

Way forward with O-RAN

Success in O-RAN require Industry Convergence and Partnerships.

Open RAN India 2021

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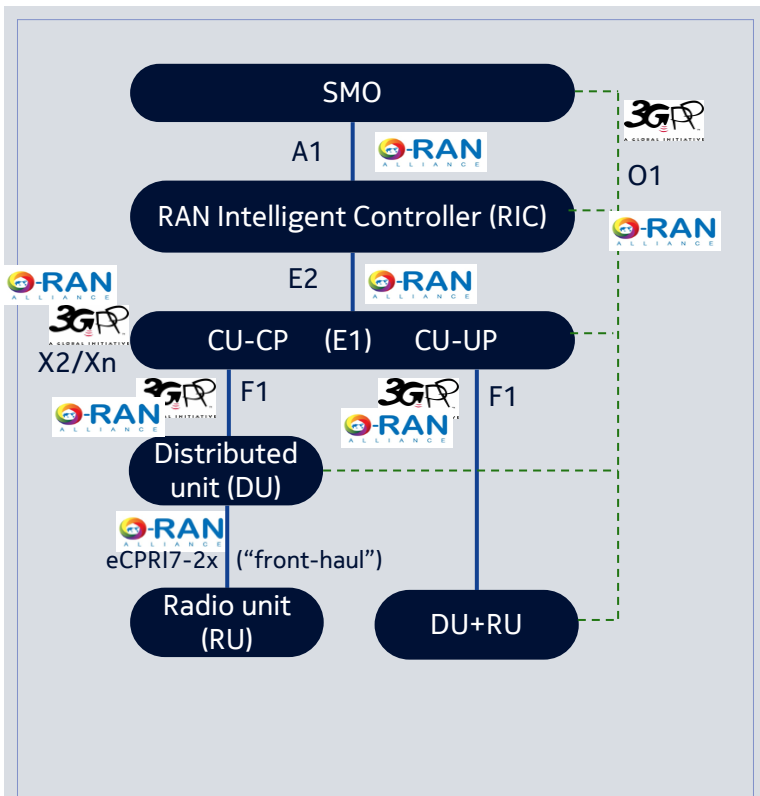
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Agenda

- O-RAN Architecture - Motivation
- O-RAN Adoption & Challenges
- How to overcome challenges : CSP and CEV perspective
- Nokia's O-RAN
- O-RAN deployment strategy
- Conclusion

O-RAN Architecture – Primary Motivation



O-RAN Alliance: O-RAN Reference Architecture

Openness Dimensions

Open Interfaces

Virtualization

Programmability

White Box

Open Source SW

Objectives

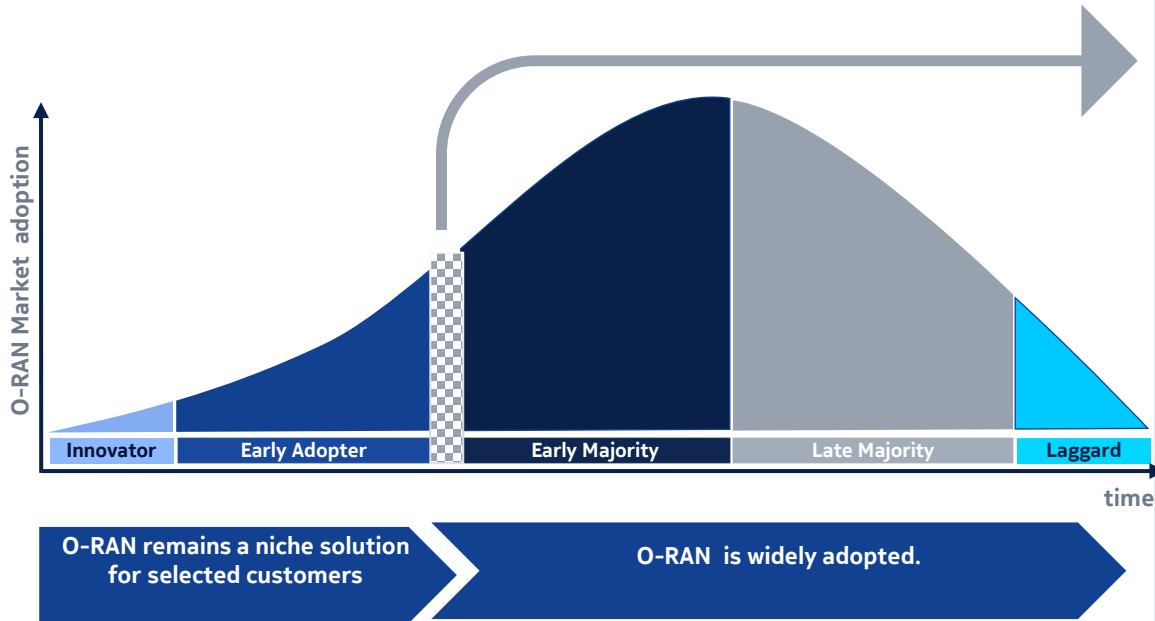
Agility

Flexibility

TCO
Reduction

O-RAN Market Adoption

Key Challenges in crossing the Chasm



Key Challenges in crossing the Chasm

O-RAN adoption not uniform across CSPs/CEVs*

Multi-vendor Integration impact on TCO

Multi-Vendor Network : Feature Parity

Multi-vendor Network: Performance Parity

Convergence on IOT Profiles

O-RAN Specification Maturity

How to overcome the challenges in O-RAN adoption?

