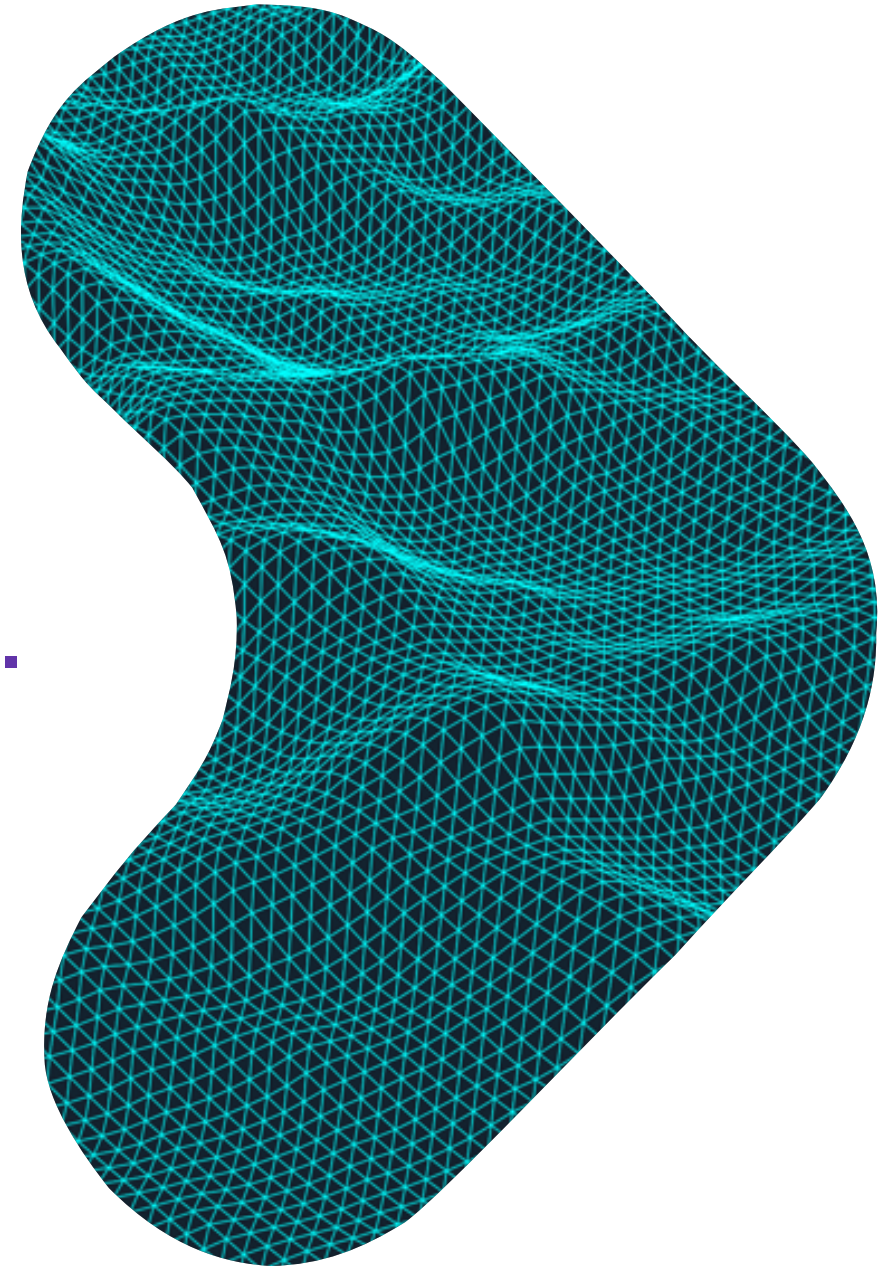


Building true PODS for next generation RAN requirements.

Presenter

Amit Kulkarni.

Sterlite Technologies Limited

Agenda

Introduction to Sterlite Technologies Ltd.

Requirements for Next Generation RAN.

STL Approach.

Benefits of Approach

Use Cases

Q & A


Market Presence
Sales Office
Manufacturing Locations
STL
Global Presence
(100+countries)

OUR CAPABILITIES ACROSS THE VALUE CHAIN

Optical Fibre & Cables

Fibre Roll Out

System Integration

Programmable Networking & Intelligence

Operations & Business Software

Presence in over **100** countries

Partnering with **8** of top 10 Global Telcos

3 Research Labs

7 Production Facilities

Designing, Building and Managing Smarter Networks

Requirements for Next Generation RAN.

Key Enablers

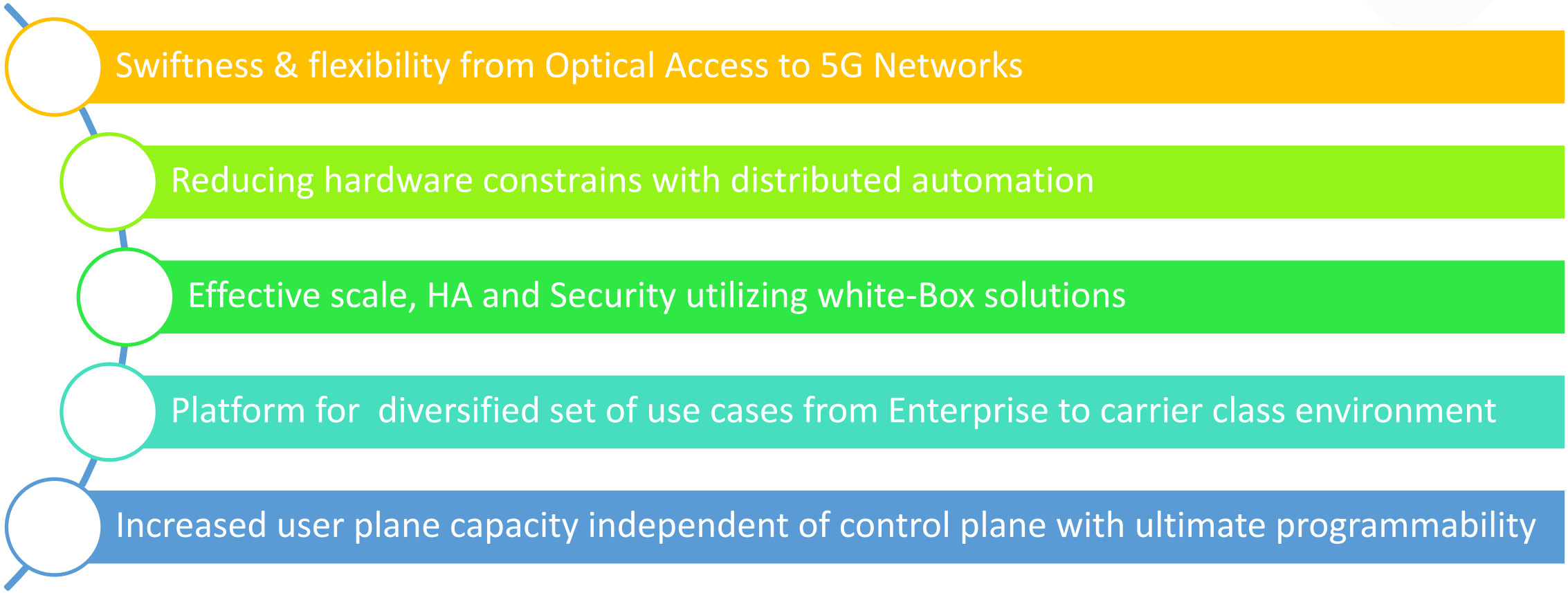
1. Around 65-70% of total cost of ownership of a network is in the RAN.

