The Future of Next-Gen Networks

Why 5G's success depends on disaggregation and OpenRAN

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And the *Transformation* is about to begin…

SDPON

Wireline disaggregation gains momentum as **PON becomes the workhorse for 5G transport**

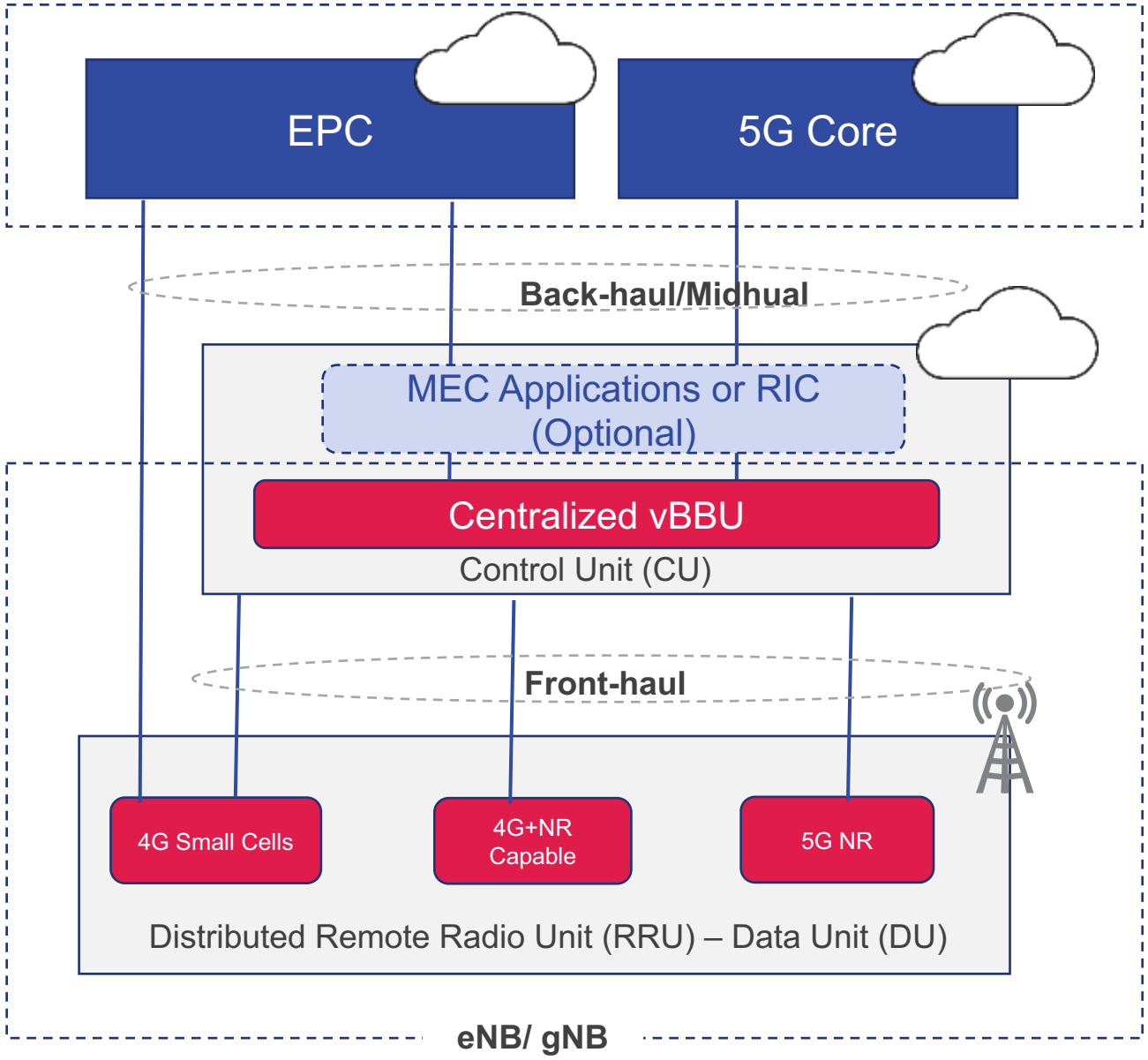
5G Access

Builds on our wireless DNA as we pivot from stacks to more ***end-to-end enabling product solution***

Disaggregation Ecosystem

Acute need from global CSPs for ***aggregator of the dis-aggregation*** *ecosystem*

