



Silicon vendor perspective on 5G infrastructure advancements

George Tsirtsis

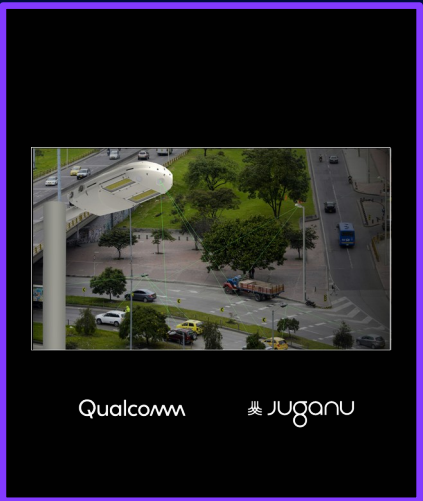
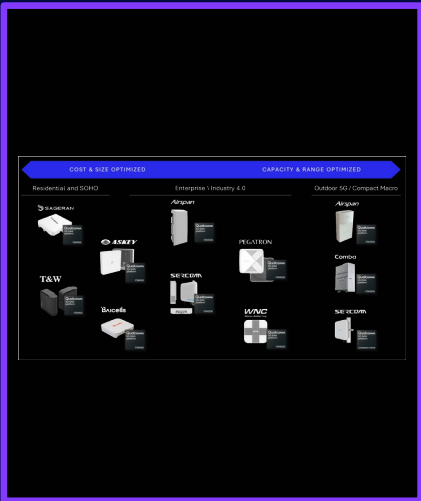
Senior Director, Technology

Qualcomm Technologies International, Ltd.

@tsirtsisg



Small Cell and Compact Macro Momentum



Qualcomm® FSM™ 5G RAN Platform Momentum

COST & SIZE OPTIMIZED

CAPACITY & RANGE OPTIMIZED

Residential and SOHO

SAGERAN



ASKEY



T&W

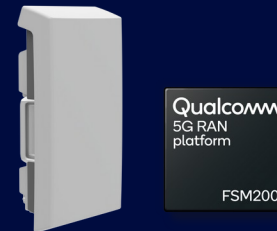


Baicells



Enterprise \ Industry 4.0

Airspan



PEGATRON



SERCOM



WNC
Wistron NeWeb Corp.



Outdoor 5G / Compact Macro

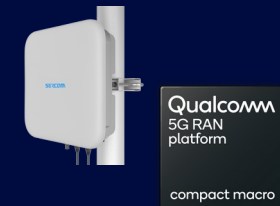
Airspan



Comba



SERCOM



5G RAN Momentum

Qualcomm
5G RAN
platform

FSM200

Qualcomm
5G RAN
platform

FSM100

Qualcomm
5G RAN
platform

compact macro

Sercomm mini-Macro base station tackles priority cost and range metrics for mass-scale outdoor mmWave infra deployments



1st design featuring
Qualcomm Compact
Macro
5G RAN Platform

Combines small cell
expertise with macro-
grade antenna module

Long range, cost-effective
mmWave performance
for Fixed Wireless at scale

Qualcomm

SERCOMM

Liverpool City Region HDD Project

Supporting high density consumer usecases, video security, video broadcasting and more.

One of 19 projects funded by DSIT with focus on open, high-density networks

5G Private Networks in multiple Liverpool city venues

Split 7 and AIO Sub6 Deployments



1st mmW-only SA Deployment in UK

B2B and B2C Use cases

Network Automation

Enhanced speed/capacity throughout venue

AIMES	Asset Market	Attocore	CGA Simulation	Hartree Centre	ITS
Liverpool 5G	Liverpool City Region	Liverpool John Moores University			
Qualcomm	Radisys	Telet	University of Liverpool	Weaver-Labs	

5G RAN Momentum

Right-sized 5G small cell solution for cost-effective residential deployments at scale