Require Convergence, Co-operation and Partnerships

Communication Service Provider(CSP)

Communication Equipment Vendor(CEV)

Governance

- CSP should provide strong governance in terms of the following.
 - Multi-vendor alignment
 - Prioritization of requirements

Maturity of O-RAN standards

- Drive O-RAN standards. Identify & resolve Interoperability issues.

Factor-in Multi-vendor Integration

- Plan for resources and factor-in cycle time for Multi-Vendor Solution Integration.

O-RAN Offering

- Build O-RAN Compliance within RAN Products.

IOT Profile Convergence/ Reference Architecture

- Propose and converge to a few set of IOT Profiles to avoid market fragmentation.

IOT Profile convergence /Reference Architecture

- Propose and converge to a few set of IOT Profiles/Reference implementations to avoid fragmentation of the market.

Drive Uniform adoption of O-RAN

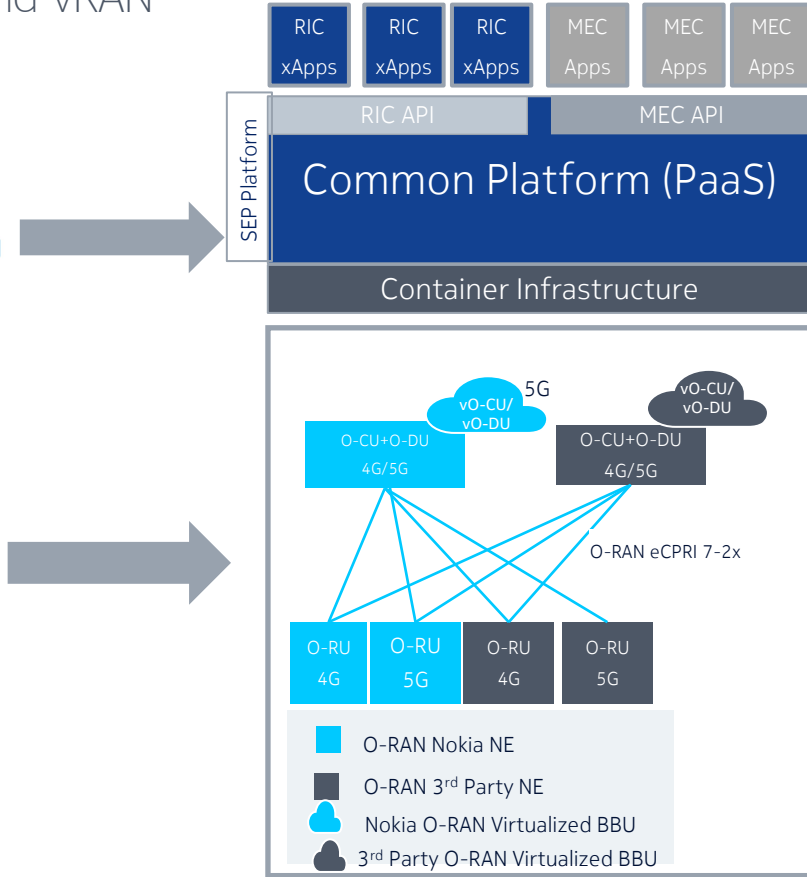
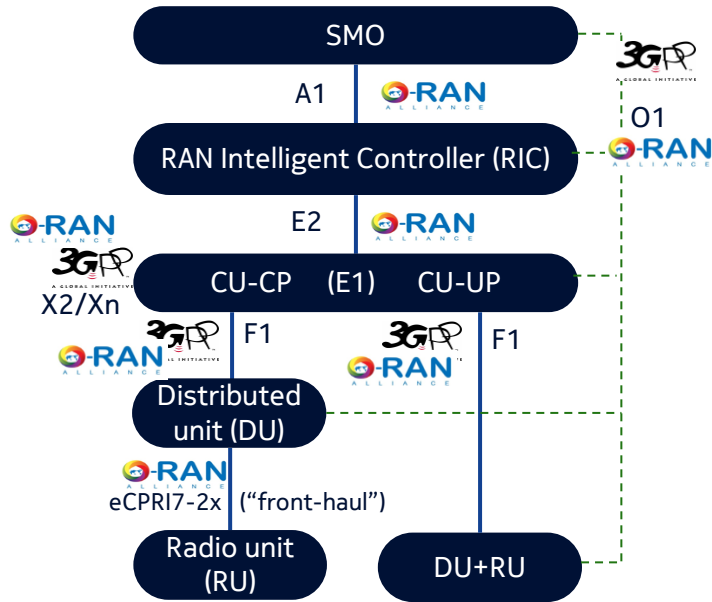
- O-RAN adoption is not uniform across CEVs and CSPs. CSPs can drive the adoption through Multi-Operator MoUs to drive Industry towards openness.