Open Virtualized RAN Architecture for 4G and 5G Networks



- Virtualized mobile core for 4G and 5G Networks with end to end Network Slicing
- Programmable RAN Control plane using open reference architectures
- Centralization and Virtualization of RAN eNodeB functions + Mobile Edge Apps
- Unbundled RAN (CU/ DU) using standard APIs
- Modular RRU software functions supporting multiple RAT co-existence

Radisys Telecom Industry Expertise

O-RAN ALLIANCE xRAN

- xRAN API (RAN) Development
- Joint Solution with Intel®
- ORAN defined APIs
- WG Participation
- Design and Specification contribution

SMALL CELL FORUM

- Contributor Member
- FAPI eNB MAC – PHY Interface
- Small Forum API Development
- nFAPI development
- 5G FAPI / nFAPI development

ALLIANCE cbrs

- Observer Member
- CBRS eNB, EPC Solutions
- On.Go Test Platform for CBSD(A/B)

Our Telecom Expertise

Contributing Member

THE LINUX FOUNDATION

AKRAINO EDGE STACK

ONAP OPEN NETWORK AUTOMATION PLATFORM

3GPP A GLOBAL INITIATIVE

- RAN#2 Meeting Plenary
- LTE eNB, EPC Solutions
- 5G gNB, UE and CN Solutions