Qualcomm

T&W

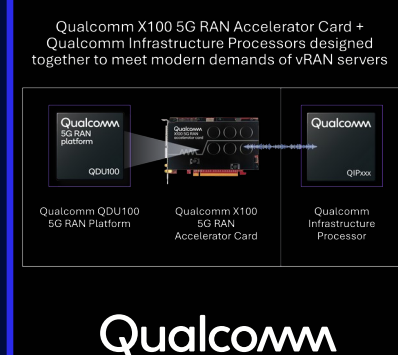
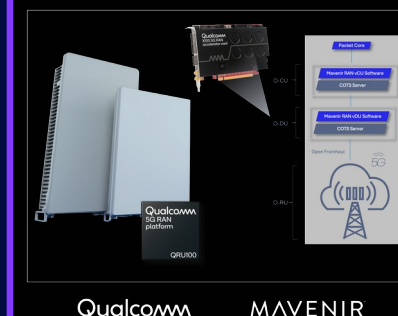
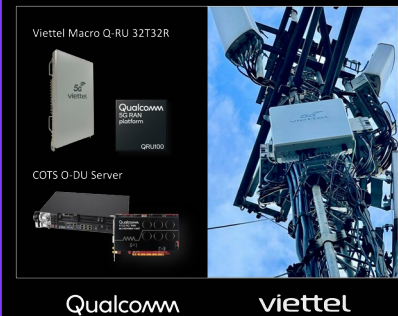
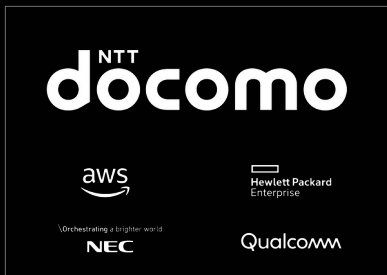
1st to integrate
Qualcomm®
Infrastructure Processor
(QIP100)

Addresses market gap for
cost-effective 5G at home

Dual-mode 5G + 4G for
support of legacy
devices

Designed for large-scale
deployments and 5G
upgrade for LTE
femtocells

Open vRAN Momentum



Open vRAN Network Momentum

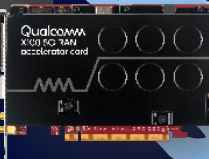
Viettel 5G NR O-RAN Massive MIMO 32T32R E2E Live network deployment with Qualcomm® 5G RAN Platforms



Viettel Macro Q-RU 32T32R



COTS O-DU Server



Viettel Outdoor Macro
O-RU 32T32R, featuring
Qualcomm® QRU100
5G RAN Platform

COTS Server, featuring
Qualcomm X100 5G RAN
Accelerator Card

Live Network Results

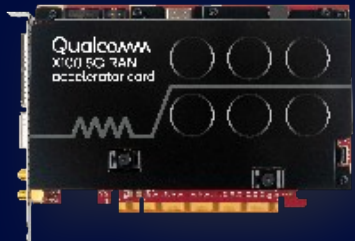
DL: 1200 Mbps
(100 MHz, 4 Layers)

UL: 60 Mbps
(100 MHz, 1 Layer)

Qualcomm

viettel

Open vRAN Network Momentum



NTT DOCOMO has selected ecosystem partners for large scale Open vRAN commercial deployments

NTT
docomo



Orchestrating a brighter world

NEC



Hewlett Packard
Enterprise

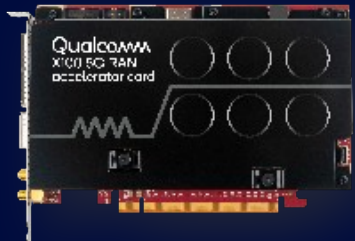
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End-to-end ecosystem collaboration for large scale Open vRAN deployment

Selection includes NEC vDU solution, with Qualcomm® X100 5G RAN Accelerator Card

Set to deliver a high-performance, low-latency, and energy-efficient network

Open vRAN Network Momentum



NEC, Arm, Qualcomm, Red Hat and Hewlett Packard Enterprise demonstrate Open vRAN and 5G Core, optimized for reduced TCO and power efficiency



End-to-end operation of NEC's open and virtual radio access network (vRAN) and 5G Core virtual User Plane Function (vUPF) products

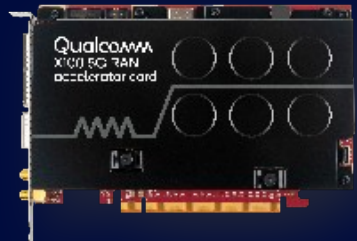
Utilized:

