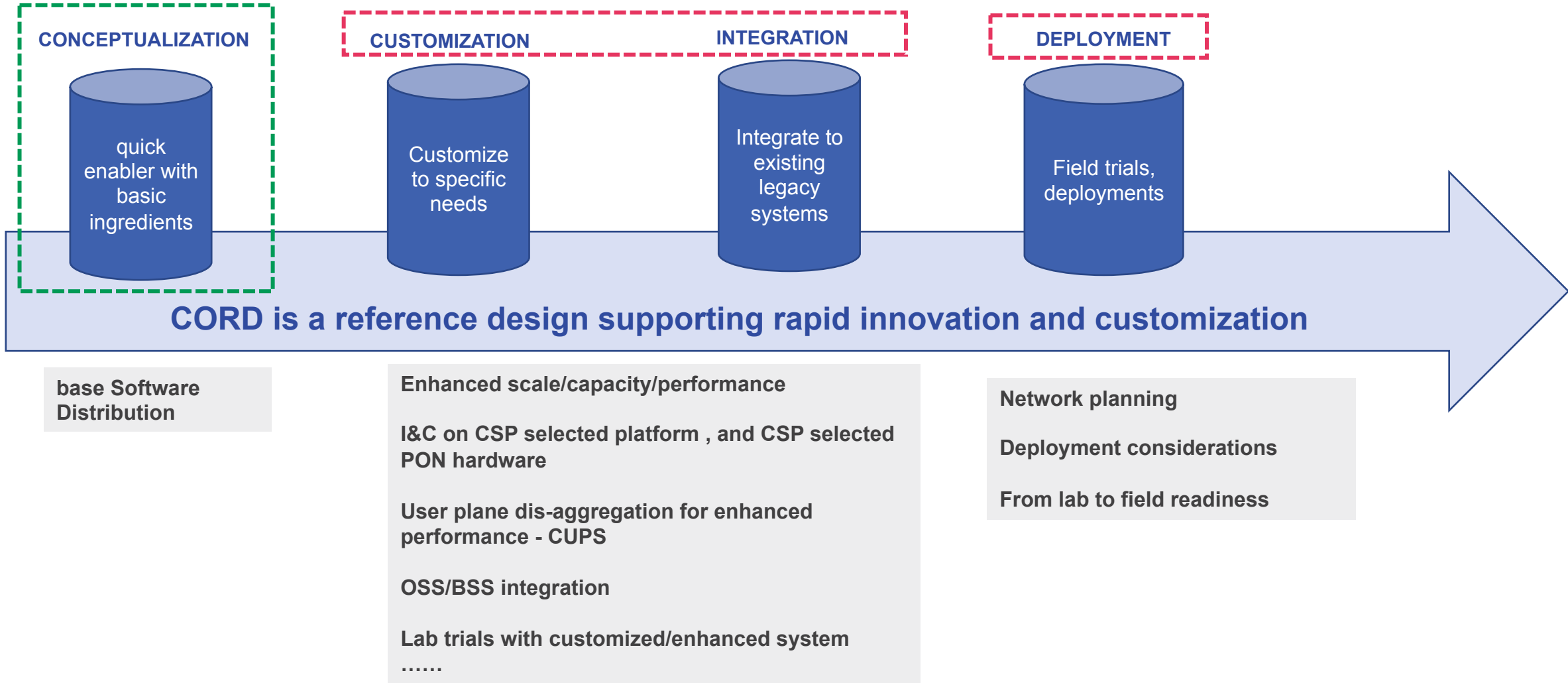


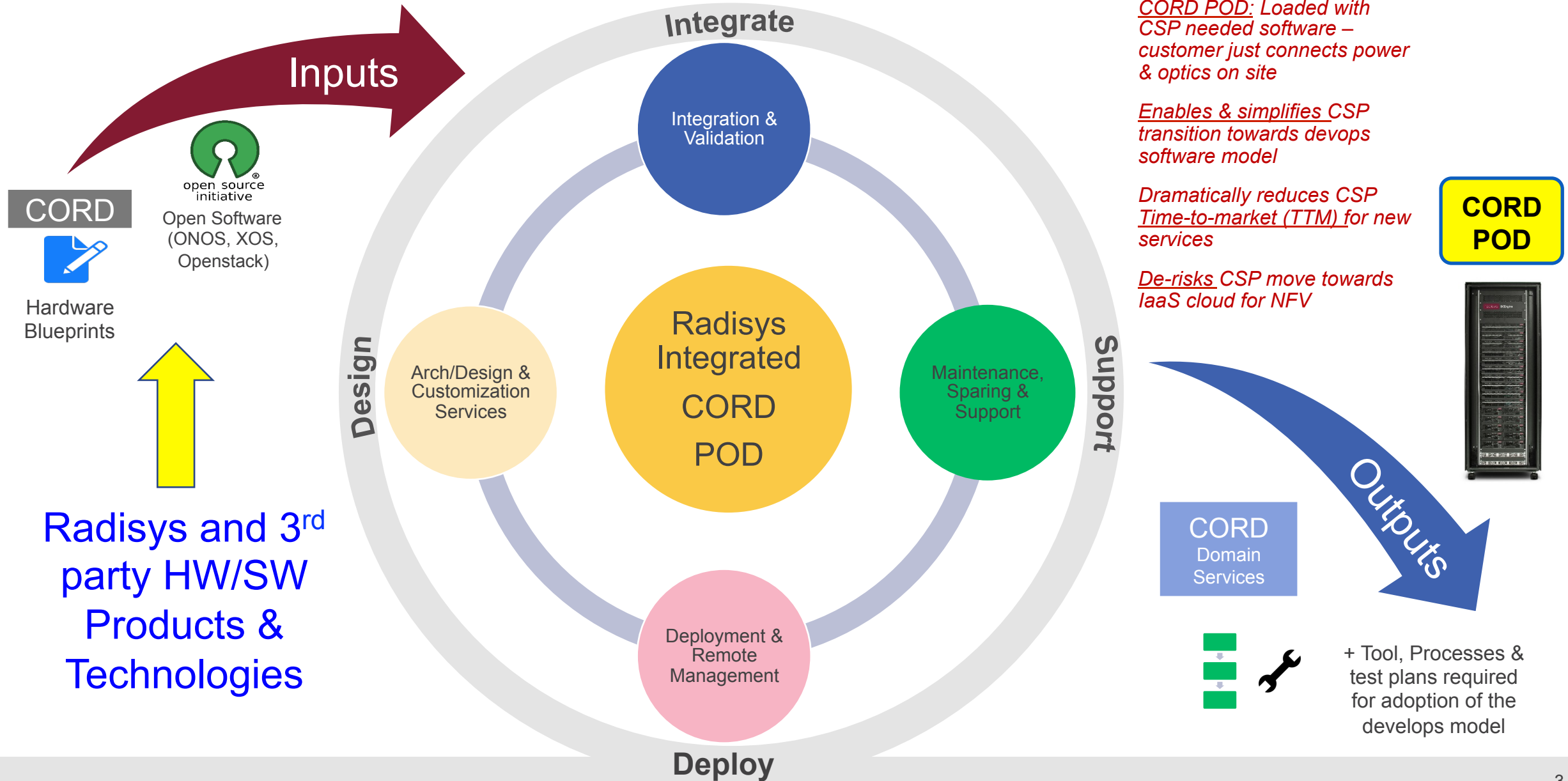


CORD Deployment