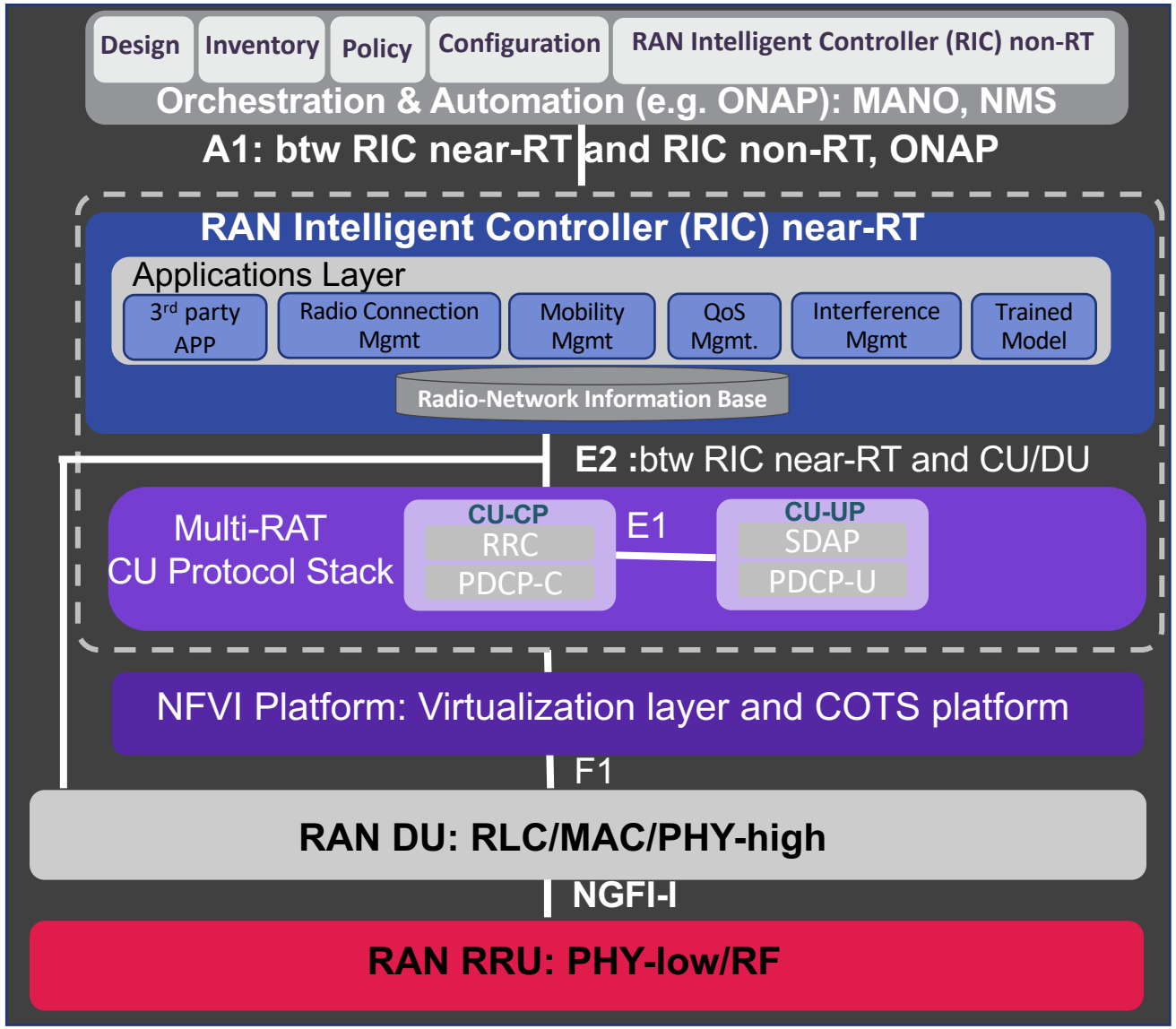
TELECOM INFRA PROJECT

- Lead TIP Type 1 Solution Integrator
- Contribution of LTE and EPC to TIP
- Development for Open Cellular
- Solution Integrator for Open-RAN
- Solution Integrator for Virtual RAN Fronthaul
- TIP Demo integrator for TIP Summit & MWC

ONF

- Board Member
- CORD (SEBA/MCORD/MEC) Contribution
- Exemplar Framework and Solution Integration

Radisys & ORAN Alliance



O-RAN ALLIANCE

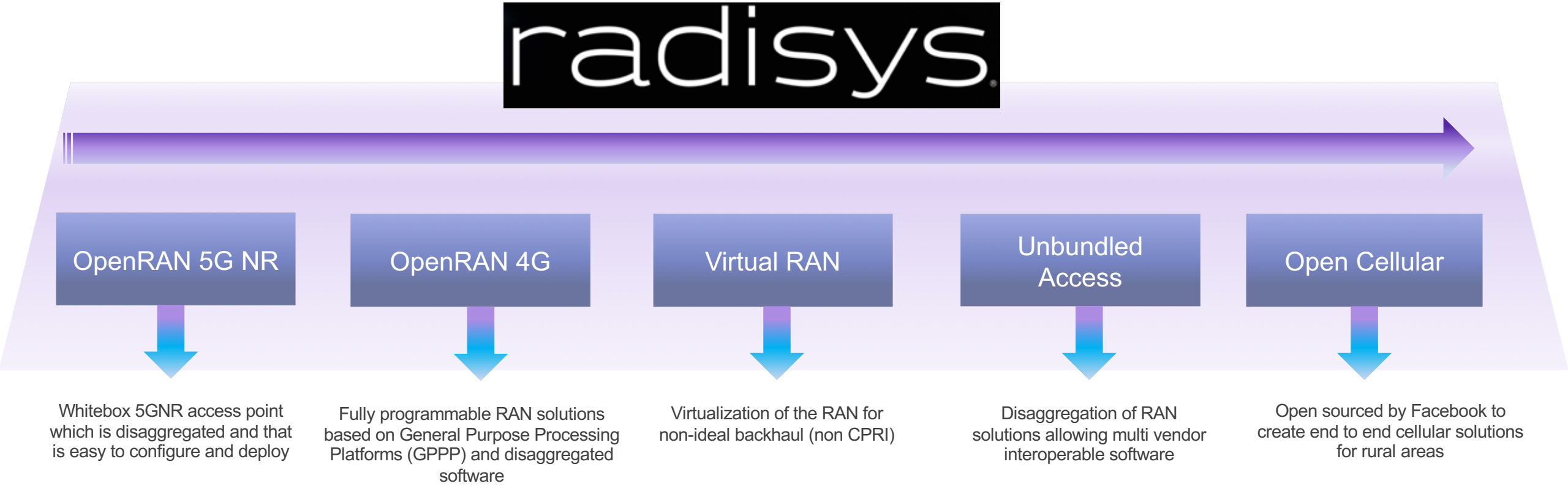
Radisys actively participating in:

- **WG3 (Contributor)**
  - Near-Real-time RIC and E2 Interface
- **WG4**
  - Open Fronthaul Interface
- **WG5 (Contributor)**
  - Open F1/W1/E1/X2/Xn Interfaces
- **WG6**
  - Cloudification and Orchestration + OSFG
- **WG7 (Contributor-SW)**
  - White-box Hardware (demo at MWC-S)
- **WG8 (Vendor Co-Chair with Intel)**
  - Stack Reference Design
- **TIFG (Contributor)**
  - Conformance & Interoperability Testing
  - Harmonization across different WGs and end-to-end system test
- **OSFG (TOC, Contributor)**
  - Seed code contribution for O-DU (available on Wiki)

