Mobile & 5G Tutorial

ONF Mobile Edge Cloud Ecosystem

Tutorial Outline: COMAC

Morning

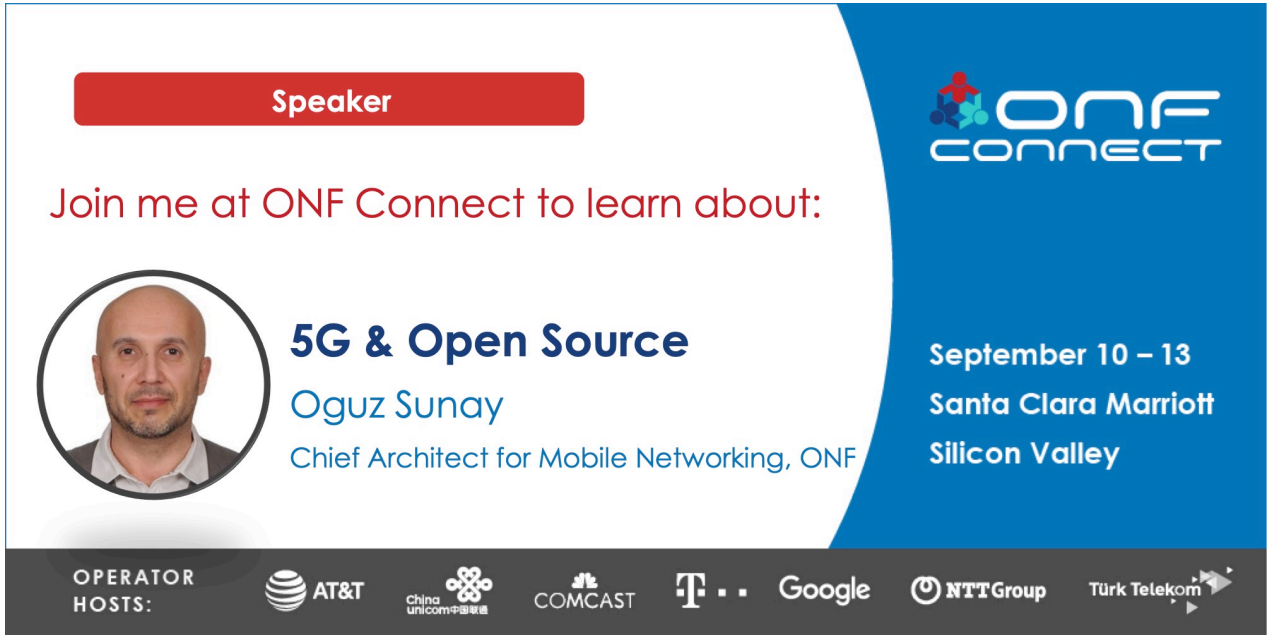
- 9:00am - 9:45am - COMAC RD and EP Overview
- 9:45am - 10:30am - COMAC EP Platform Deep-Dive
- 10:30am - 11:00am – Break
- 11:00am - 11:45am - Installing and Setting Up the COMAC EP Release
- 11:45am - 12:30pm - Hands-On with COMAC-in-a-box on CloudLab
- 12:30pm - 1:30pm - Lunch

Tutorial Outline: OMEC

Afternoon

- 1:30pm - 2:30pm - OMEC Project Overview
- 2:30pm - 3:00pm - Submitting code/fixes to OMEC and OMEC CI/CD
- 3:00pm - 3:30pm – Break
- 3:30pm - 4:15pm - Hands-On with OMEC on CloudLab
- 4:15pm - 4:40pm - Evolving OMEC - Next Step: Production Grade MME
- 4:40pm - 5:00pm - Closing Remarks

More Information



PANEL on September 11, 2019 @ 11:45am

More Information

TALK on September 11, 2019 @ 2:00pm

A Very Brief Introduction to ONF

Oğuz Sunay, Chief Architect, ONF

ONF's Operator Led Mission

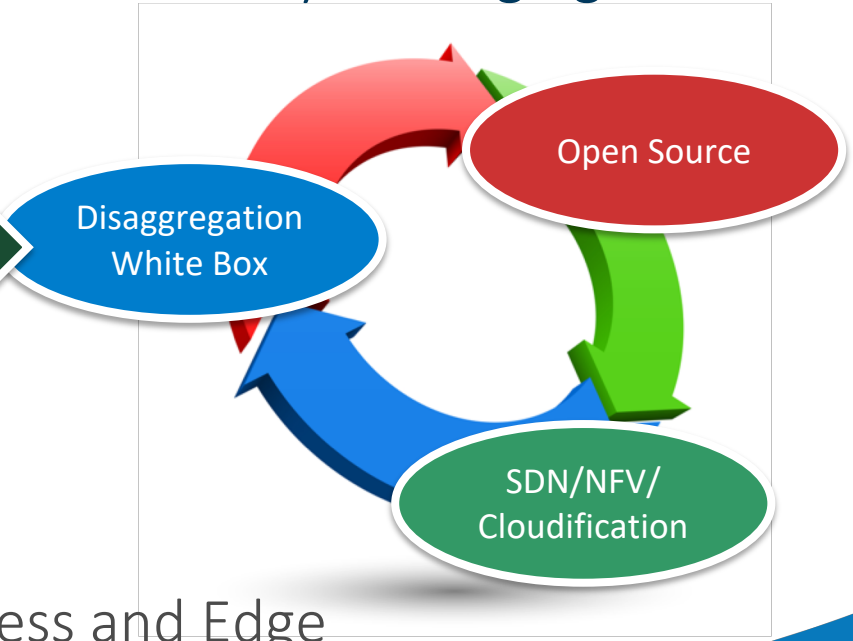
Transform Operator Networks

Why?