Experiences

Rishi Raj Maulick
PLM Radisys – SDN and NFVI

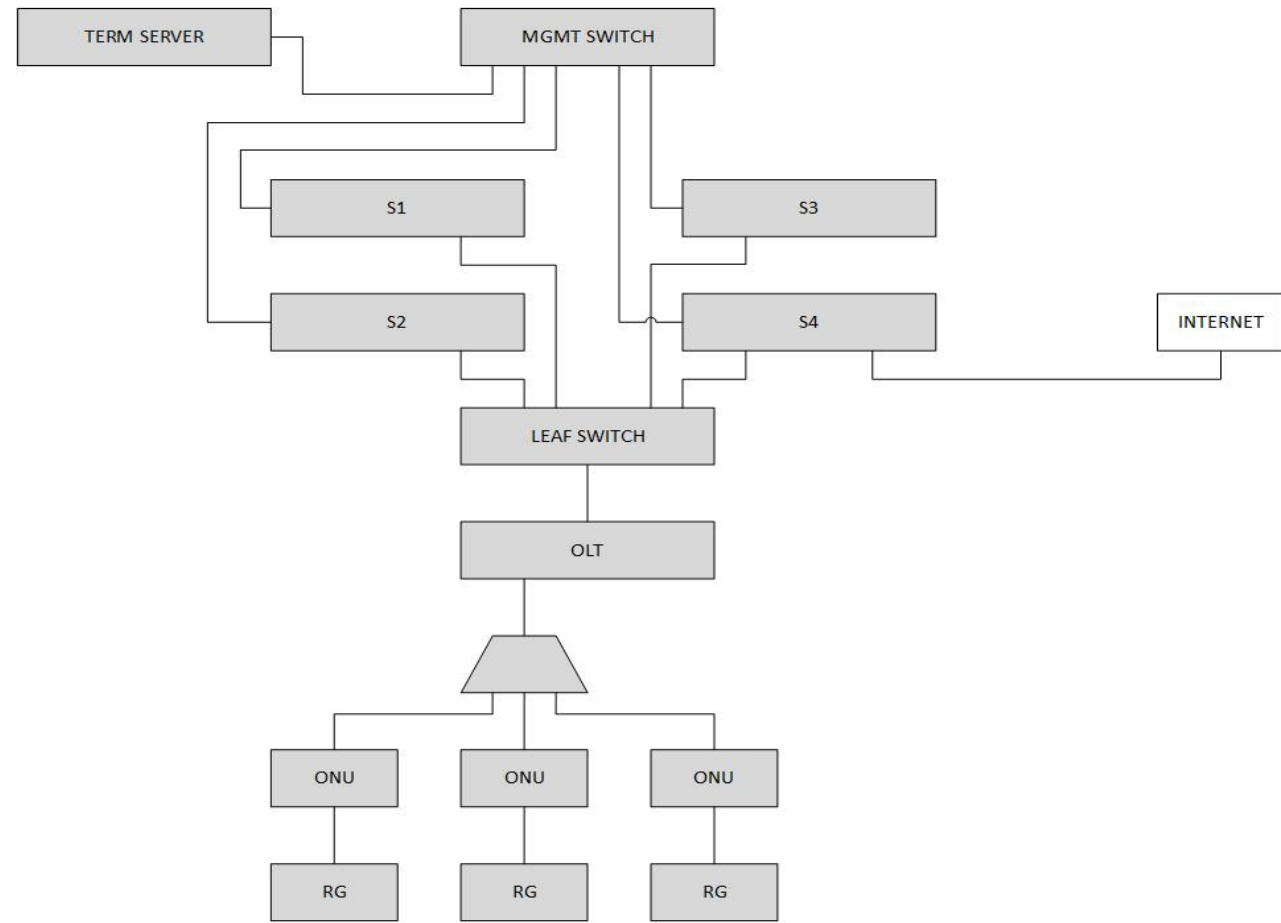
system integration services in taking the concept system onto a field trial ready system.