- Qualcomm X100 5G RAN Accelerator Card
- Arm® Neoverse™-based CPUs on Red Hat OpenShift
- HPE ProLiant DL110 Gen11 server platform

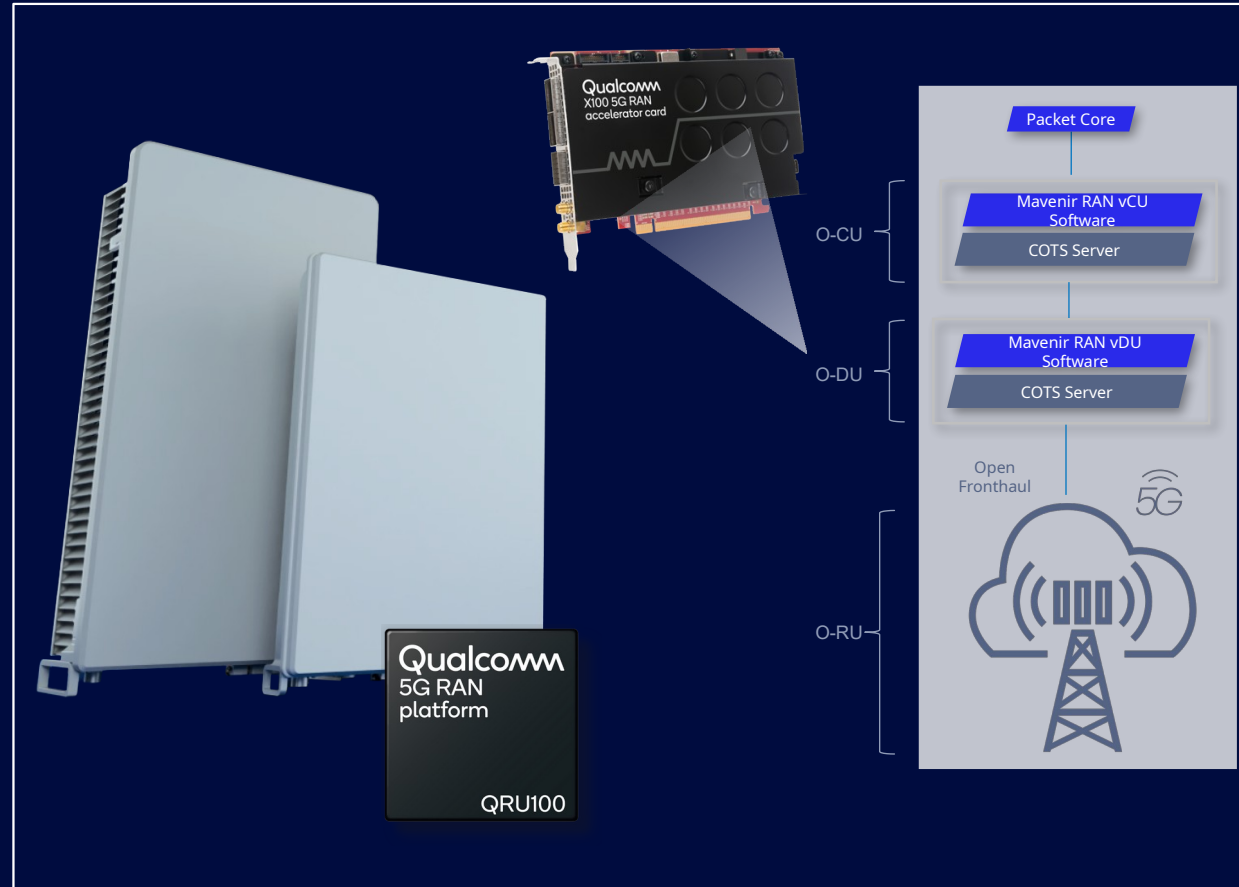
Image Source: NEC

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Open vRAN Network Momentum



Mavenir unveils next-gen “Green by Design” OpenBeam™ Massive MIMO AAUs and vDU RAN evolution, supported by Qualcomm 5G RAN Platforms



New high-performance and power-efficient Massive MIMO AAU, powered by Qualcomm QRU100 5G RAN Platform

Strategic vDU collaboration to deliver energy-efficient solutions for high capacity and coverage in urban areas, leveraging Qualcomm X100 5G RAN Accelerator Card