… to bring capex & opex efficiencies & innovative services

How?

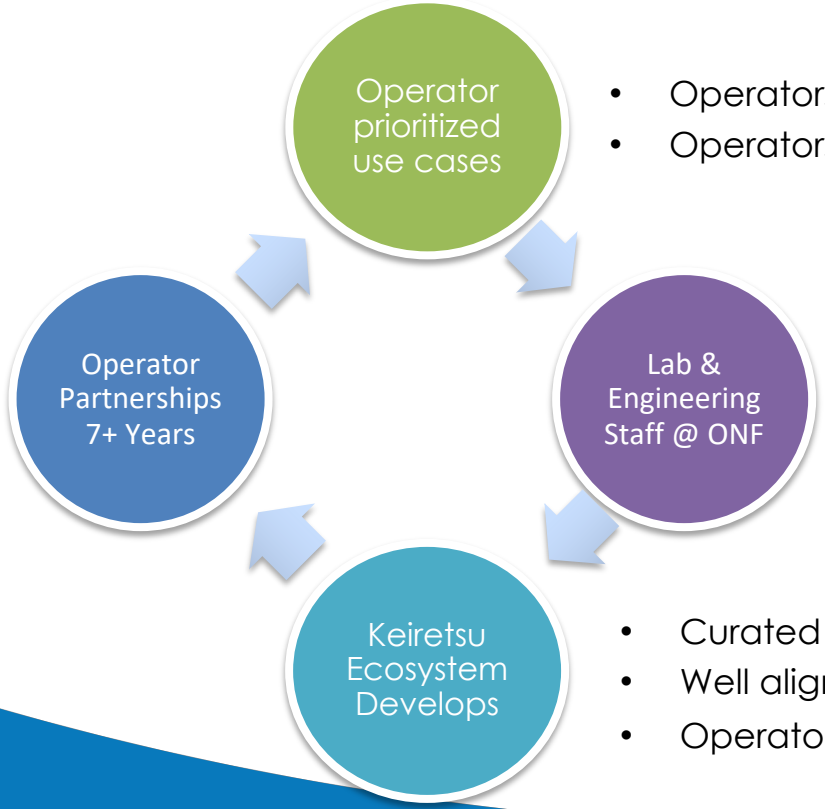
by leveraging



with the focus on Access and Edge

ONF's Unique Approach

Operator Led Curated Open Source



- Operators first agree on common Use Cases to jointly pursue
- Operators commit to deployment

- Curated supply chain engages to embrace opportunity
- Well aligned vendors each contribute value to overall solution
- Operator commitment to deployment ensures ROI

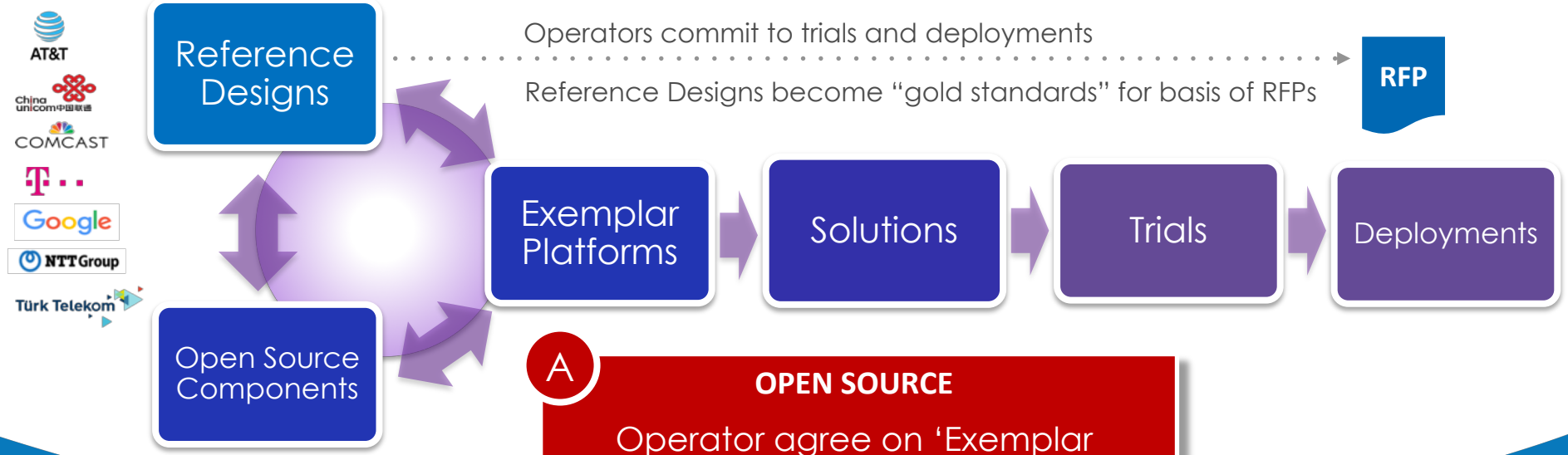
Strategy of Reference Design + Exemplar Platform