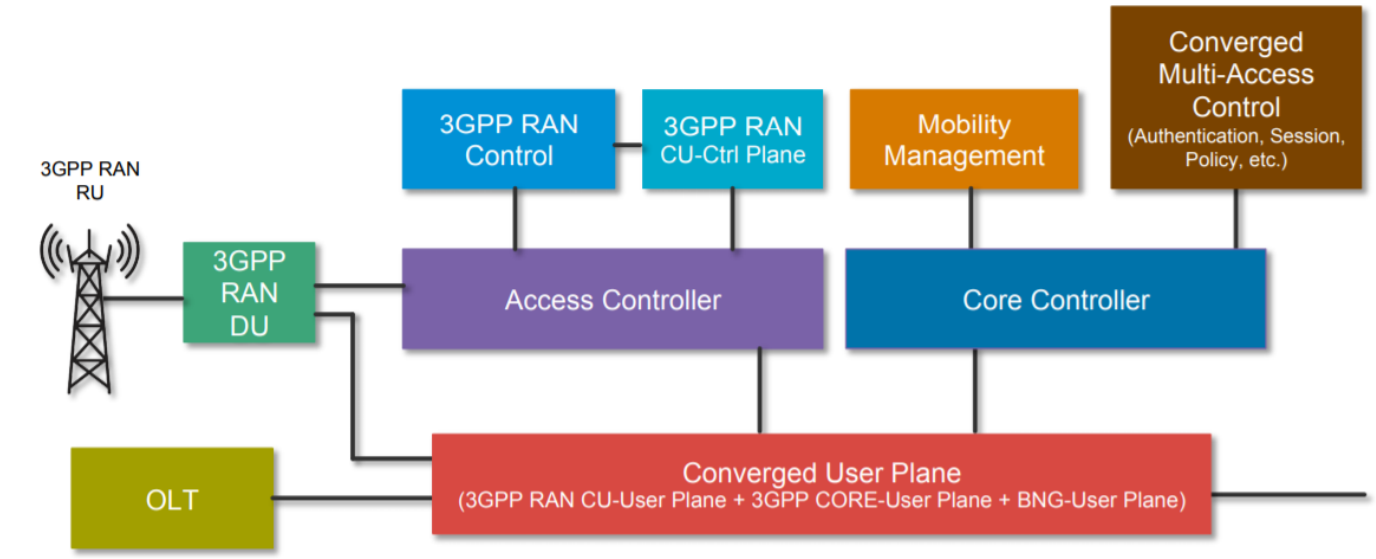
Telecom Infrastructure Project (TIP)

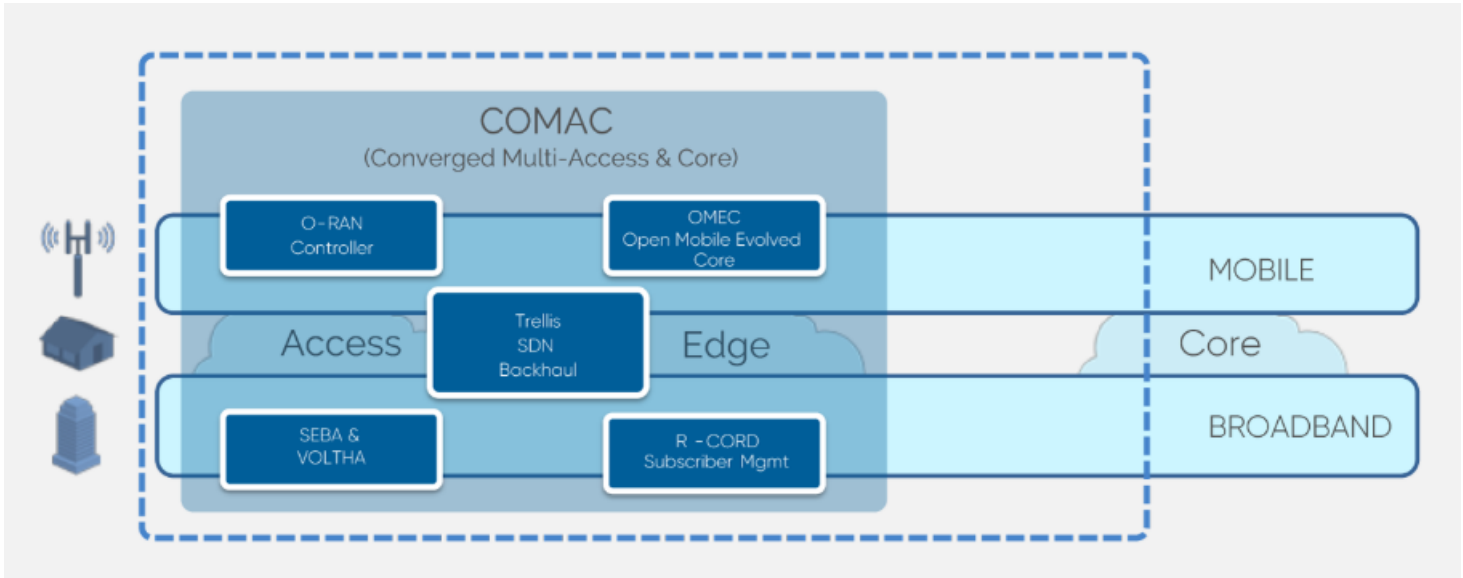
Radisys is a pioneer in enabling open RAN solutions for OEMs and Carriers alike