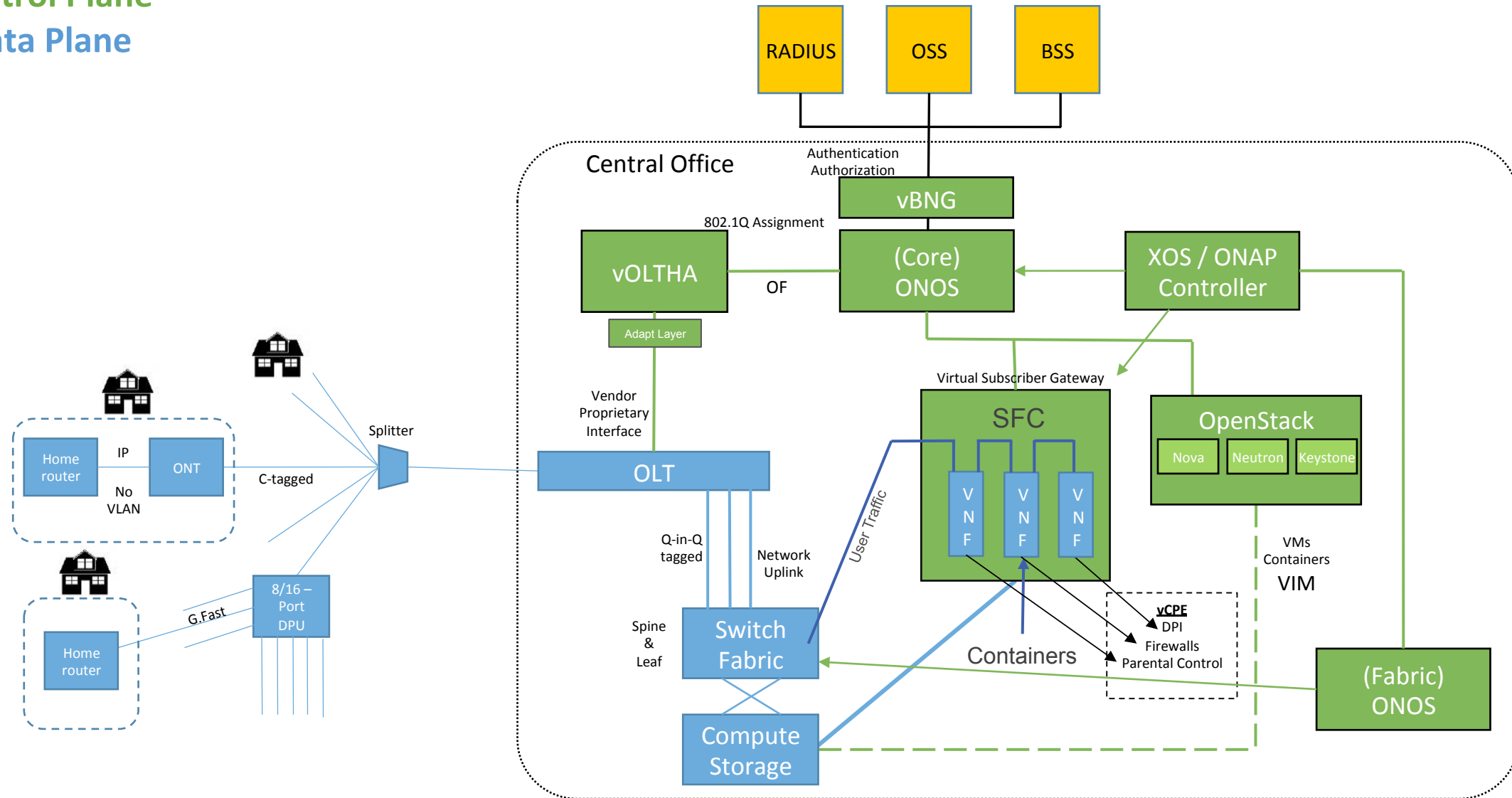
radisys

VOLTHA POC
SYSTEM DIAGRAM

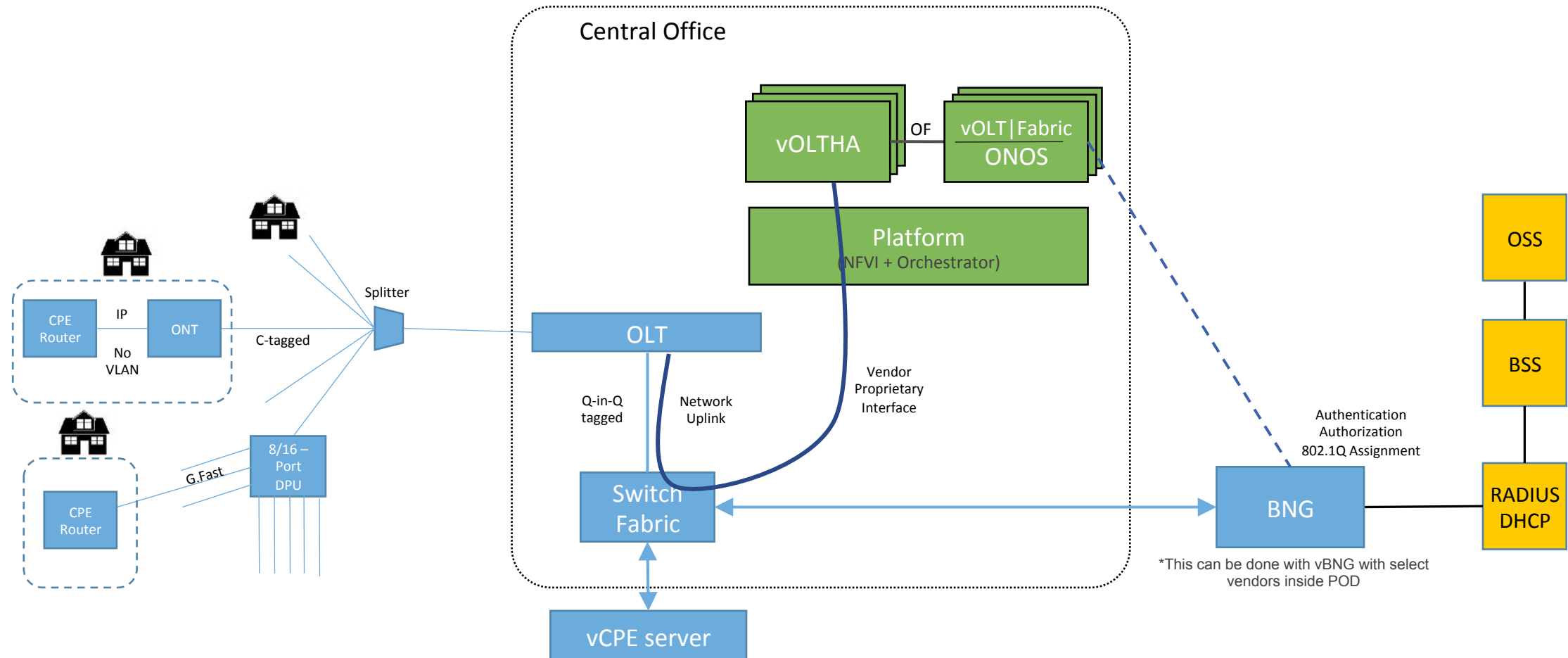


Rev. Date 11/2/2018

Control Plane
Data Plane



Control Plane
Data Plane



Proof of Concept:

Successful POCs - Typically \ll 50-100 Subscribers/POD

Lab Trial & Early Field Trials:

Successful Lab/Field Trial Typically \ll 500-1000 Subscribers/POD

Deployment:

Typically \geq 10000 Subscribers/POD

- 16 PON Ports/OLT x 32 ONU/PON x 16 OLTs = 8,192 Subscribers
- 16 PON Ports/OLT x 64 ONU/PON x 16 OLTs = 16,384 Subscribers
- 16 PON Ports/OLT x 128 ONU/PON x 16 OLTs = 32,768 Subscribers

Why disaggregation & disruption – The White box business model

- #1 **More OPEX** oriented business case than CAPEX
- #2 CAPEX comparisons just move **from a blended to a separated cost/margin** representation.
- **OPEX** is Cost Effective
 - More flexible supply chain & operational model
 - More adept to change management
 - Whitebox hw powered with disaggregated model – more granular and agile choices of building network



Evolution towards disaggregation and white box model is a natural causality of networking maturity.

