

NEC 5G Portfolio Overview

July 21

NEC Overview

Our Businesses & Technologies

Aviation

Satellite

Submarine cable system

Healthcare

Logistics

Hospitality

Financial

Broadcasting

Manufacturing

Energy

Retail

Firefighting

Transportation

Government

Education

Telecom

From the ocean floor to outer space

Providing extensive value to customers in a wide range of fields, all across the world

- Founded in 1899
- 27B\$ revenue
- 2.6B\$ annual R&D spend
- > 110k employees
- > 50,000 patents

NEC'S unique values to CSPs

Live network
experience

Quality &
performance

Innovative &
reliable vendor

System
integration

TCO
contribution

Monetization

NEC's world's first Open 5G mass deployment

Open RAN

World's first O-RAN mMIMO commercial urban deployments

xHaul transport network

Rich supply record to hundreds of CSPs

Core Network

World's first Cloud Native 5G SA core in production

Orchestration and Automation

End to End Slicing

System Integration

NEC's RU - "World's first" commercial deployment of O-RAN mMIMO



NEC provides 5G macrocell RU with O-RAN fronthaul conformance



NEC provides 5G massive MIMO RU/AAS for 3.7 GHz frequency band 34



- | Location flexibility
- | Reduced installation effort
- | Efficient urban coverage



NEC converged 4G / 5G Core Field proven with tier-1 carriers



Case study
4G/5G packet core migration

Key highlights

- **80M Subscribers**
- UPF deployed in MEC at central office

Case study
5G Core to cover all 4G/5G traffic

Key highlights

- **Fully cloud-native architecture**, including UPF, with full automation process

Case study
end-to-end system and full integration with managed service, as well as B2B service

Key highlights

- Live since April 2021
- Providers use NEC's **5GC on Public Cloud**
- Some local 5G providers will migrate from public cloud to their own cloud



Local / Private 5G
(Multiple customer engagements)

UPF performance Industry leading performance

| | |
|------------|--|
| Throughput | 640Gbps/server |
| Server | Dual socket server with 3rd Gen Intel® Xeon® Scalable processors |

Vodafone UK Selected NEC for massive MIMO RU

Vodafone selects key partners to build Europe's first commercial Open RAN network

Vodafone partners with Dell, NEC, Samsung, Wind River to build Europe's first commercial Open RAN network

15 June, 2021 at 1:33 PM Posted by: Anasia D'mello



Vodafone has unveiled its strategic vendors; **Dell, NEC, Samsung Electronics, Wind River, Captero Engineering** and **Keysight Technologies** to jointly deliver the first commercial deployment of Open Radio Access Network (RAN) in Europe.

The company believes the move will spark other large-scale Open RAN launches and spearhead the next wave of digital transformation across Europe.

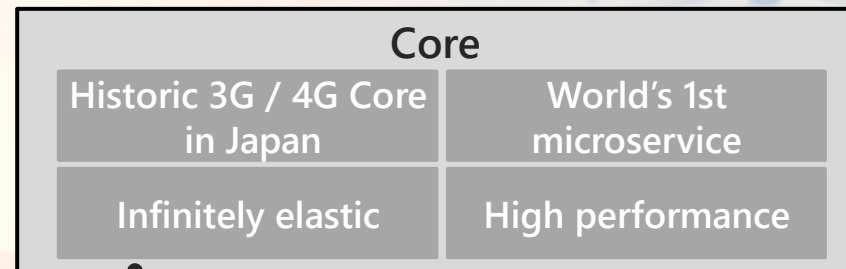
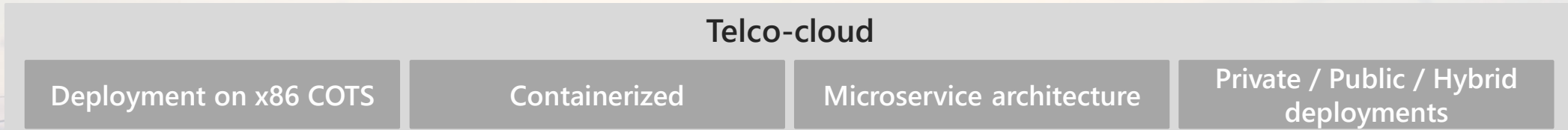
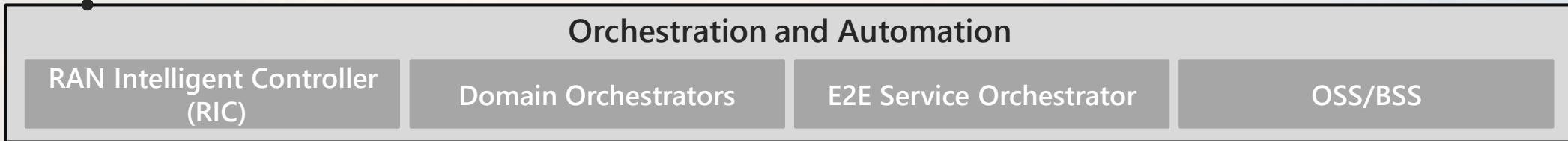
Pioneered by Vodafone and its partners, Open RAN will drive greater innovation through a diverse and open vendor ecosystem. It will lead to a more cost-effective, secure, energy efficient and customer-focused network of the future.