As part of this activity, Radisys has embraced the TIP (Telecom Infrastructure Project) initiatives to create a truly open and disaggregated RAN ecosystem

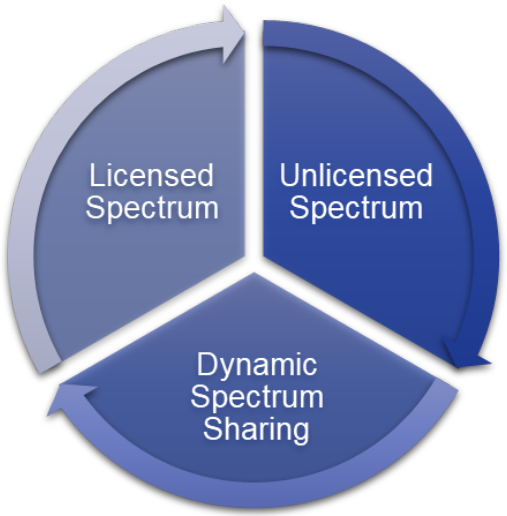


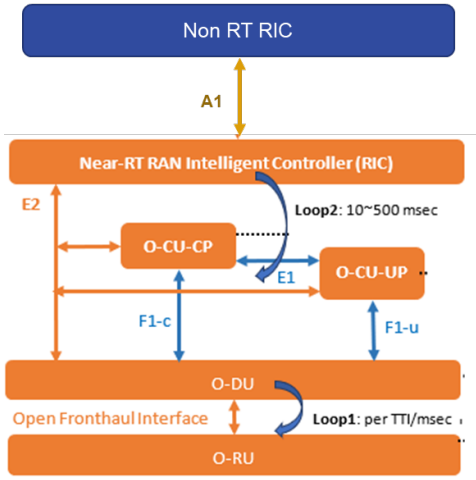
Converged Multi-Access and Core (COMAC)





- Converged User Plane
  - coDBA
- OMEC leveraged
  - Multiple Open Source EPC
- O-RAN Controller
  - RIC (Near RT and Non RT)
- Common SDN Infrastructure
- Common data model
  - Netconf / Yang