Partnerships

- Vendors require to forge partnerships to resolve Interoperability issues early in the Cycle.

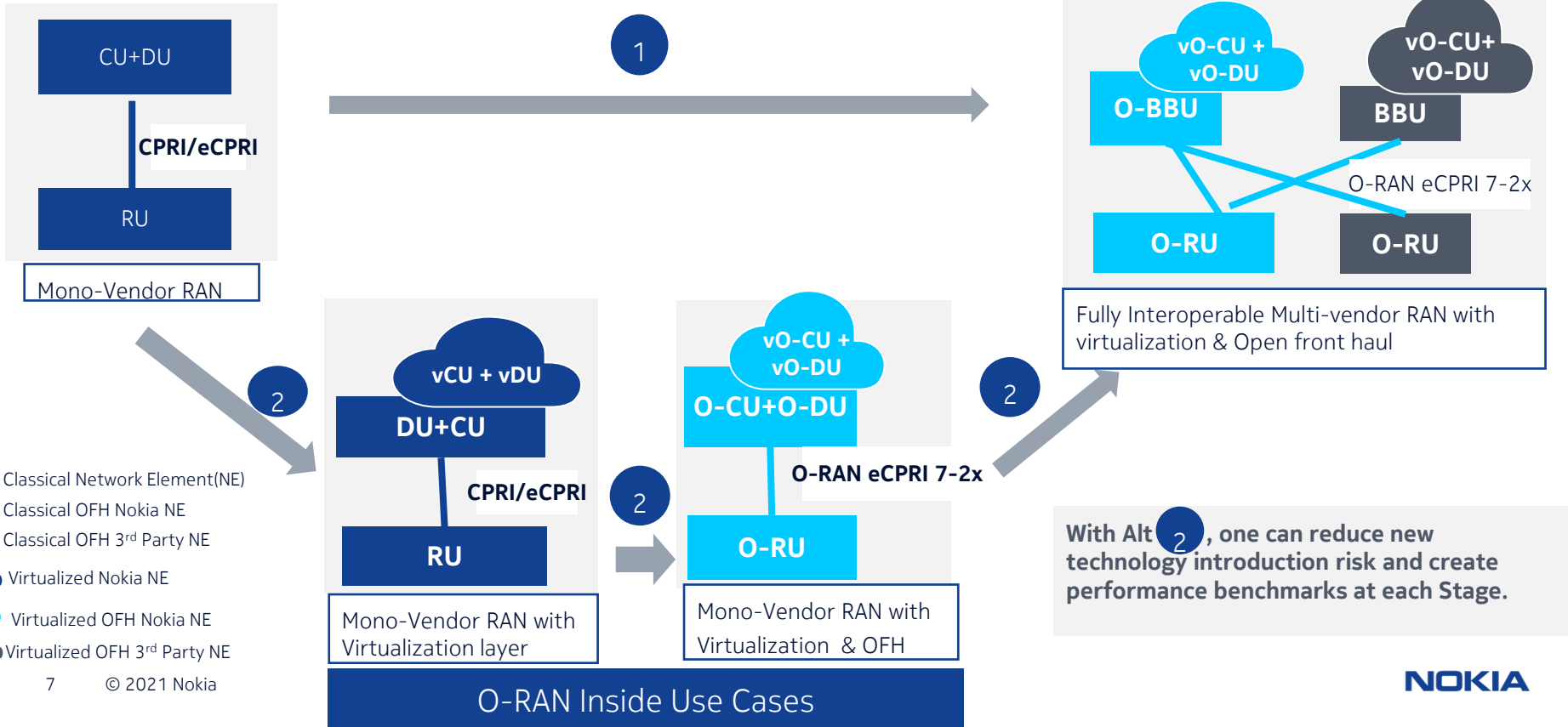
Nokia's O-RAN

Near RT RIC , Open Front Haul and vRAN



O-RAN deployment Strategy

Example with Open Front haul(OFH) and vRAN



Concluding remarks

1

Alignment on IOT Profiles is key. Fragmented sub-scale vendor landscape should be avoided.

2

Robust and continuous governance from the Communication Service Provider is needed in an O-RAN ecosystem

3

The impacts on **time-to-market** as well as the **costs of recurring test, Multi-vendor alignment** and IOT have to be considered by CSPs.

4

Industry convergence on O-RAN requirements and **Partnerships** are key to O-RAN Success

5

Nokia is working on **Open Interfaces, Programmability** and **Virtualization** of RAN function.

6

Planning for “O-RAN inside” deployment use case as an intermediate step will reduce the new Technology Risk for CSPs

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