B REFERENCE DESIGN

Operators jointly create common specifications

C DEPLOYMENTS

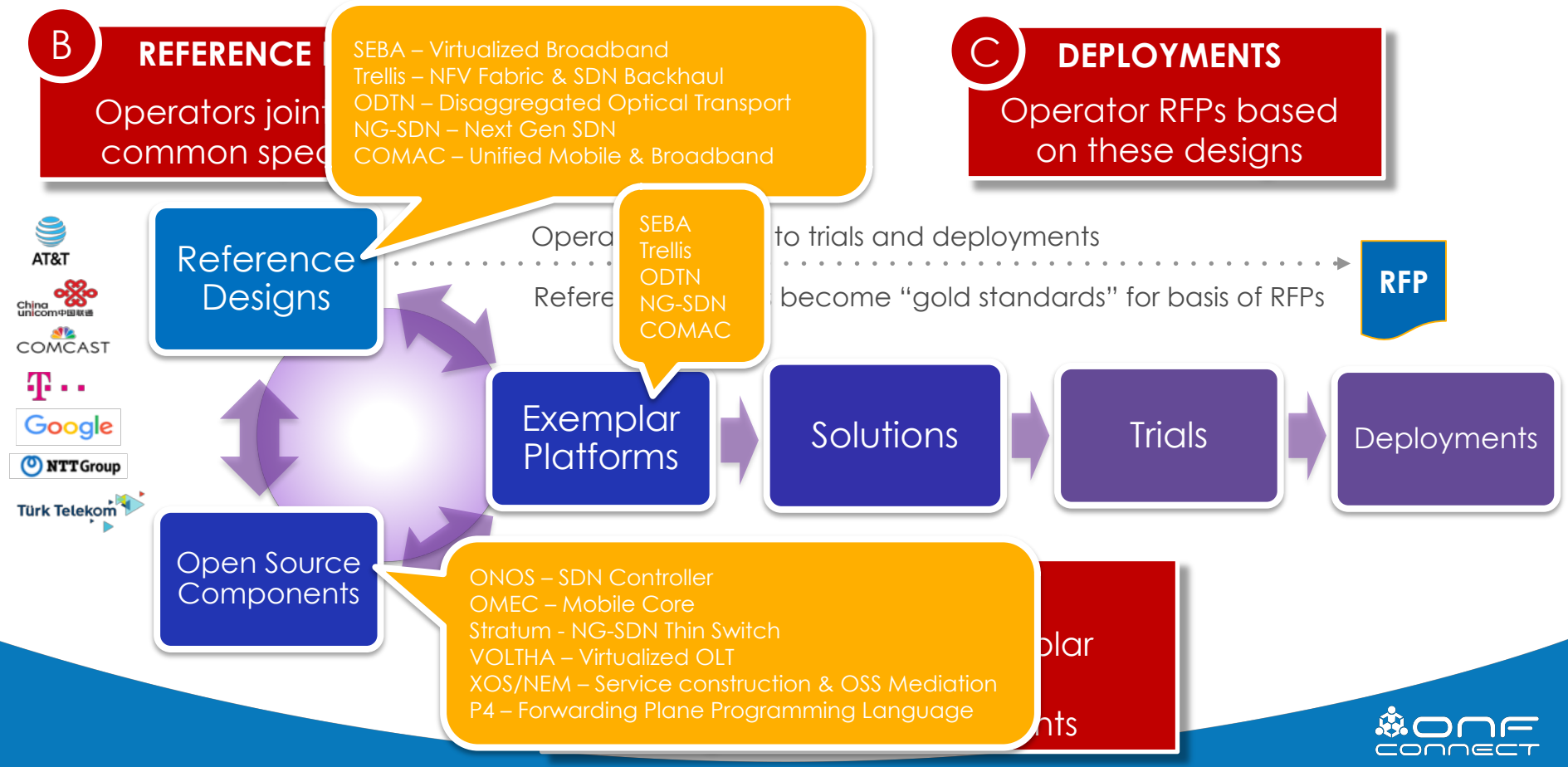
Operator RFPs based on these designs



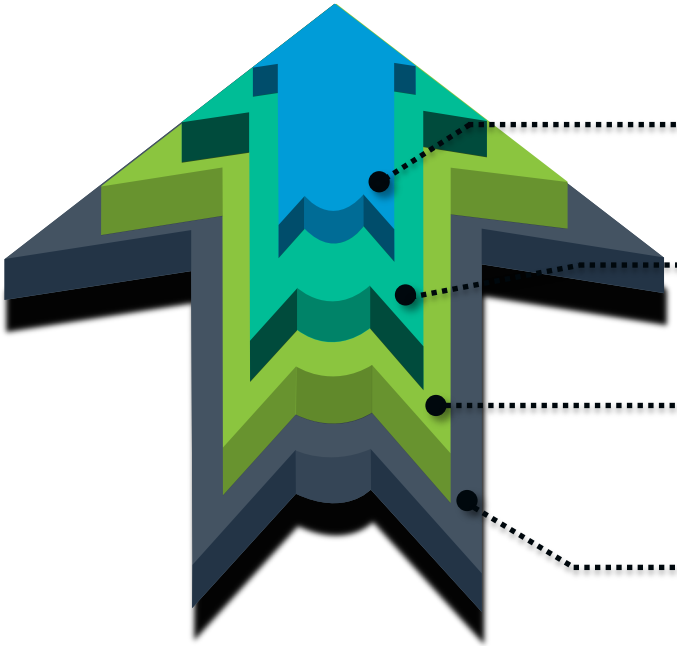
A OPEN SOURCE

Operator agree on 'Exemplar Platforms' using selected components

ONF Reference Designs and Exemplar Platforms



Mobile Projects at ONF



COMAC

Open source platform enabling user plane and control plane convergence for multiple access technologies at the edge

OMEC

Open source, disaggregated, CUPS compliant 3GPP core

M-CORD

Mobile edge cloud platform enabling software-defined controlled RAN, hosting all or some of core network VNFs, OTT apps and enabling multi-cloud connectivity

CORD

Central Office Re-architected as a Datacenter

Open source edge cloud platform for disaggregated, software-defined controlled access using commodity hardware