2. The recent trends brought significant change in the core with the innovative technologies like SDN & NFV but the RAN has largely remained untouched.

3. Open interfaces also enable multi-vendor deployments, enabling a more competitive and vibrant supplier ecosystem.

4. Networks becoming complex must self-driving, they should be able to leverage new learning based technologies to automate operational network functions and reduce opex.

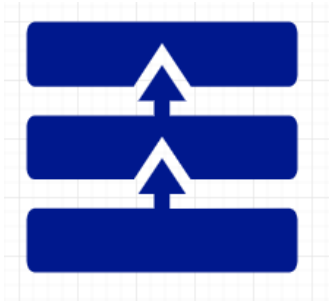
Next Gen RAN Requirements



Next Gen RAN Requirements …

Boxes

Functions



Protocols

APIs

Successful Innovations have to be made Cloud-Native.

Next Gen RAN Requirements …

Usage Scenario : (IMT) for 2020 and beyond

eMBB Enhanced Mobile Broadband

- Mobile Broadband addresses the human-centric use cases for access to multi-media content, services and data.

mMTC Massive Machine Type Communications

- This use case is characterized by a very large number of connected devices typically transmitting a relatively low volume of non-delay-sensitive data.

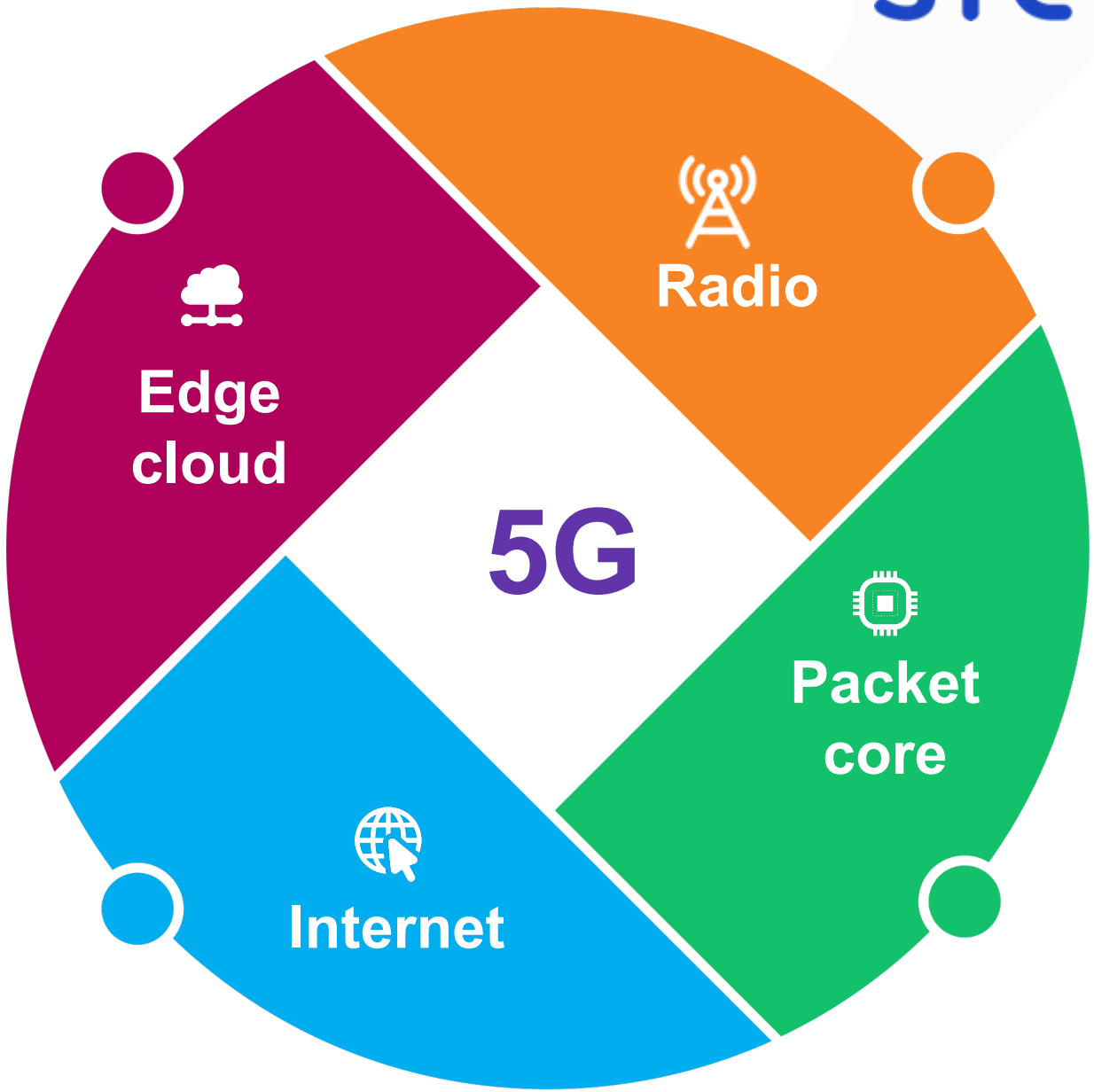
URLLC Ultra-Reliable and Low Latency Communications

- This use case has stringent requirements for capabilities such as throughput, latency and availability. Some examples include wireless control of industrial manufacturing or production processes,

STL Approach.