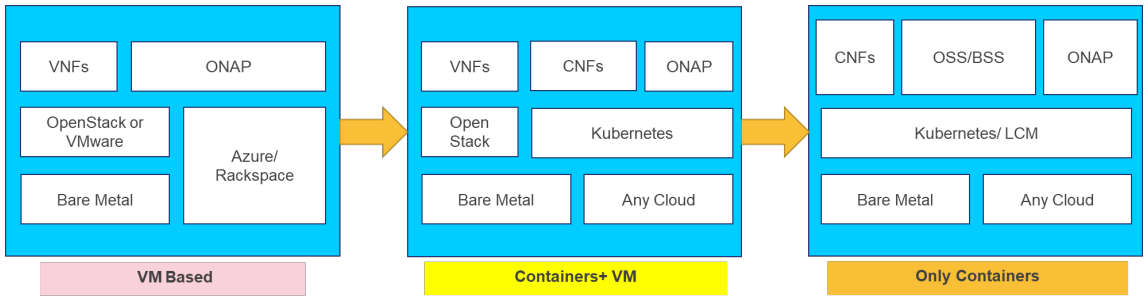




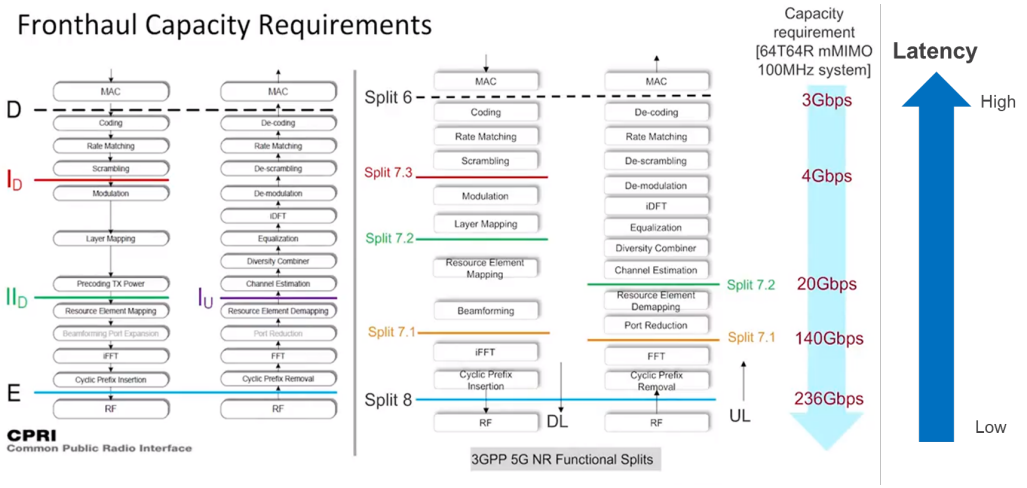
Centrally Observed Data
Enrichment via external sources
Central Training

Near-RT Prediction

Locally Observed Data
Real Time Prediction



- Most of the Applications are VM centric
- With the evolution of light weight and Telco grade infrastructure, Containers based approach is more preferred for Real time and High Traffic applications.
- In coming few years, Network Infrastructure will be a container framework.

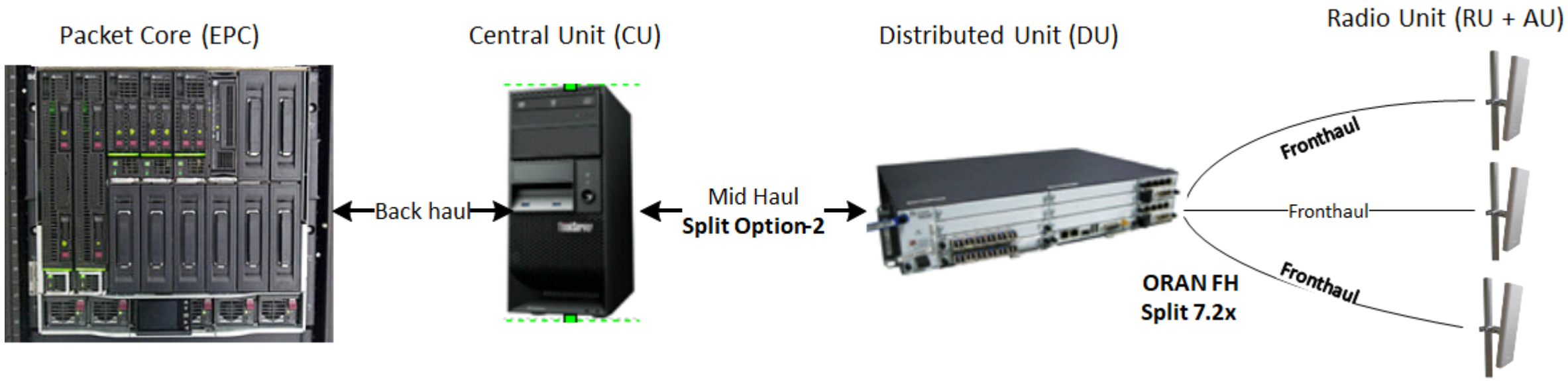


Aggregator of the Dis-Aggregation Needed

- CSPs want a product level solution but with principles of disaggregation
  - Multi vendor | CUPS | hardware – software disaggregation
- Open Source is not just open source software
  - Open Architectures | Open APIs | Open Interfaces | Open Hardware
- Radisys can provide sandbox for
  - Architecture considerations
    - Split options, integrated vs. split, RIC and its placement
  - PNF vs. VNF vs. CNF
  - Performance dimensioning
  - Deployment scenarios
  - Use Cases
  - Conformance & Interoperability

Radisys in the Open RAN reality

Security | Cloudification | RIC | MANO | Transport (x-Haul)



Radisys will aggregate this disaggregation from the multi vendor ecosystem

Life Cycle Management: Tested | Validated | Documented | Supported


Radisys
Thank You
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