COMAC
Converged Multi Access & Core

Oğuz Sunay, Chief Architect, ONF

COMAC

Scope

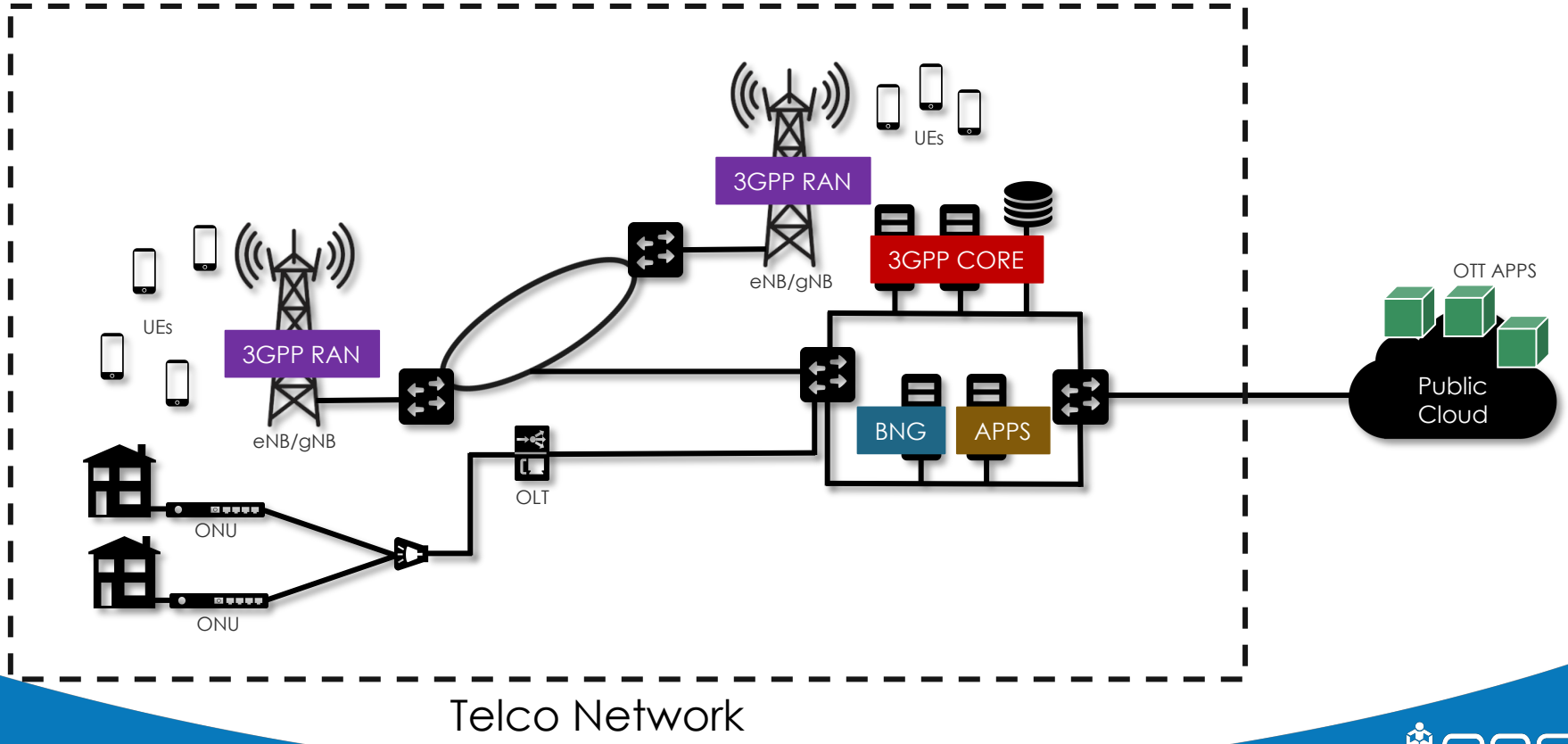
- Develop a modular, cost-efficient platform and components with well-defined interfaces to enable access and core networks, including
  - A streamlined, simple and cost-efficient implementation of 3GPP cellular core,
  - A converged user plane function (CUPF) that unifies user plane components of fixed broadband network gateway, 3GPP cellular core and virtualized 3GPP cellular radio access that would be hosted at the multi-access edge cloud,
  - A suite of control plane functions/applications that would intelligently be engaged to ensure proper, and standards compliant and programmatic control of CUPF,
  - Access and Core Controllers that intelligently and programmatically map CUPF with the corresponding suite of control plane applications.