Initial POC and Field Trial Testing was with CORD:

- RadisyS helps with validating the Whitebox/Disaggregated Proof of Concept
- Initial training
- Whitebox selection
- Lab Trials
- Customization
- Hardening
- Scalability

We found that in order to move from initial POC to Lab Trials and to consider Deployment:

- Need to be able to support **additional Capabilities**
- Full management Layer on top of VOLTHA supporting an **FCAPS** model
- Interfacing with Management Systems both Legacy **OSS/BSS** and newer systems like **ONAP**.
- Streamline **Installation Complexity**

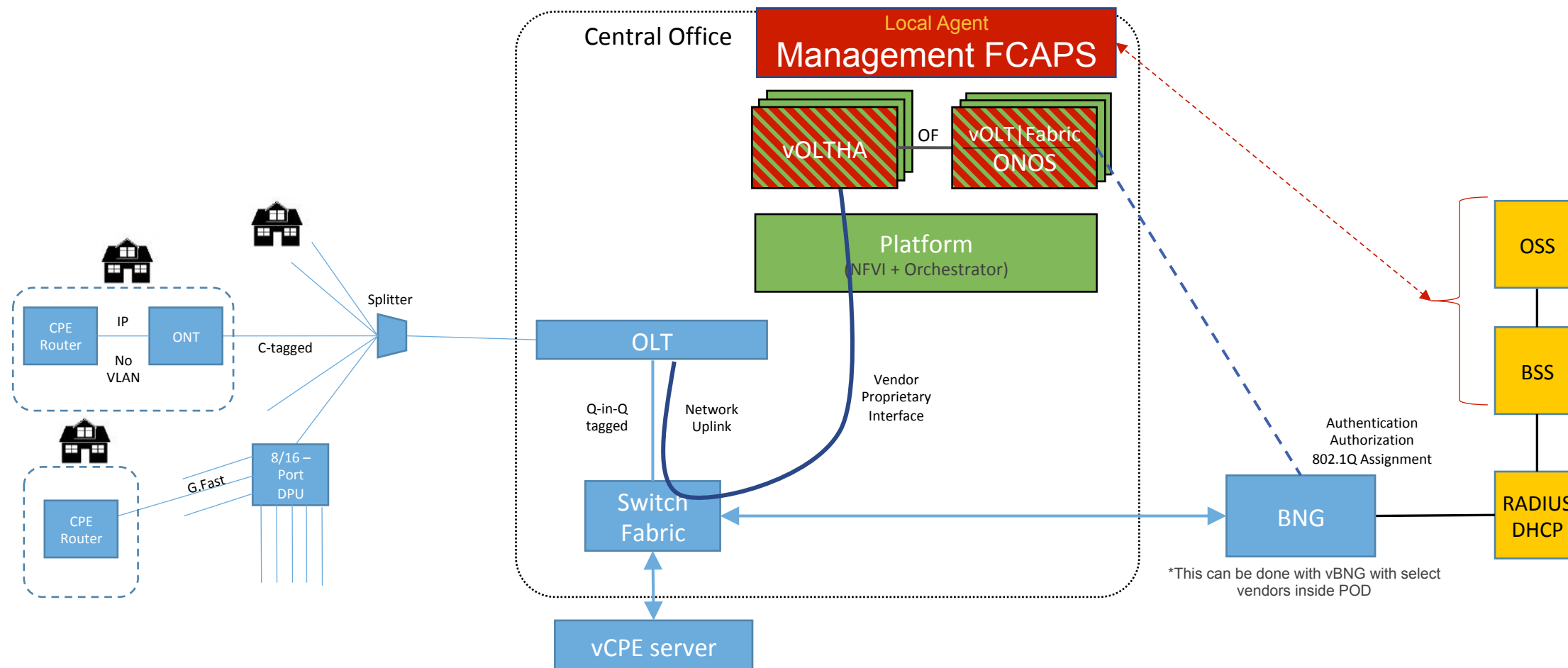
Support **additional capabilities** like :