Platform For :

- Distributed 5G Networks
- Federated Access Technology
- Intelligence and self learning networks and Applications
- Maximum flexibility with highest Micro services Architecture model
- That conforms to ORAN Architecture and interfaces



STL PODS

Programmable

Open

Disaggregated

Solutions

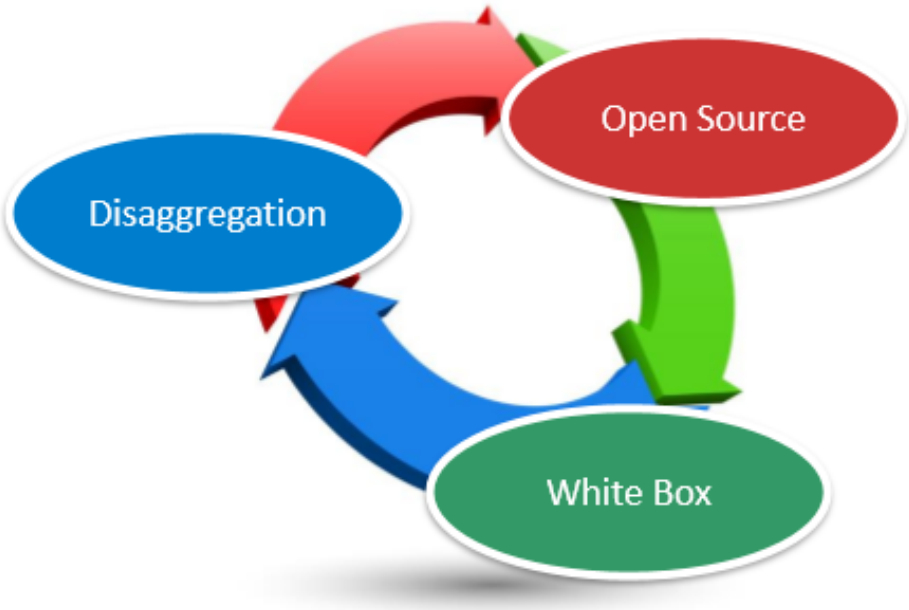
Private LTE and 5G NR (Programmable Radio)