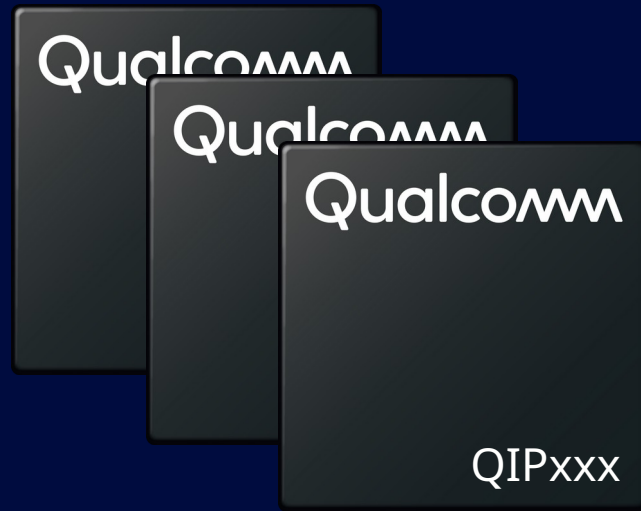
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MAVENIR™

Qualcomm

What's next: Network AI





Diverse use case
enablement (vRAN
Servers and Small
Cells)

Maximizing performance-
per-watt with power-
efficiency leadership

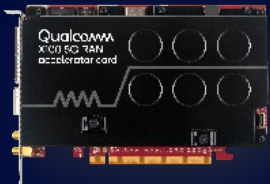
Arm® compatible
processors for 5G
infrastructure

Built for AI-driven
RAN evolution

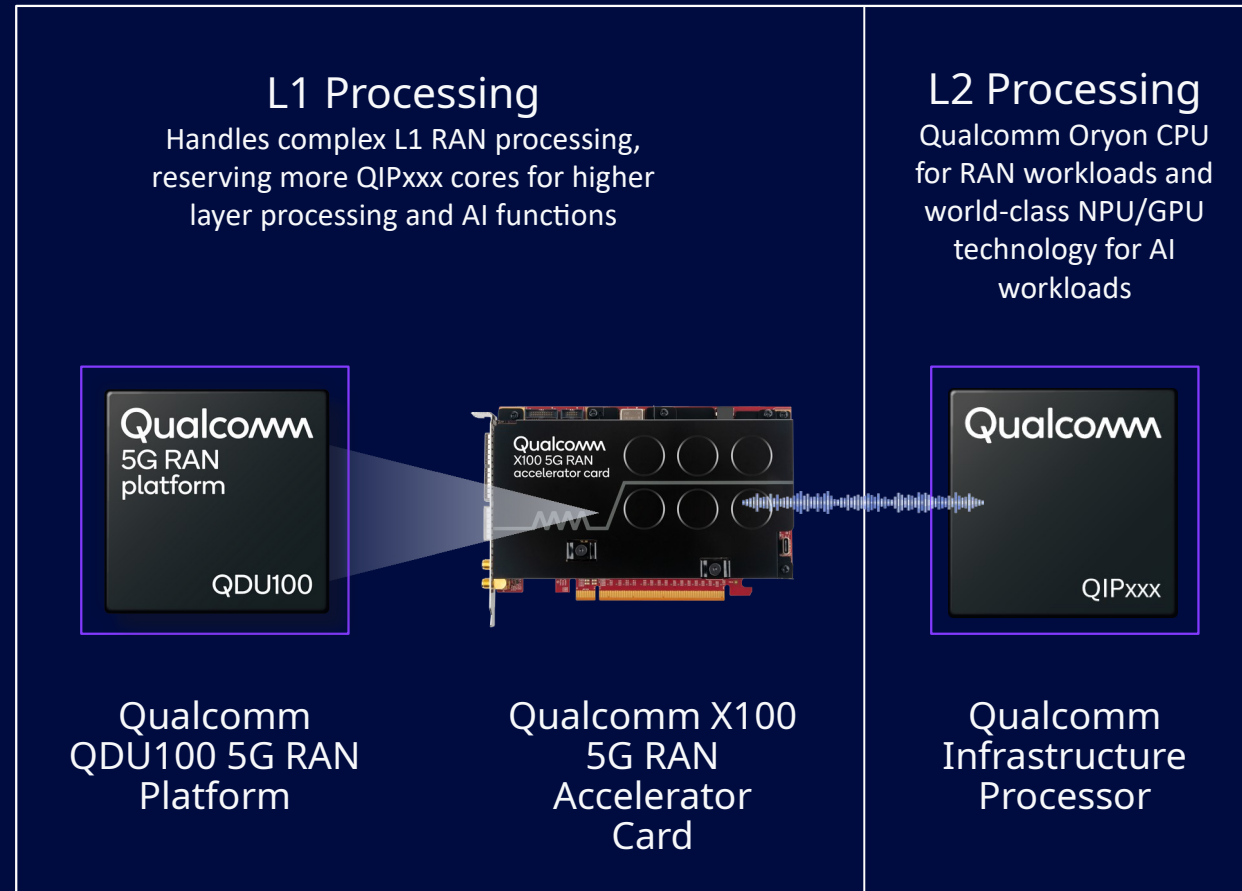
Introducing a family of Qualcomm Infrastructure Processors