Supporting Operators

Big Picture: Edge Cloud

Why Multi Access? Why Convergence?

Evolution Towards the Edge



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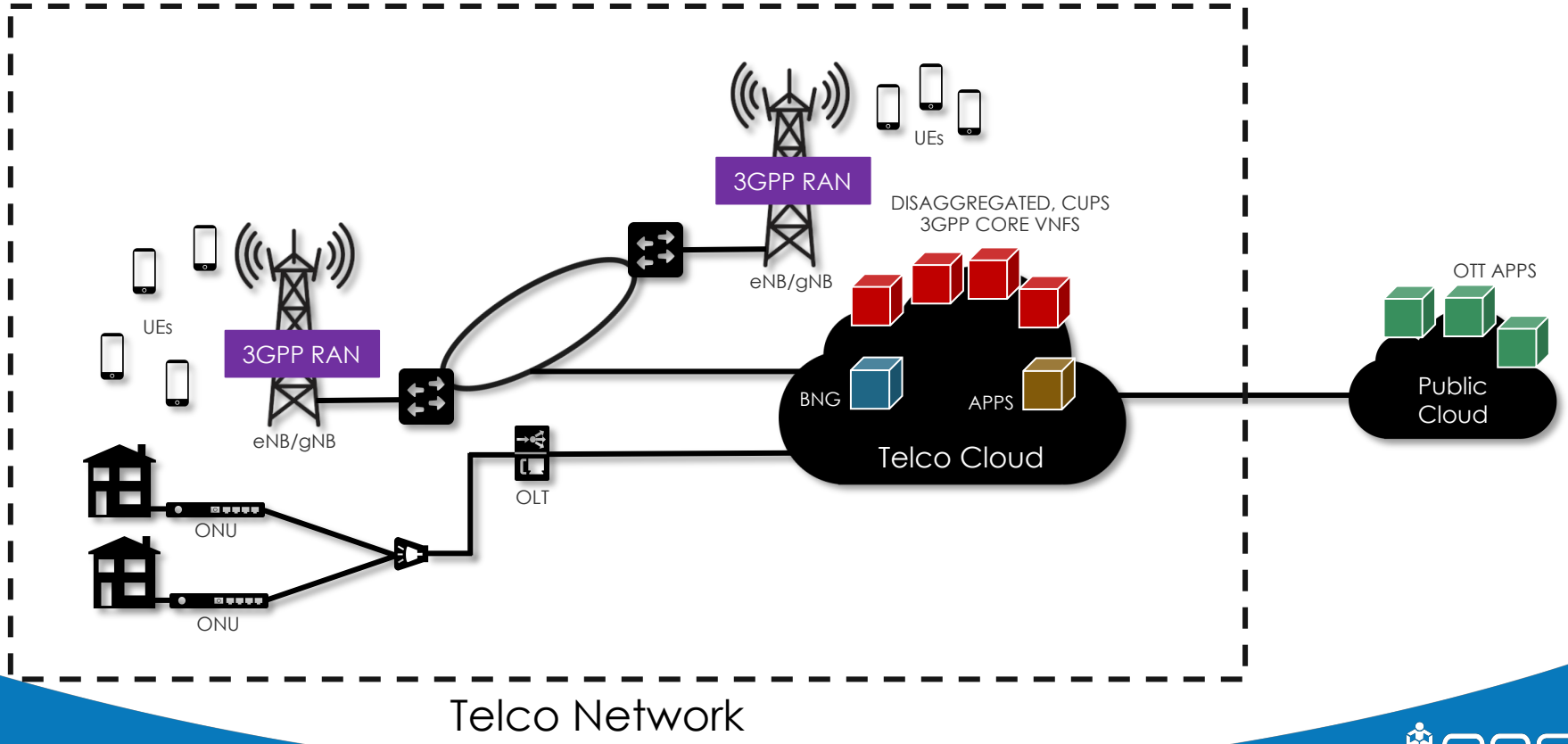