Johan Wibergh of Vodafone

Our end to end 5G open RAN capabilities

- Cloud native
- 5G slicing management (multi vendor and multi-domain)



System Integration

- Best in class performance and quality
- Massive MIMO 32T, 64T
- Beamforming
- Open RAN compliant
- Best weight / volume ratio
- Fan less air cooled
- Low power consumption

- Converged dual core SA / NSA
- Macro, private networks
- Private cloud (Red Hat OpenShift, Robin.io, VMware...)
- Public cloud (AWS)

Global support to drive customer journey

CoE

- Accumulated know-how
- Engineering expertise

US

Open RAN
Business development

UK

Open RAN CoE

EMEA

Transport NW CoE

India

Open RAN lab

Japan

HQ

LATAM

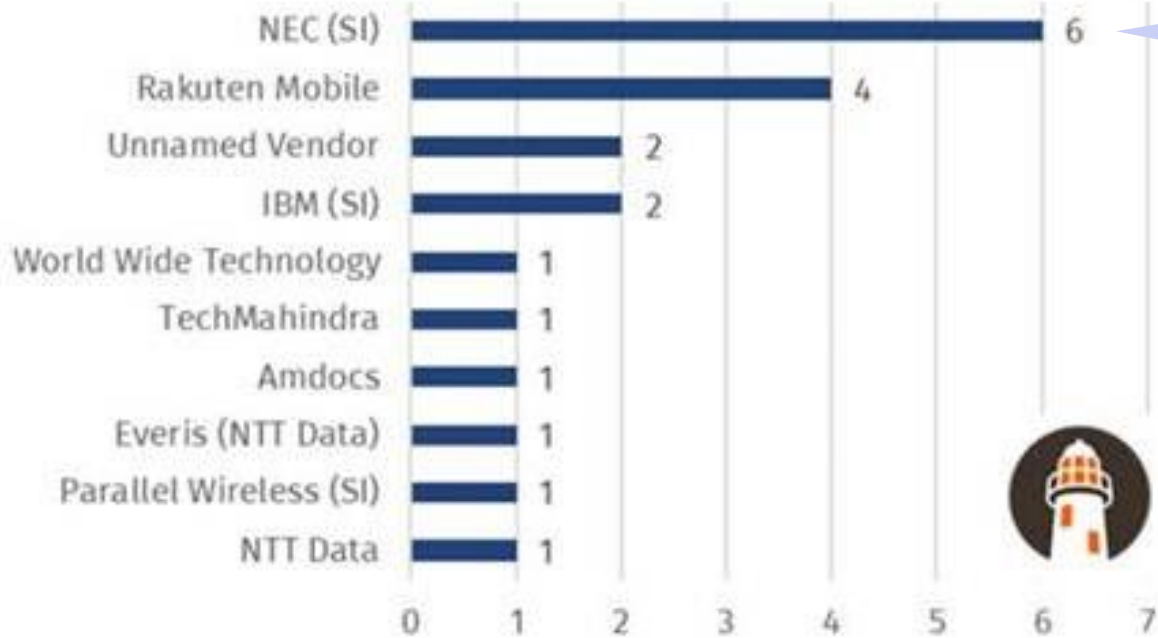
Transport NW CoE



Assisting O-RAN deployments throughout the world

NEC listed as leading SI vendor

Systems Integrators in Open RAN Projects



NEC has emerged as the leading systems integrator for Open RAN projects so far.

www.appledoreresearch.com



Figure 9: Most Engaged Vendors, Systems Integration

NEC's promise in 5G



High
performance



Reliable



Open



Innovative

HIGH ROI

\ Orchestrating a brighter world

NEC