Disaggregation Goals

Disaggregated to put operators in control

Democratized interfaces for plug and play modules

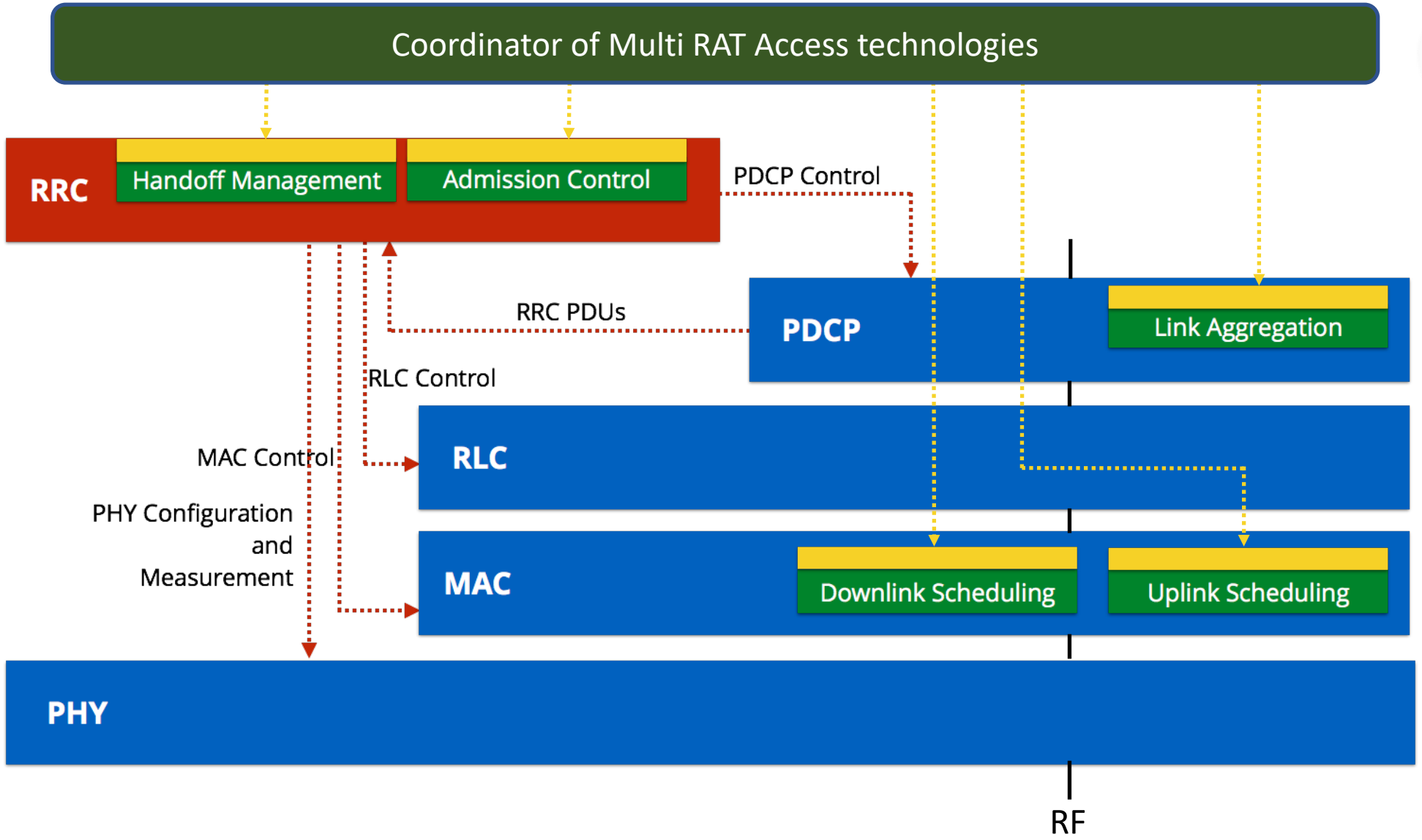
Deployable for any ARPU model



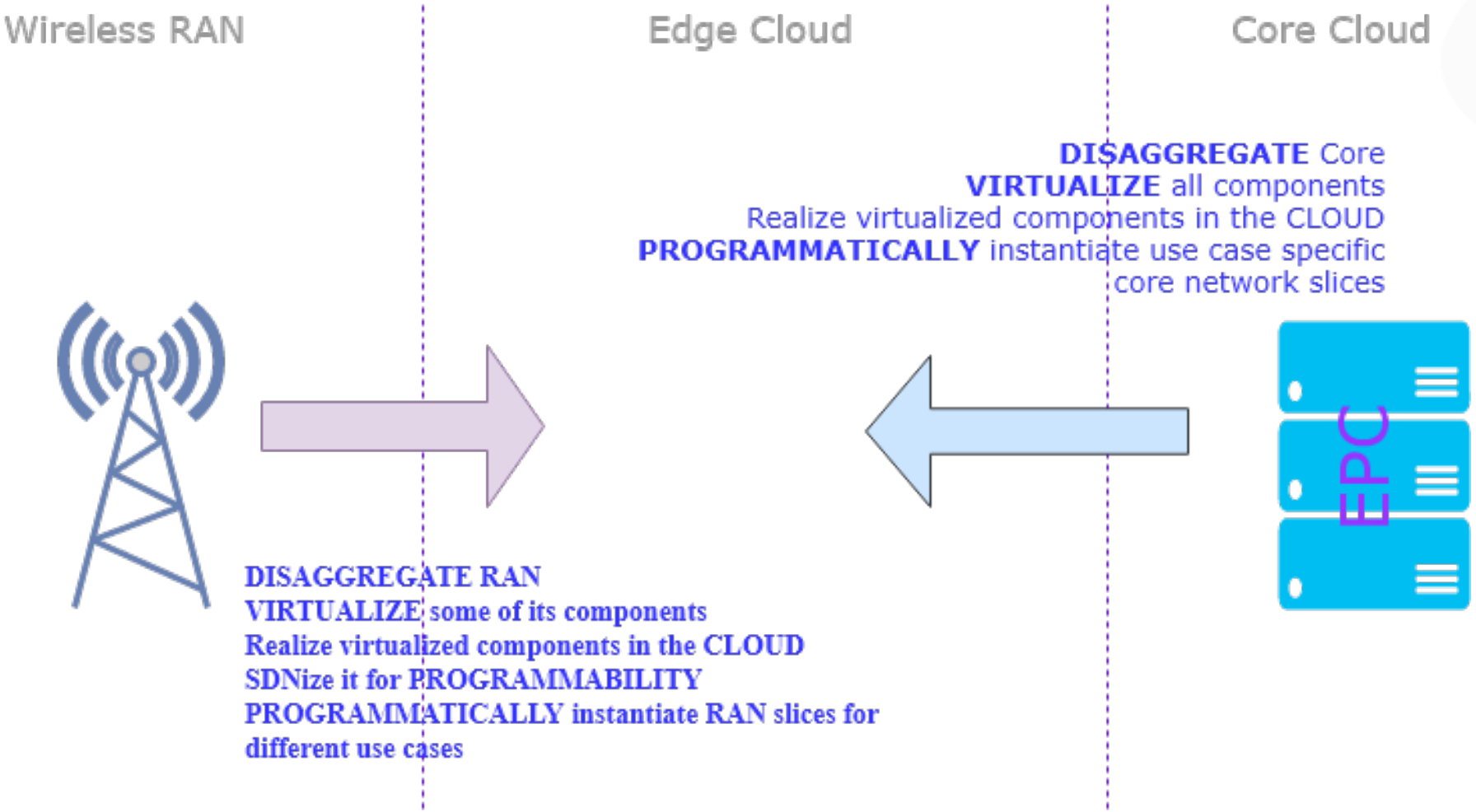
Many different configurations

- From Rural to densified deployment models
- Ability to plug-in multiple access technologies
- Programmable control & monitoring with ML
- Milliseconds control loops
- Containerized to effective Micro Services
- Zero-touch/automated provisioning, config, & operation

Programmability in RAN

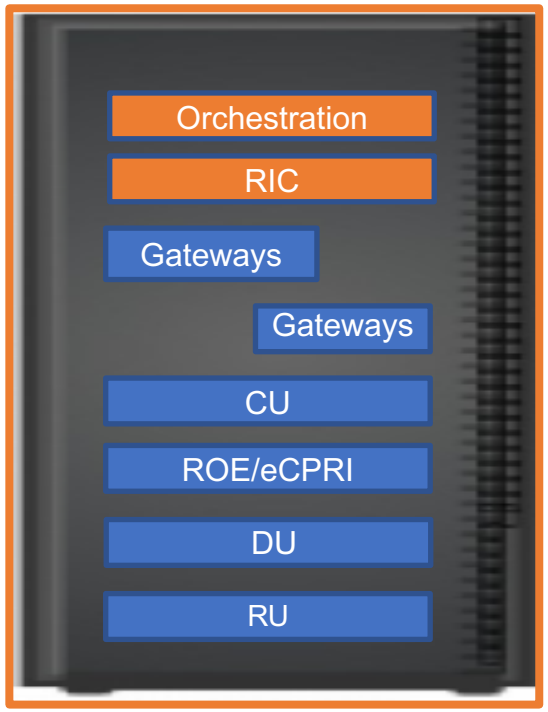


Realize Virtualized components in the edge cloud



STL Programmable Radio (pRadio)