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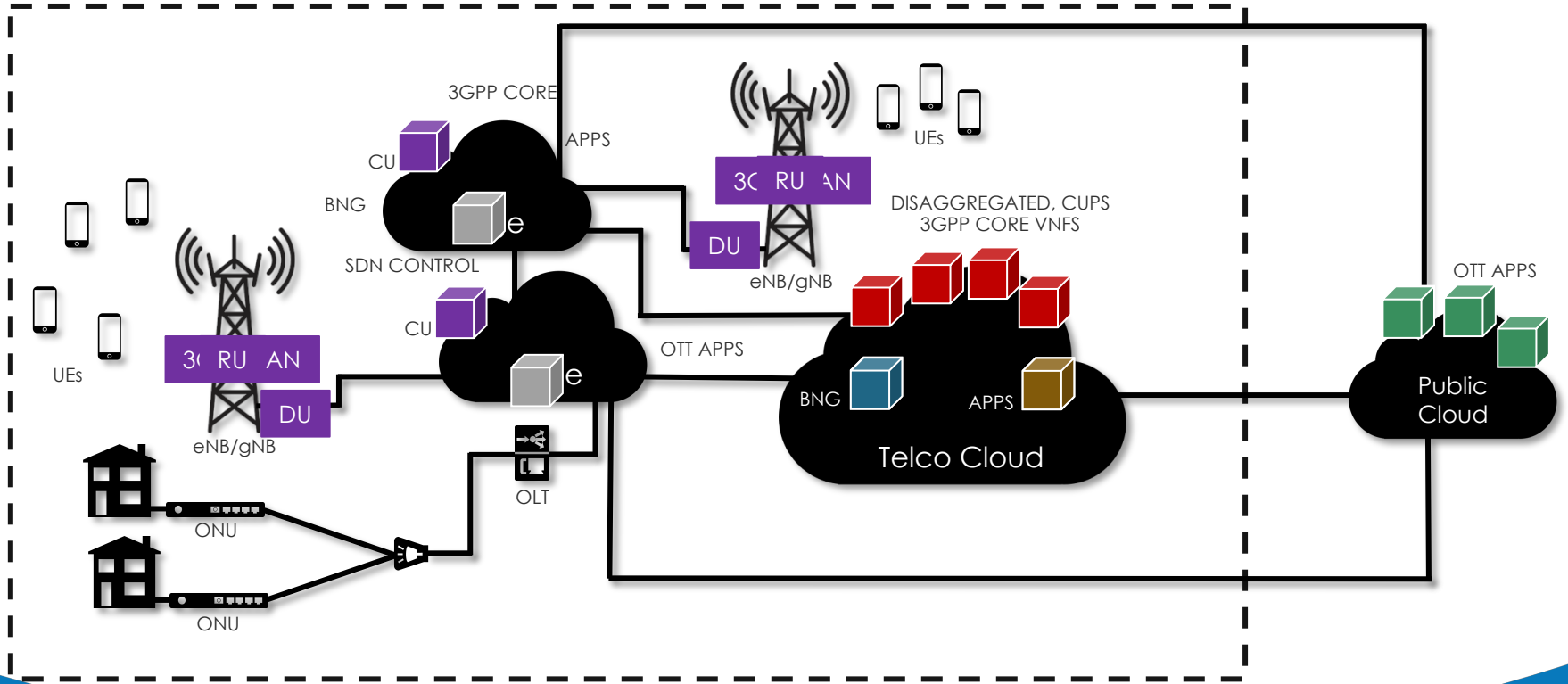
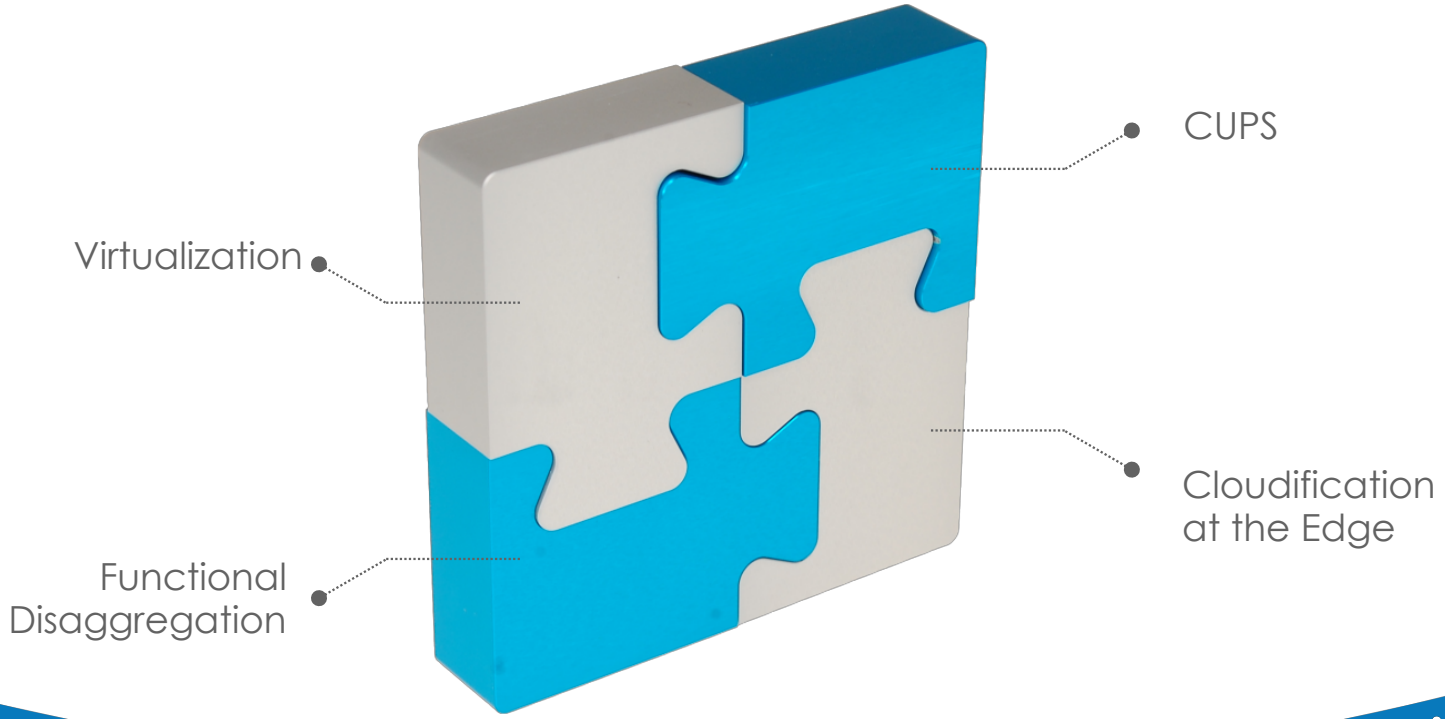