Revolutionizing processing,
power efficiency and cost-
effectiveness with intelligent
computing for modern 5G
networks

Open vRAN Network Momentum



Qualcomm X100 5G RAN Accelerator Card + Qualcomm Infrastructure Processors designed together to meet modern demands of vRAN servers

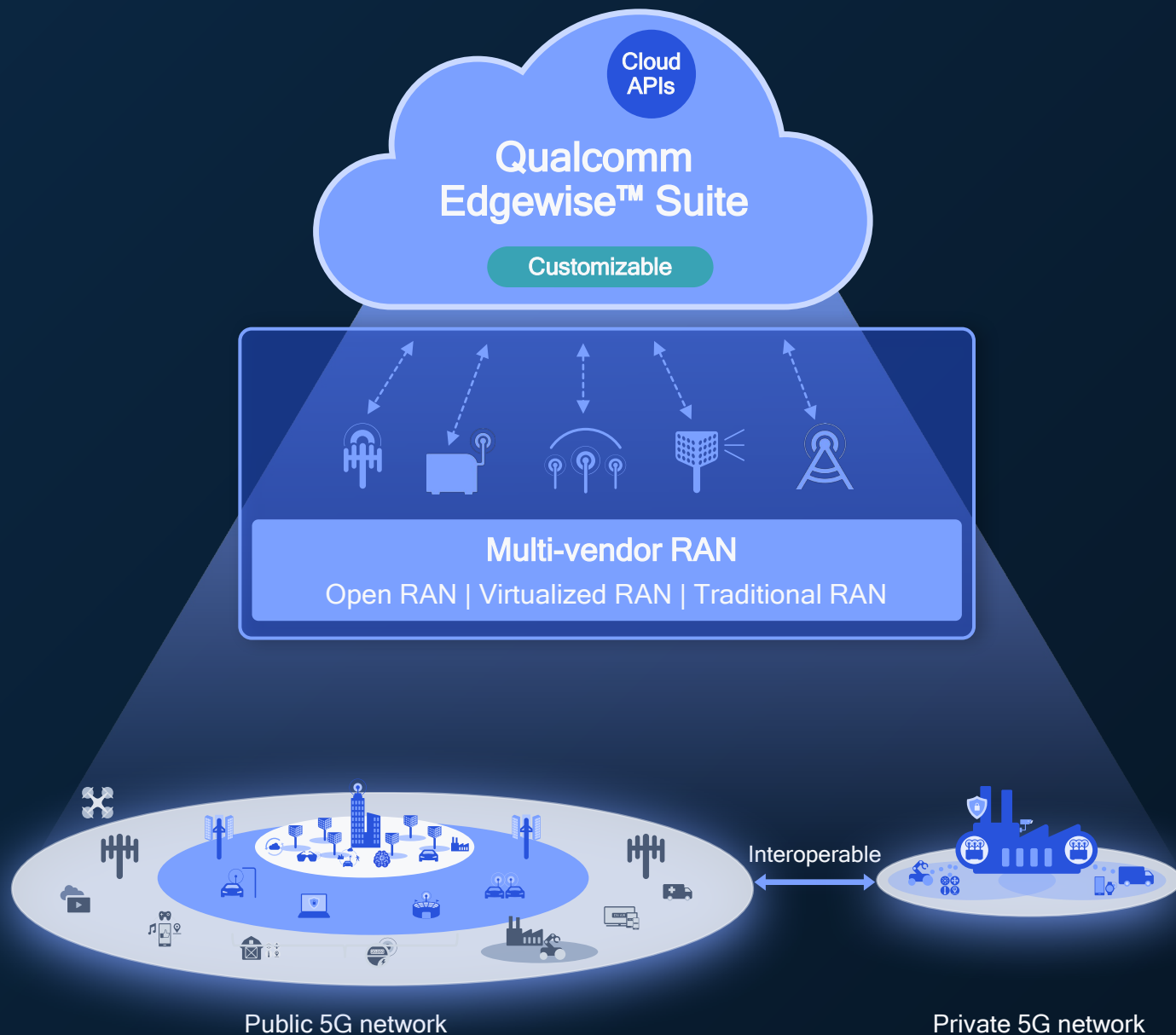


Performance for typical D-RAN workload scenarios

Orchestrated L1 & L2 workload management, reducing power and TCO