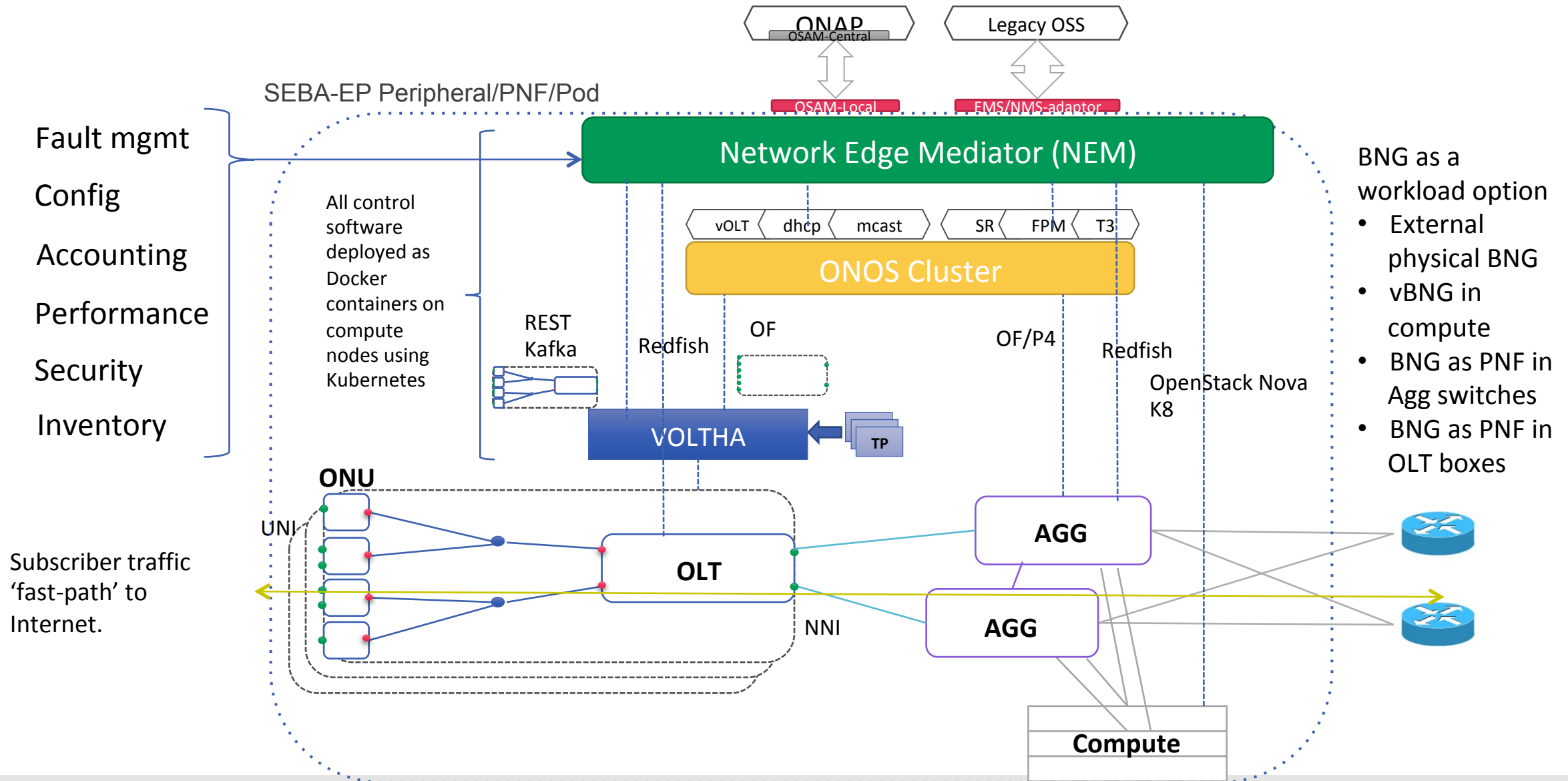
- Traffic Management; QoS, Scheduling/Queuing Policies
- Support Multiple Access Technologies without burdening VOLTHA Core with needing to understand the details/complexities of each Access Technology.
- Scalability Testing/Hardening
- Life Cycle Management
- Performance Monitoring
- Customize Services (HSIA, Voice, Video, Multicast)
- ONU and Subscriber Authentication Customization

