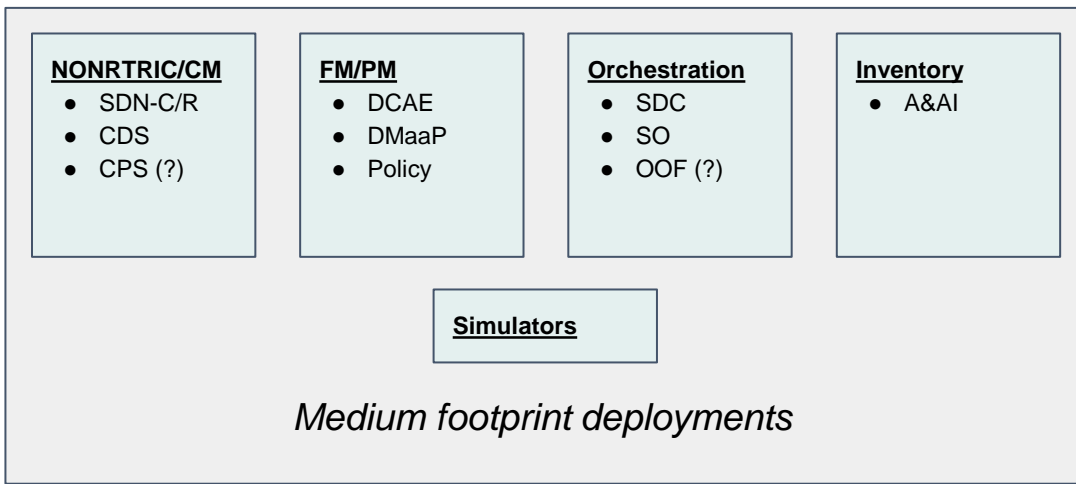# ORAN ONAP

M Seshu Kumar

Design-Time | **Run-Time** | **Manage ONAP** | **ONAP Operations Manager (OOM)** | **Honolulu ONAP** OPEN NETWORK AUTOMATION PLATFORM

VNF Validation | **VVP** | **VNF SDK** | **Portal** | **O&M Dashboard (VID)** | **Use-Case UI** | **External APIs** | **CLI** | **Interfaces**

Service Design & Creation (SDC)
- Service/xNF Design
- xNF Onboarding
- Workflow Designer
- Controller Design Studio
- DCAE Design Studio
- **Catalog**

(…)

Control Loop Automation (CLAMP) | **Policy Framework** | **Service Orchestration (SO)** | **Active & Available Inventory (AAI)** | **External System Register (ESR)**

Microservice Bus (MSB) | **Message & Data Routers (DMaaP)**

DCAE
- Correlation Engine (Holmes)
- Collectors

Infrastructure Adaptation (Multi-VIM/Cloud) | **Controller Design Studio (CDS)** | **SDN Controller (SDNC)** | **Application Controller (APPC)** | **Virtual Function Controller (VFC)**

Shared Services
- AuthN/AuthZ (AAF)
- Optimization (OOF)
- Logging
- Audit (POMBA)
- Multi-Site State (MUSIC)
- CPS

NONRTRIC/CM
- SDN-C/R

FM/PM
- DCAE
- DMaaP
- Policy

Simulators

Small footprint deployments

NONRTRIC/CM
- SDN-C/R
- CDS
- CPS (?)