Qualcomm AI Engine applied for transformative RAN techniques and use cases

Arm® compatible processors for vRAN servers



Horizontal RAN automation
for a multi-vendor ecosystem

Programmable to enable an
application ecosystem for
differentiation and customization

Ultimate RAN Architecture flexibility
and multigenerational support

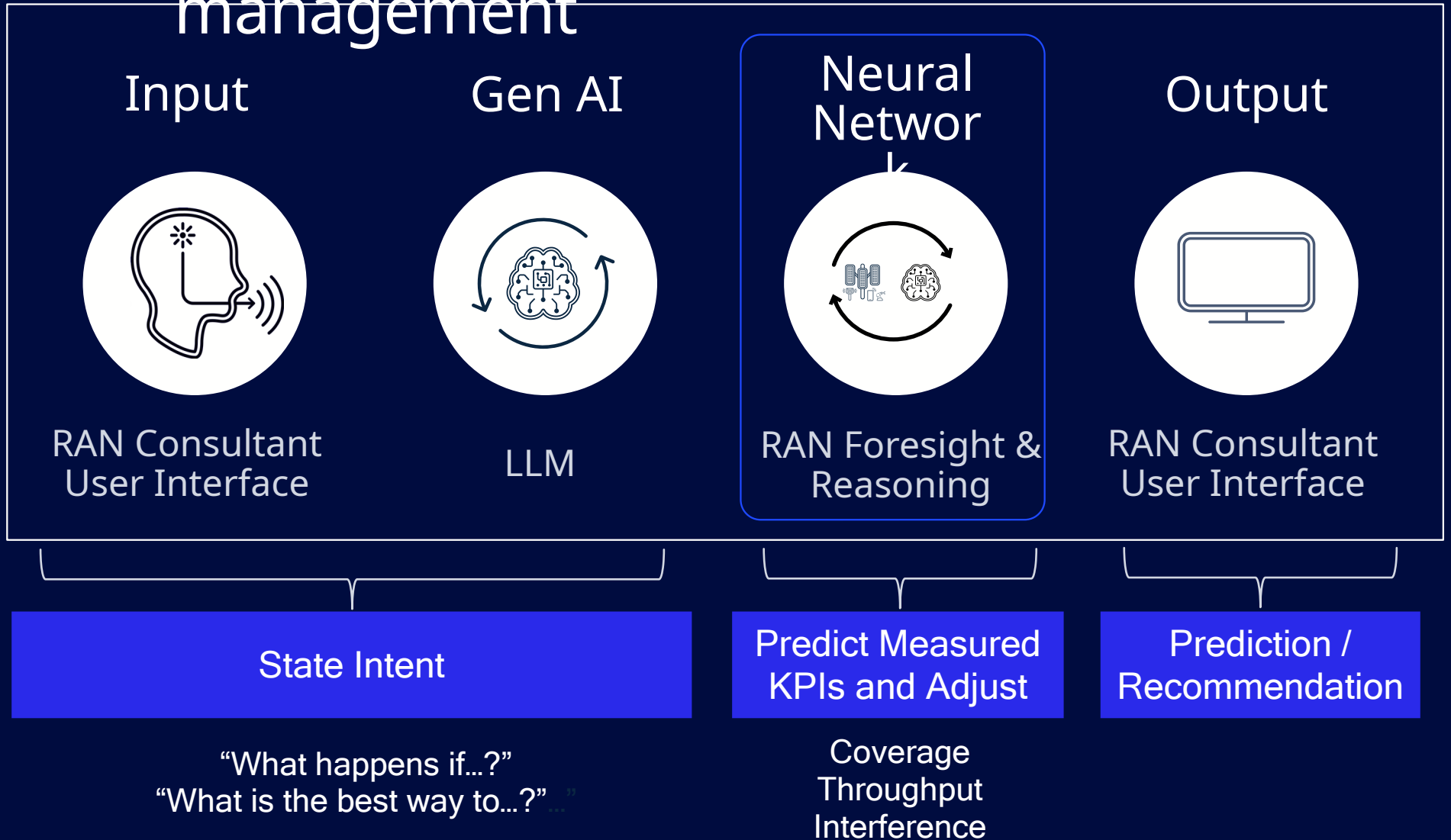
Accelerates Public and Private
Network deployments