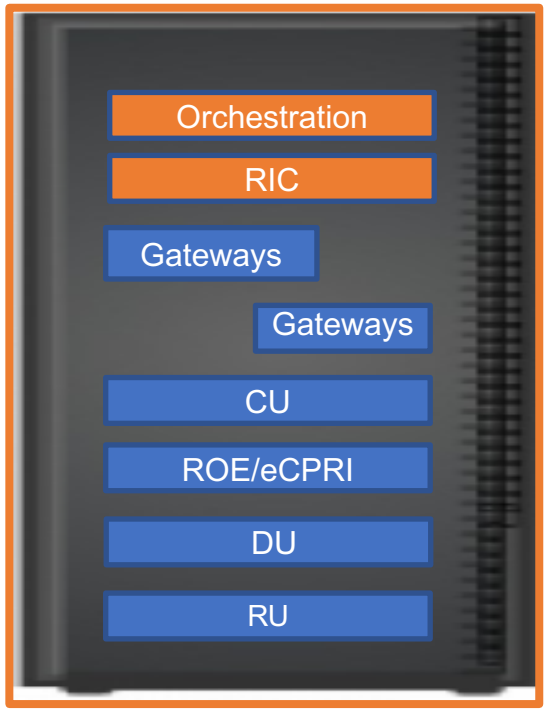
pRadio POD



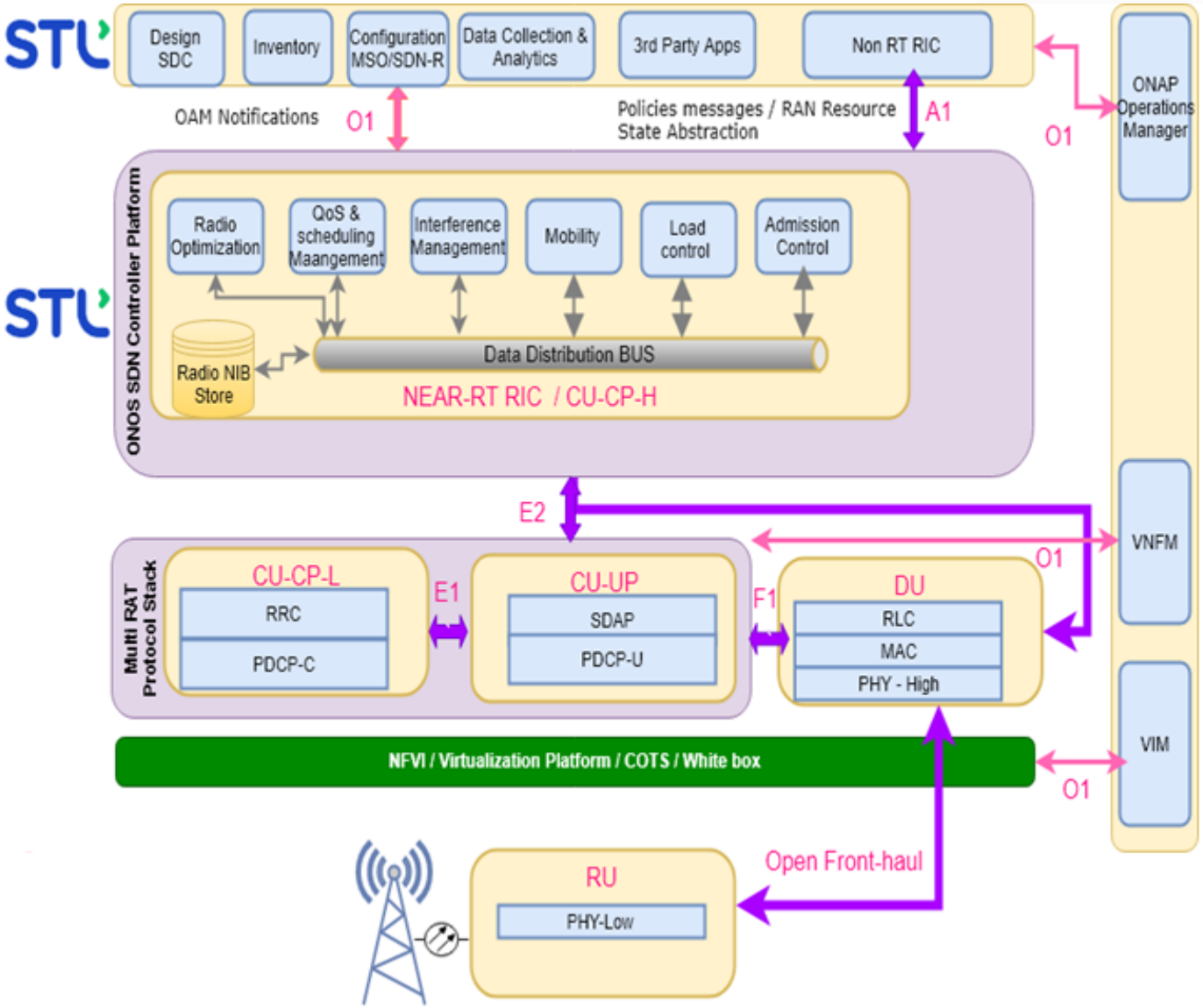
Key Highlights

- ✓ OCP Compliant - Process started
- ✓ RU - 2 partners shortlisted
- ✓ CU & DU - Partnership established, Integration and testing commenced
- ✓ RIC - Development started, Use cases targeted, Expected field trial soon
- ✓ VNF Platform - 2 partners shortlisted
- ✓ Orchestrator for RIC - Development started
- ✓ Community Lab set-up at San Jose and Pune - Process started
- ✓ pRadio POD - Complete integration targeted within this year including O/BSS