COMAC Project

Pillars, Components, and Evolution

COMAC Pillars

Why is Convergence Relevant Now?



COMAC Pillars

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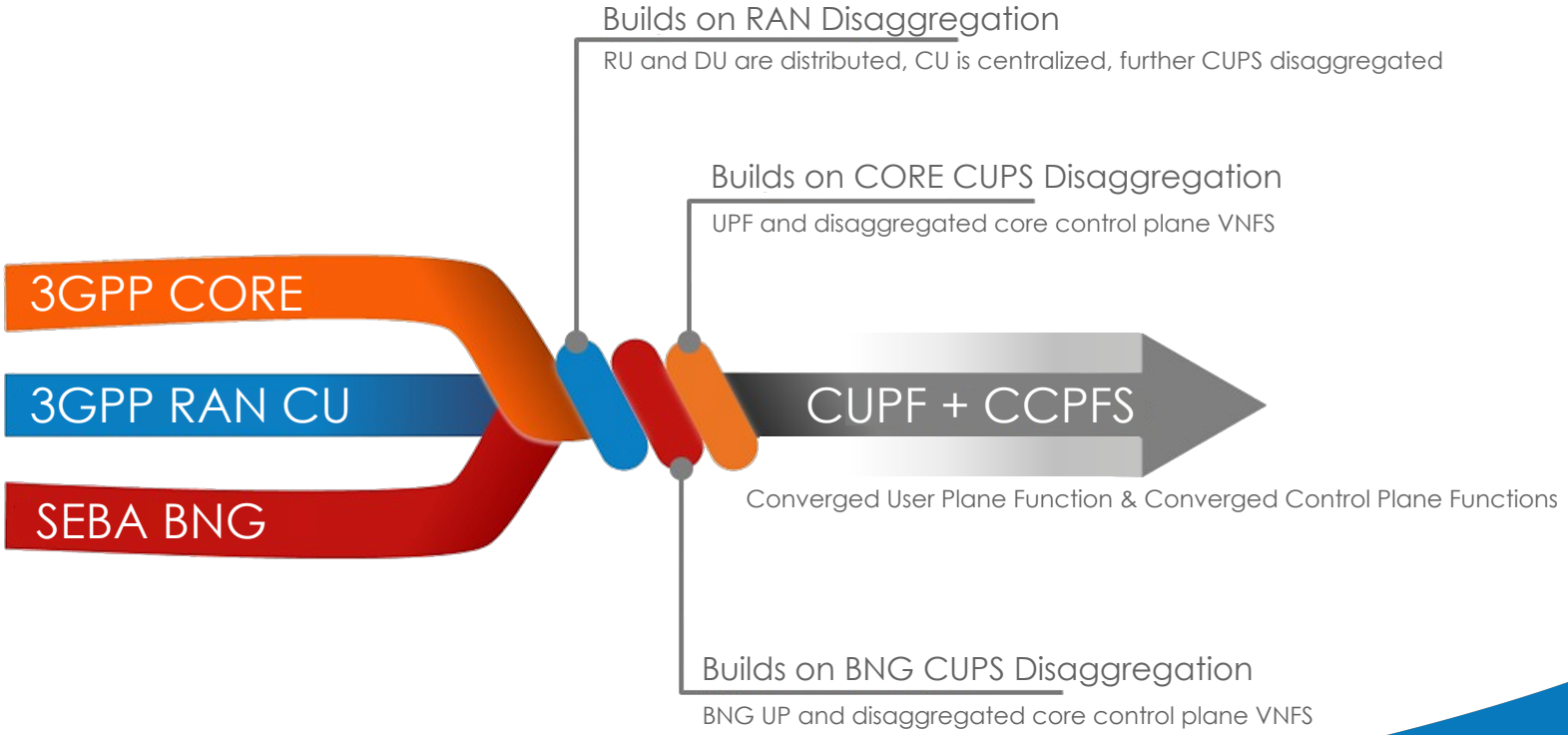
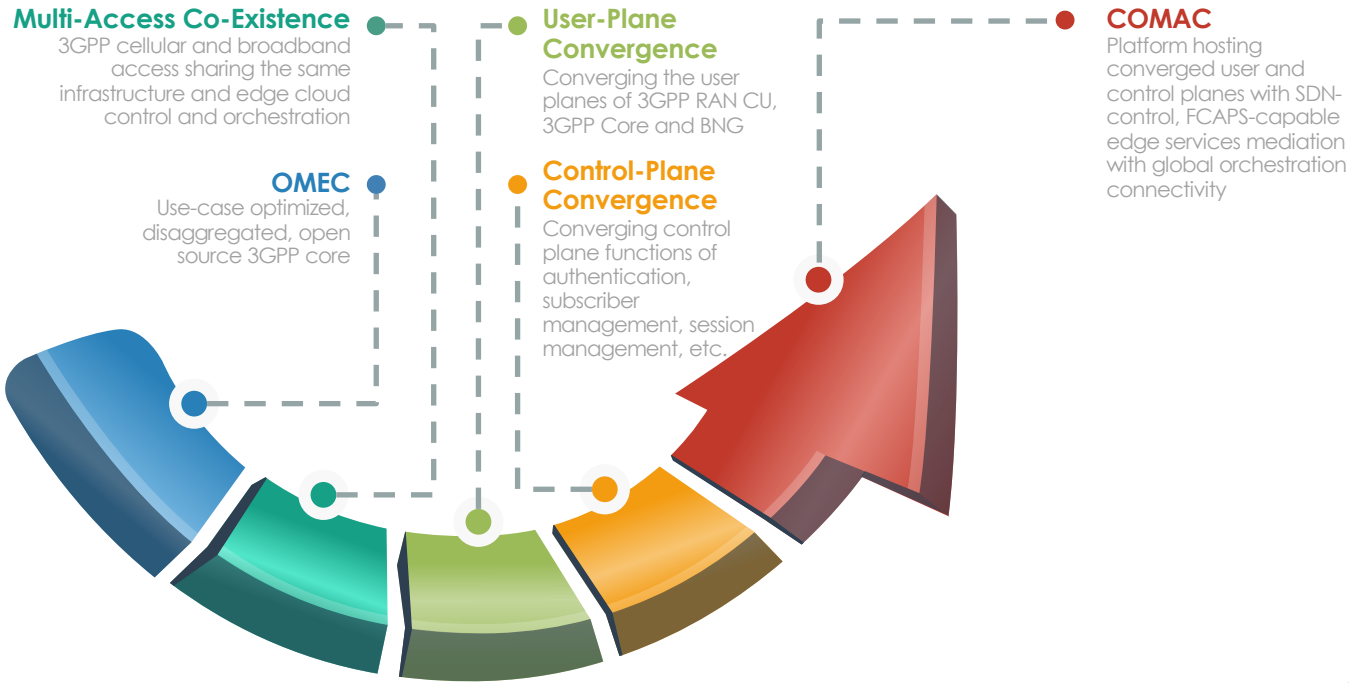


