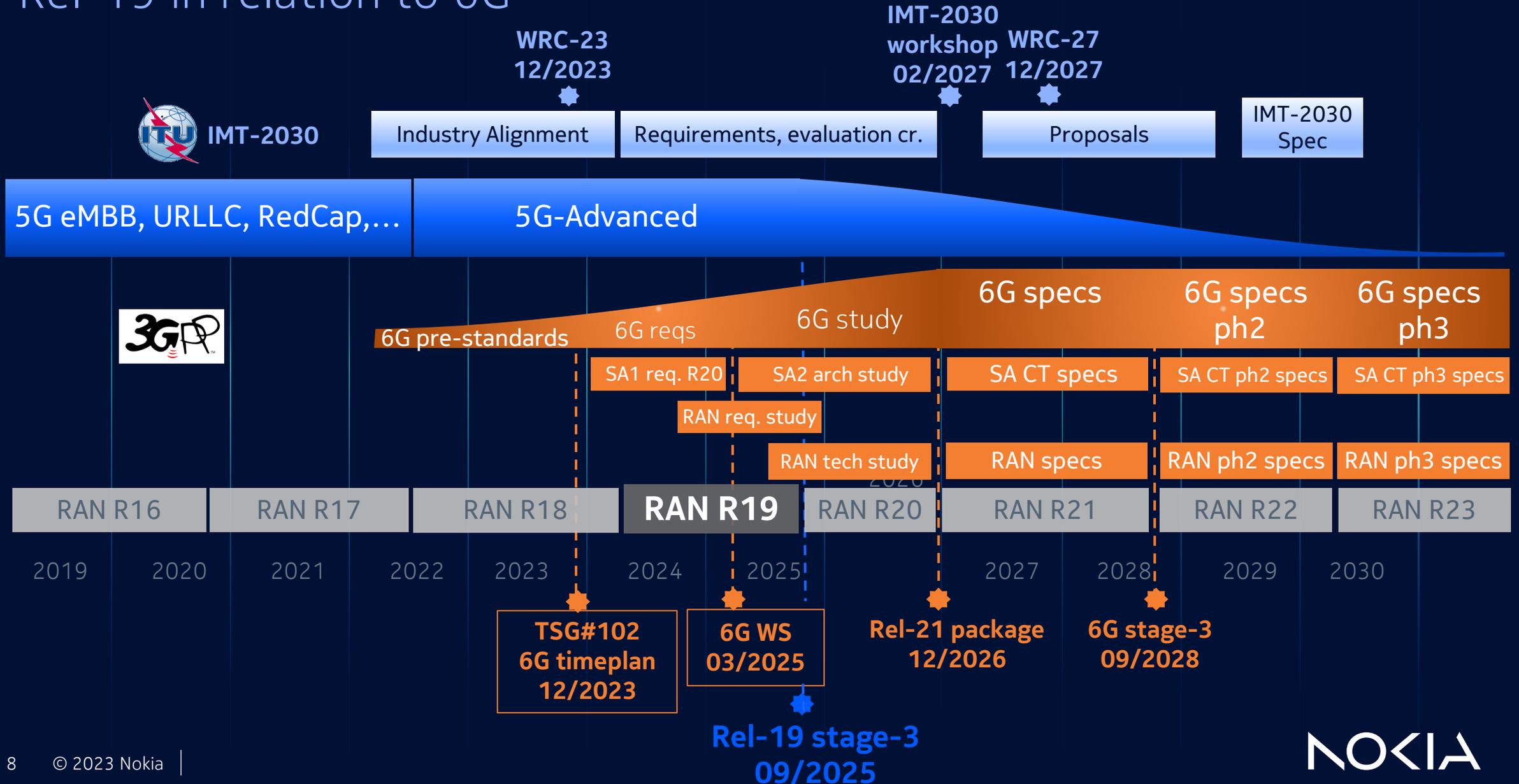
UE reader should be the focus of potential WG level study for Release 19

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# Rel-19 in relation to 6G



# Key Takeaways for 5G-Advanced Release 19

- Setting the scene for also towards 6G

## Invest in performance

Improve the performance of key features like XR to build solid benchmark for 6G operation

## Keep changes reasonable

Be mindful of level of change to justify implementation, both in the UE and Network side

## Path towards 6G

Some items are for paving the way for 6G rather than for 5G market

Keep the workload under control!

Thank You!