Reduce OPEX
by improving
Network
Operations

AI-Driven Autonomous RAN management



Qualcomm Edgewise
Suite

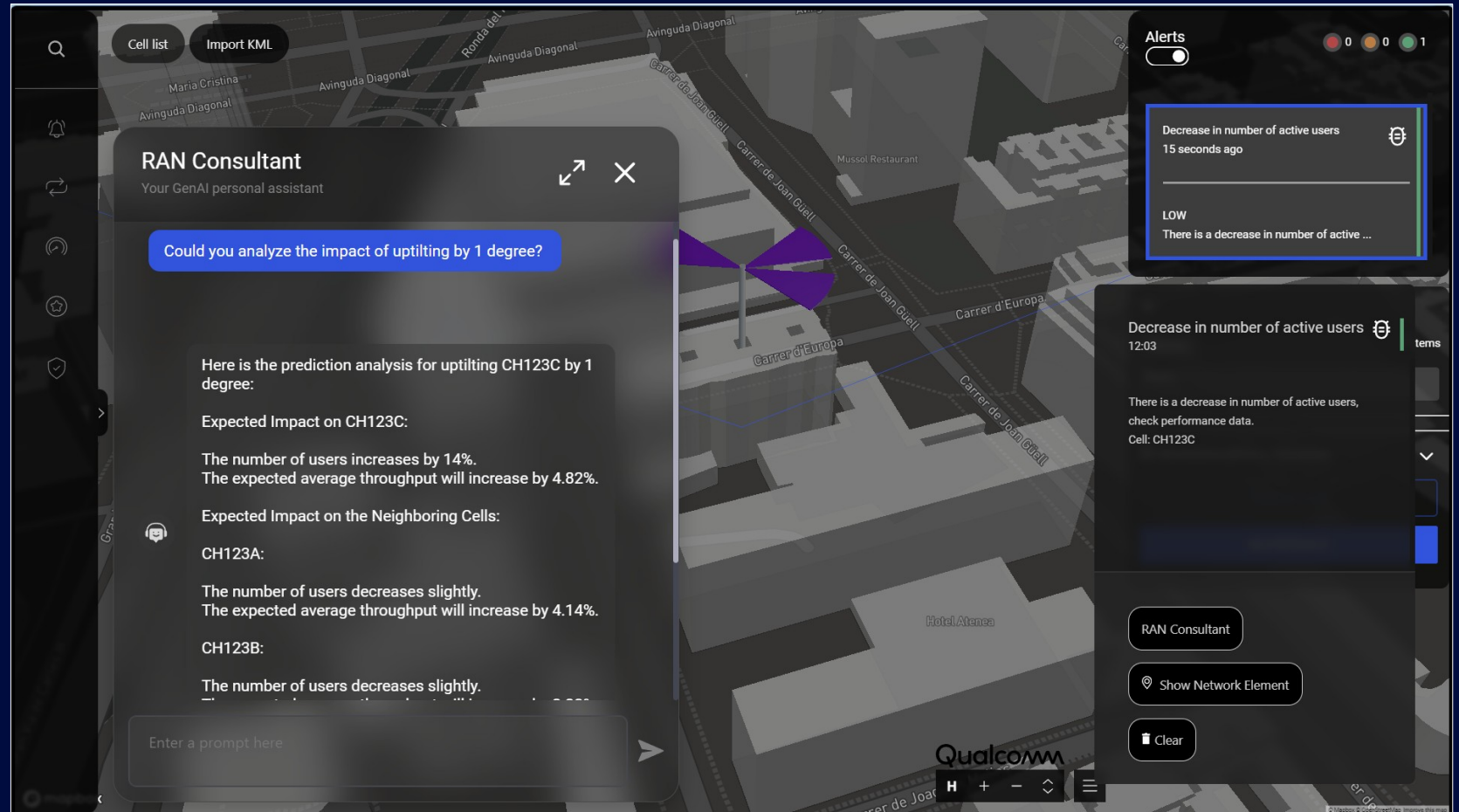


Qualcomm Edgewise Suite RAN Consultant demonstration

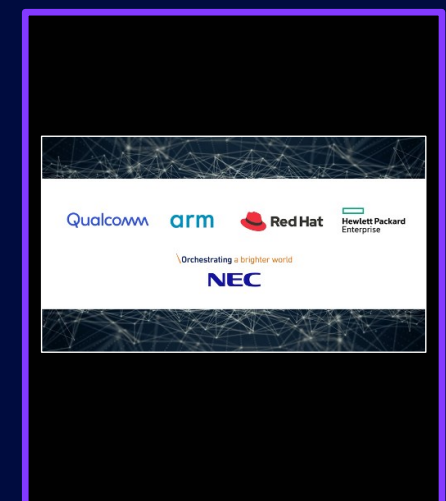
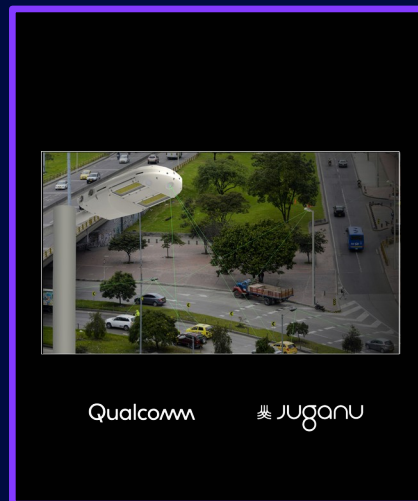
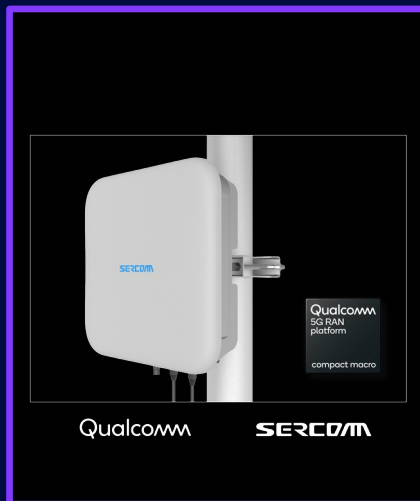
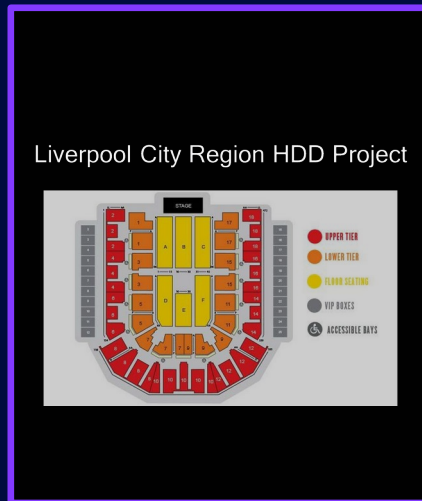
MWC AI Demo

→ Empowers engineers and users through natural language chat interfaces, predictive insights, and actionable recommendations.

→ Leverages ML RAN Foresight and RAN Reasoning AI Apps



5G Infra momentum accelerating indoors and outdoors, spanning Small Cell and Open vRAN





Thank you

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