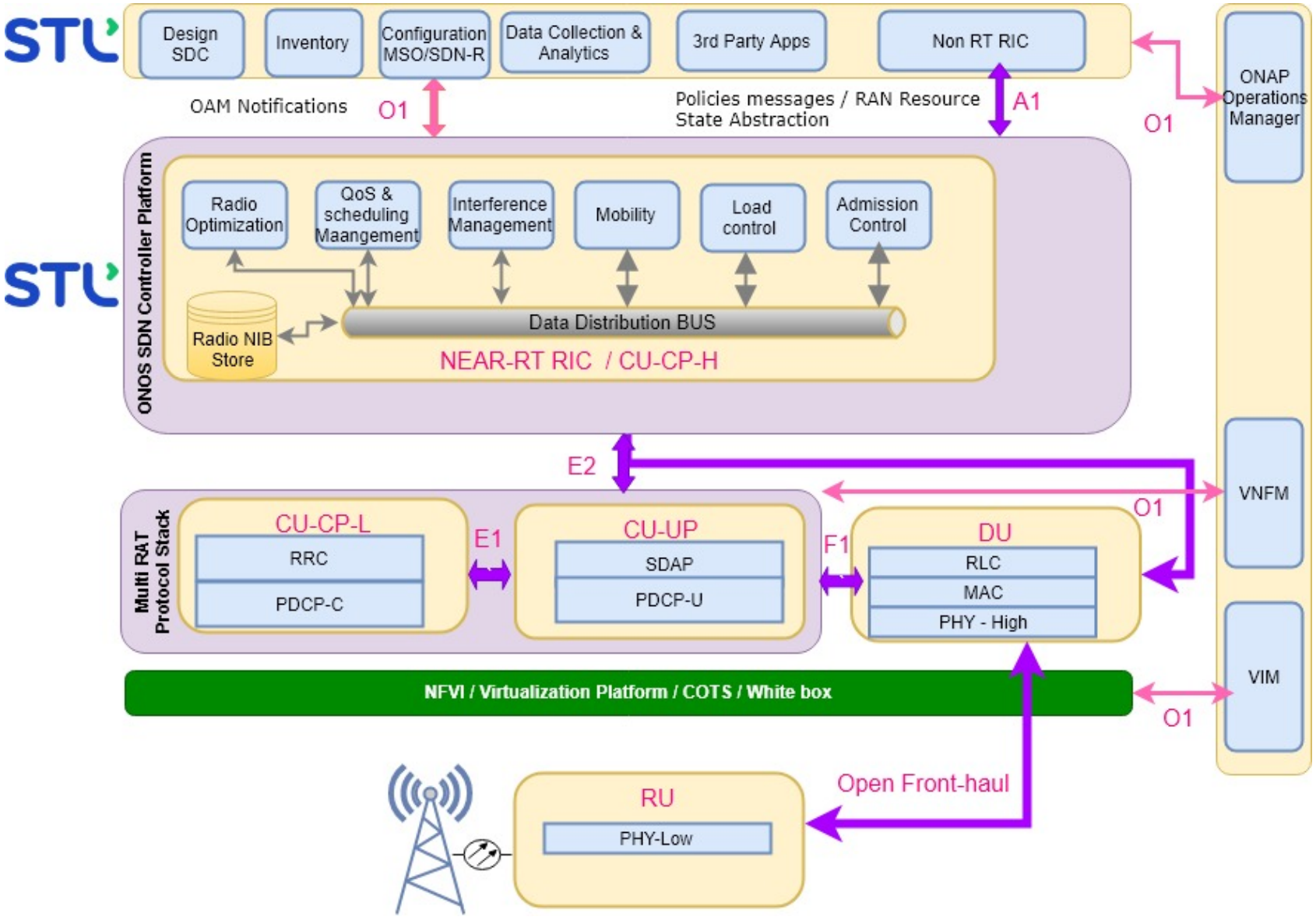
STL solution Maps to ORAN Architecture



pRadio POD

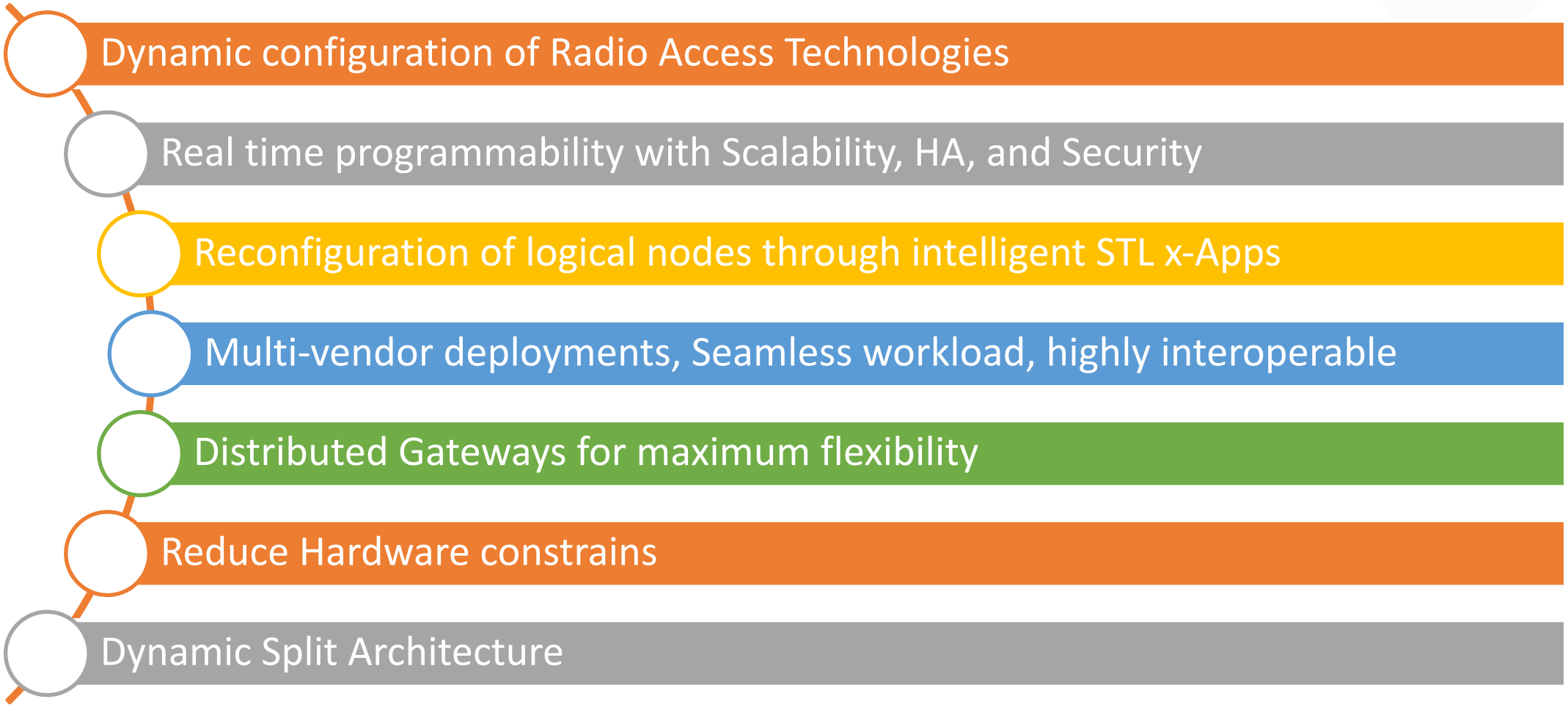


pRadio ORAN Compliancy

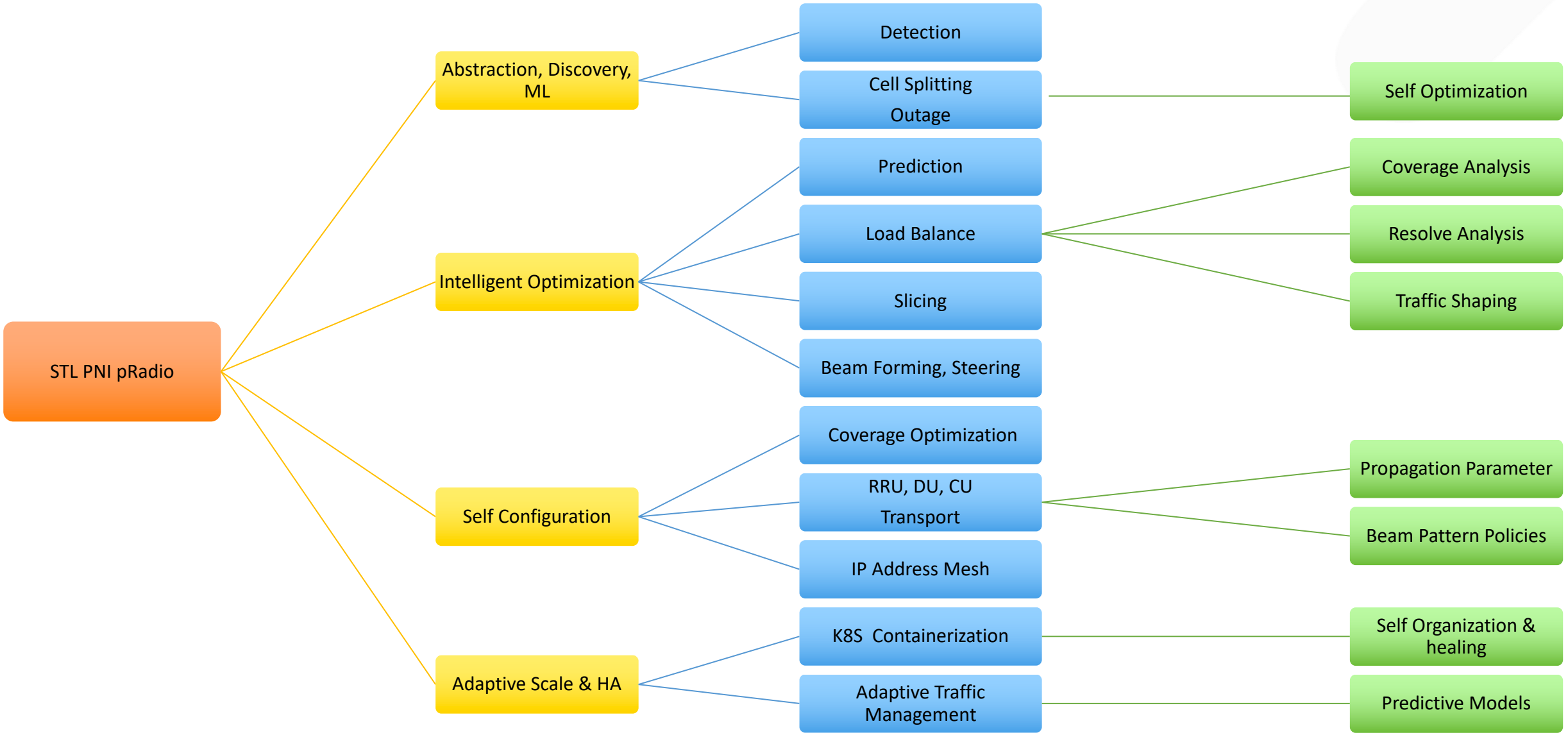


Benefits of STL Architecture Approach

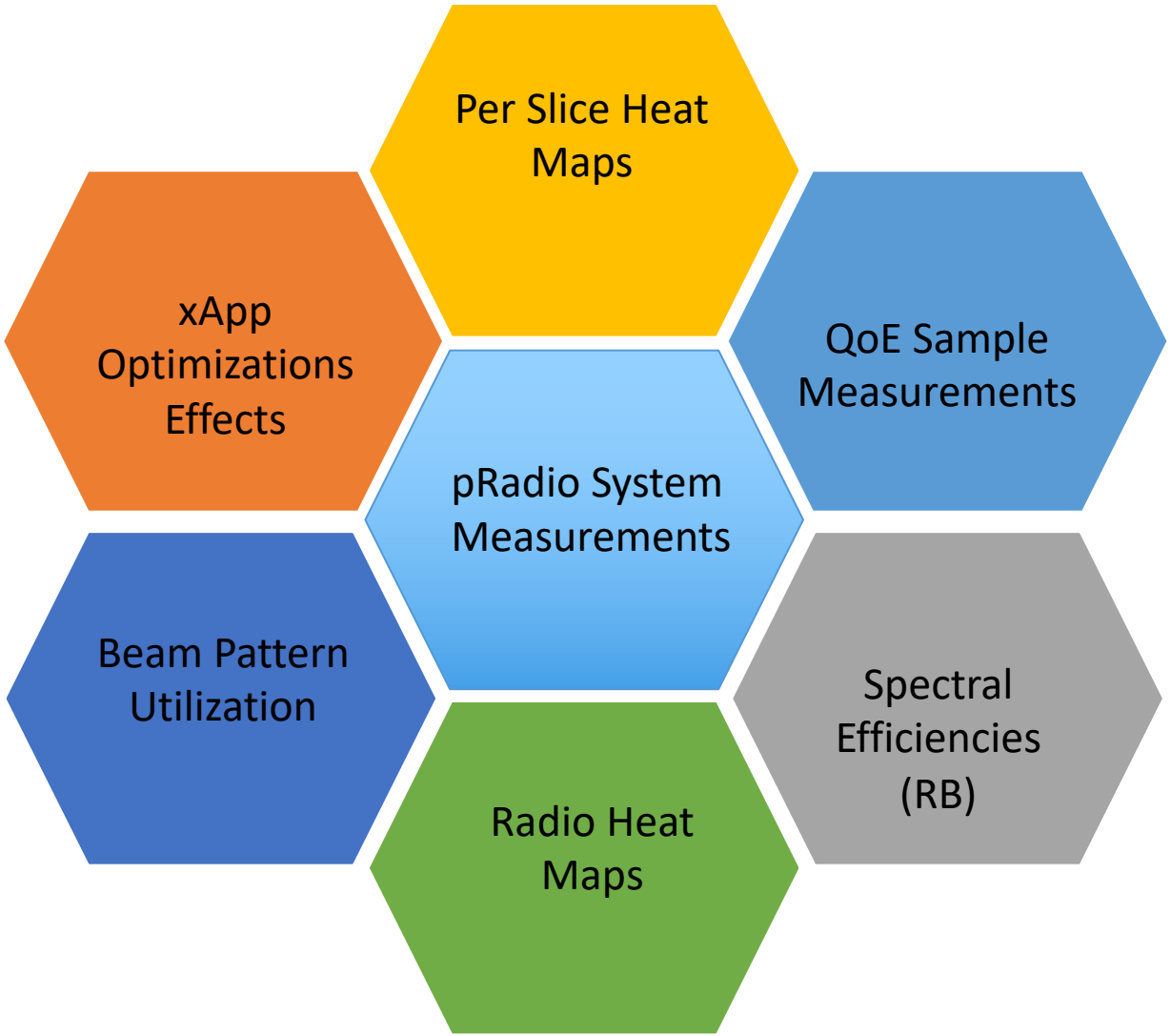
Benefits of STL Architecture Approach



pRadio Functional work loads

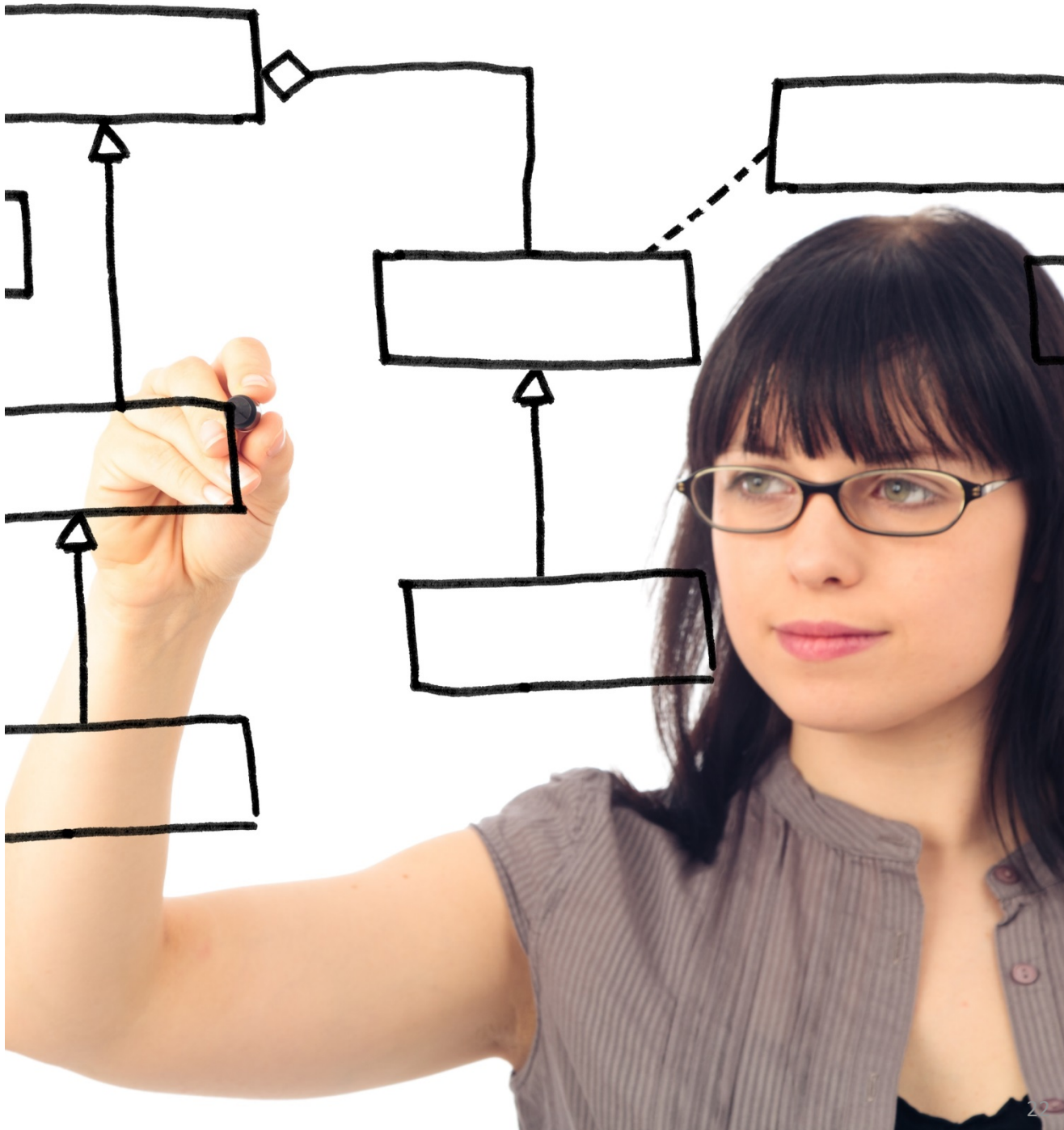


pRadio Measurements



Use Cases

- Handoff Management
- QOS Management
- Interference Management
- Network Slicing.



Use Cases : Handoff Management

Handoff triggered to support better QoE and Load Balancing. Augment the existing Handoff that is triggered by the vBBU in which a RSRP based handover is carried over.

Handoff for better QoS