COMAC Evolution

Phased Approach



COMAC EP v.1.0 Release

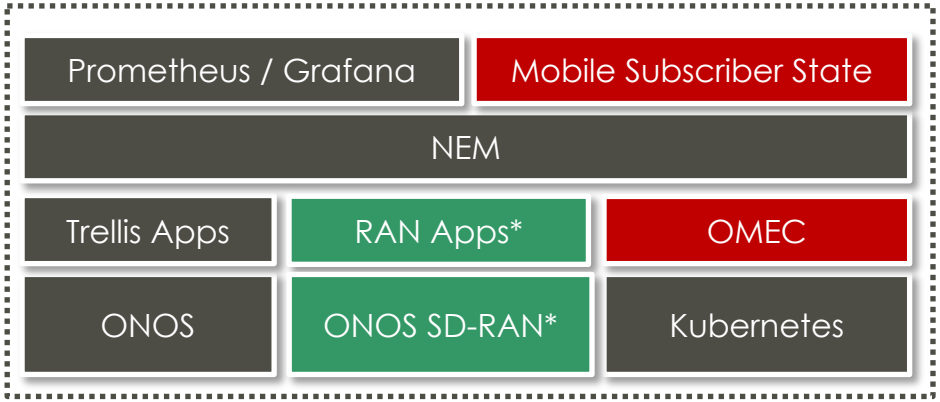
COMAC EP v1.0 Release

Graduating from Demo Quality to Field Trial Quality Towards Production Readiness

China Unicom will use this platform in its field trials for SD-RAN and MAEC

ONF Mobile Edge Cloud Platform
Official Release Date:
September 20, 2019

OMEC dev follows the same processes that other ONF projects use
Gateway components hardened for deployment
MME component is being enhanced towards deployment



M-CORD has conducted very successful demonstrations

Focus has been on showcasing cutting-edge technology

SD-RAN controller is based on ONOS which has been hardened for Trellis
Further development will be in synch with µONOS processes
RAN Apps development will follow the same processes that other ONF projects use

*** Will not be part of v1.0 release, but subsequent releases**

THANK YOU

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