Management Plane

Control Plane

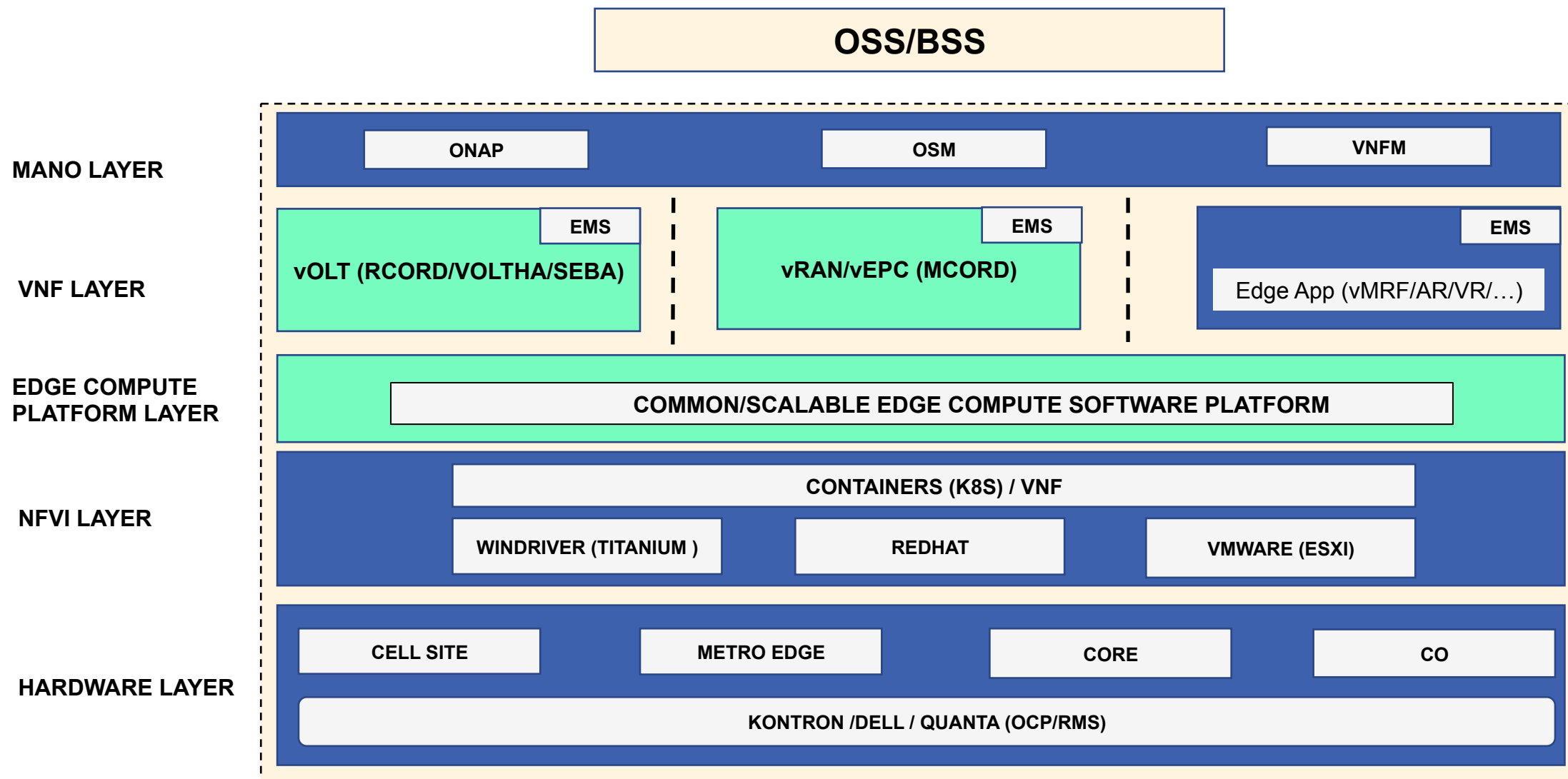
Data Plane





ONF Roadmap

- *BNG Disaggregation*
- *Using P4 in Aggregation switch*
- *Implementing more operator workflows*
- *Performance & scale improvements for Trials*
- *Redundancy*
- *Integrating VOLTHA 2.0 & Technology profiles*
- *ISSU*
- *Integrating M-CORD profile to use SEBA as mobile backhaul*



A nighttime photograph of the Shanghai skyline, featuring the Shanghai Tower and other illuminated skyscrapers along the Bund. The scene is overlaid with several glowing white arcs that sweep across the sky, creating a sense of motion and connectivity. The text 'Radisys' is centered in the upper half of the image.

Radisys

Thank You