FM/PM
- DCAE
- DMaaP
- Policy

Orchestration
- SDC
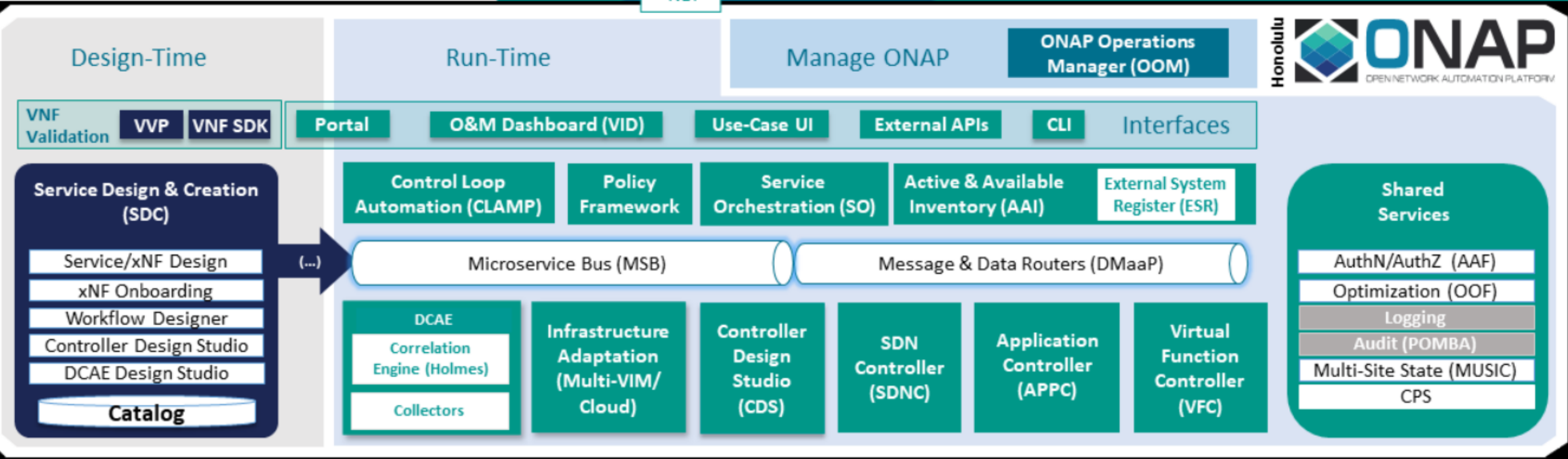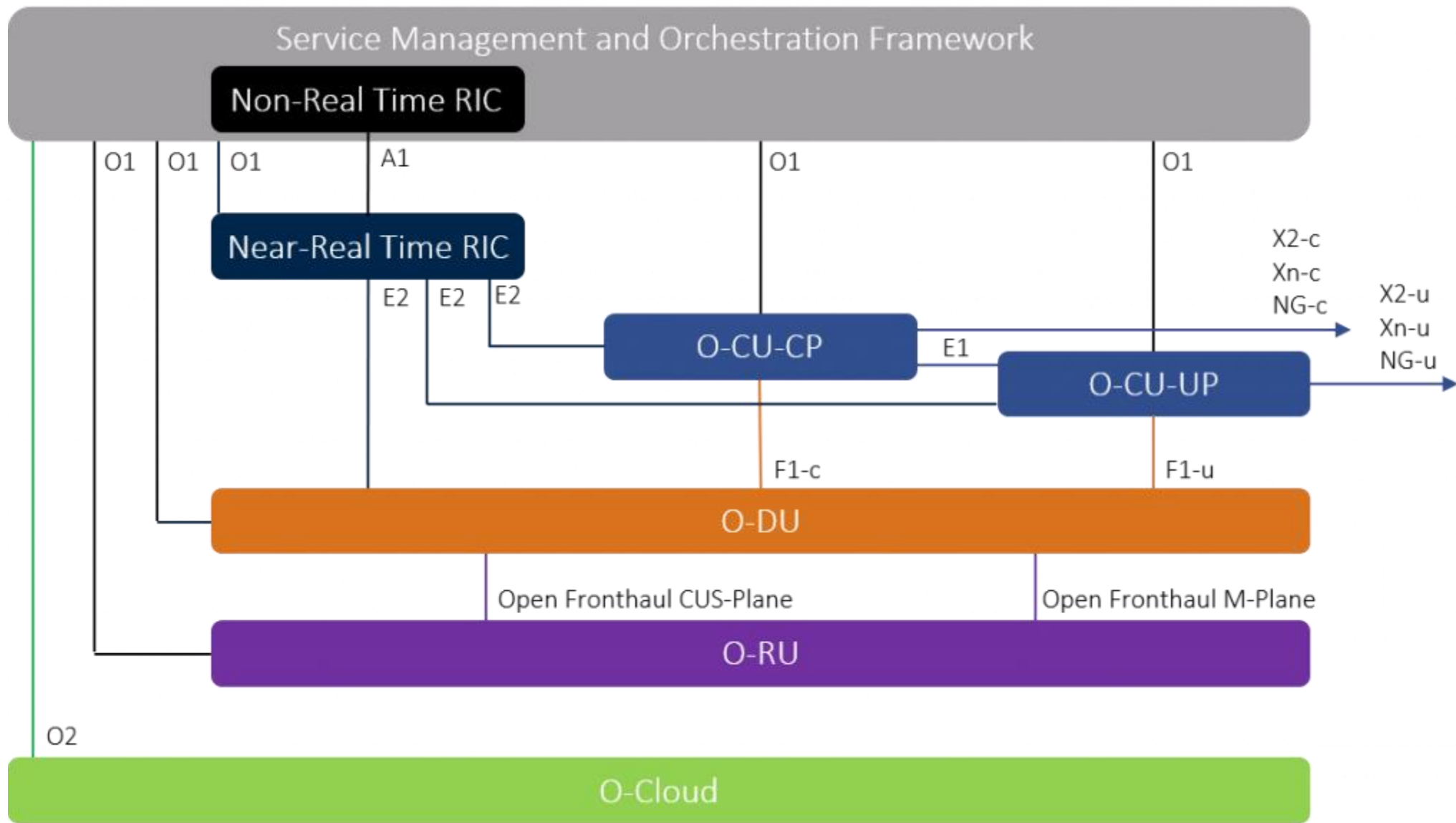- SO
- OOF (?)