- Ensure better QOS in a near real time scenario.
- QOS dependent handover will be triggered on the basis of CQI value.

Handoff to ensure Load Balancing among eNodeBs```

- RIC based handoff will be triggered to ensure Load balancing between different eNodeBs.
- RIC will maintain a load of different eNodeBs and handover UEs to a different eNodeB which can provide equivalent service to ensure Load balancing.
- Parameters used: Total transmit power, Total received power, Interference in a cell, Cell throughput in downlink/uplink, Increase in blocking, Handover failure rate

@Sterlite Technology We offer:

- ❖Dynamic configuration and Real time Programmability
- ❖Intelligent STL xApps & Multi Vendor HetNet deployment Models.
- ❖No H/W constraints
- ❖Dynamic Split Architecture
- ❖Containerized platforms
- ❖Complete Automation & ML

Network agility with programmable networks

Innovation that intelligently reduces operational expenses while smartly upgrading the experience

Software Defined with Virtualized Network Functions

PODS

Programmable
Open
Disaggregated
Solutions

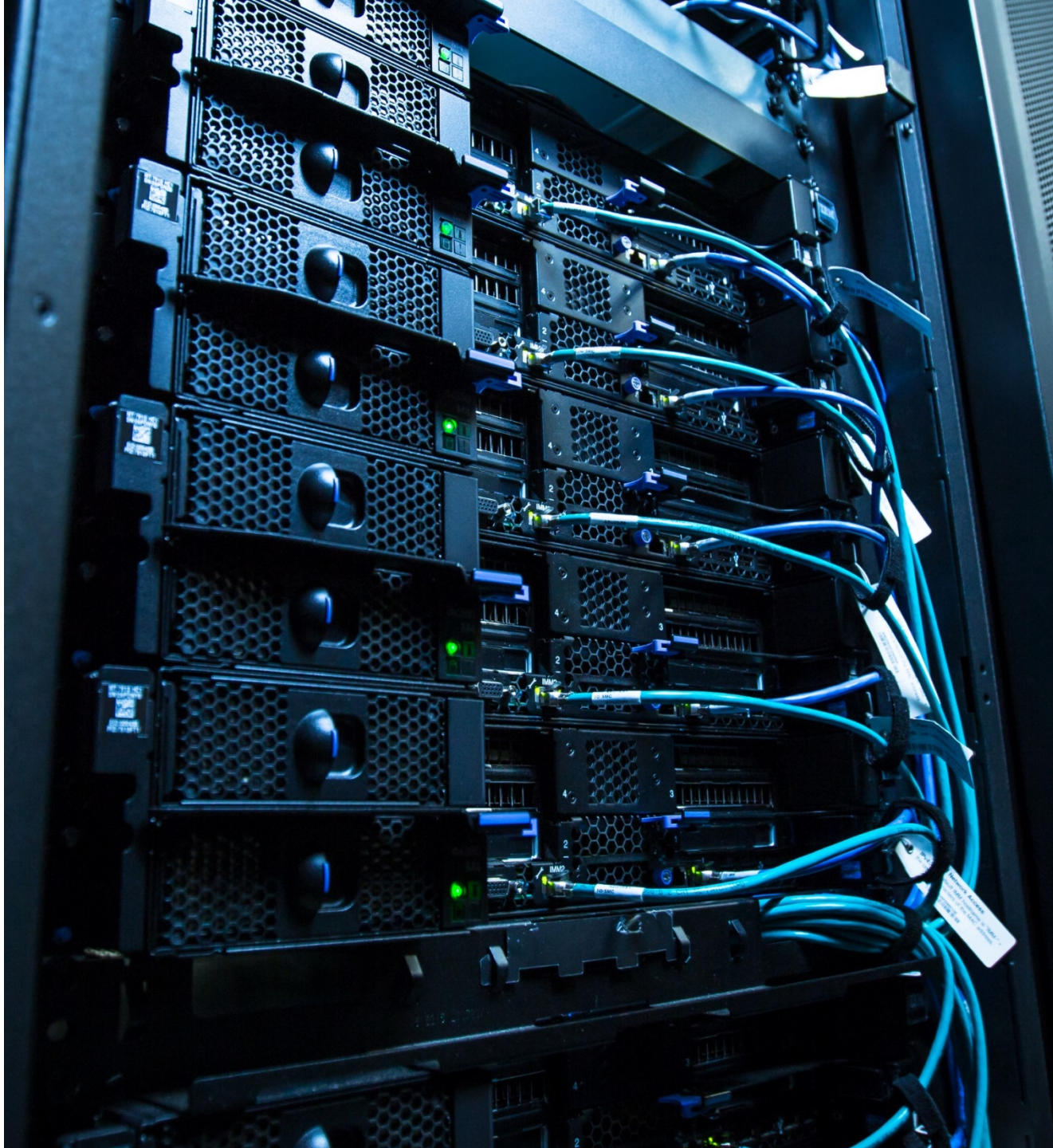
Aligned with ONF
Programmable, Agile and Intelligent

Hardware and Software Abstraction
Control and Data Plane separation

Reduced OPEX
Near Zero Touch Provisioning (ZTP) deployment

Faster to Market
Quicker new service provisioning

Visit us @ ONF Booth for a Demo.



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beyond tomorrow