Inventory
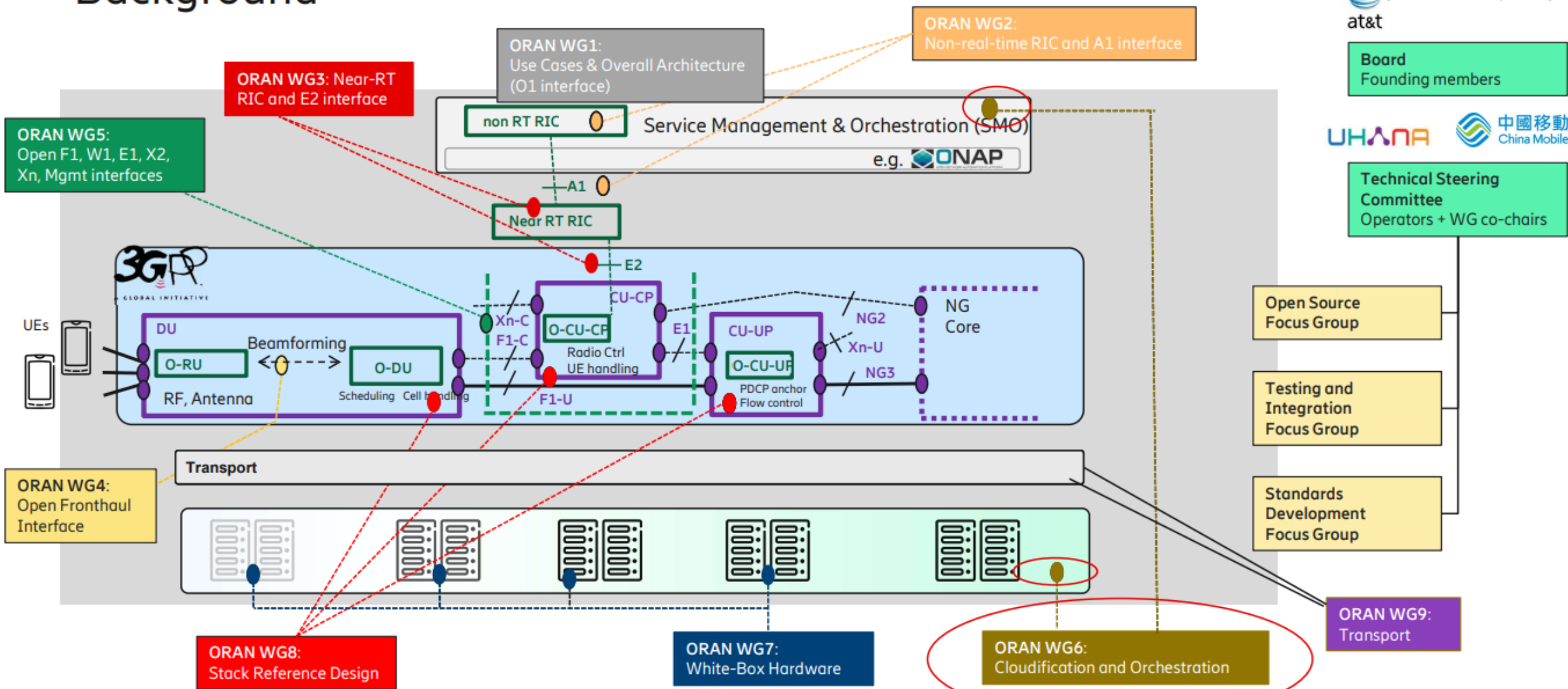- A&AI

Simulators

Medium footprint deployments

- The task is to select the specific components of ONAP based on the deployment need of the ORAN user (operator)
- This is critical to reduce the footprint of the overall deployment
- Need customization and adopt plug and play approach for this to be successful.

Service Management and Orchestration Framework

Non-Real Time RIC

Near-Real Time RIC

O-CU-CP

O-CU-UP

O-DU

O-RU

O-Cloud

O1   O1   O1   A1   O1   O1

X2-c
Xn-c
NG-c

X2-u
Xn-u
NG-u

E2   E2   E2

E1

F1-c   F1-u

Open Fronthaul CUS-Plane   Open Fronthaul M-Plane

O2

O-RAN Work Groups

Background

ORAN WG2: Non-real-time RIC and A1 interface

ORAN WG1: Use Cases & Overall Architecture (O1 interface)

ORAN WG3: Near-RT RIC and E2 interface

ORAN WG5: Open F1, W1, E1, X2, Xn, Mgmt interfaces

ORAN WG4: Open Fronthaul Interface

ORAN WG8: Stack Reference Design

ORAN WG7: White-Box Hardware

ORAN WG6: Cloudification and Orchestration

ORAN WG9: Transport

(Andre Fuetsch, Chair)

Board — Founding members

Technical Steering Committee — Operators + WG co-chairs

Open Source Focus Group
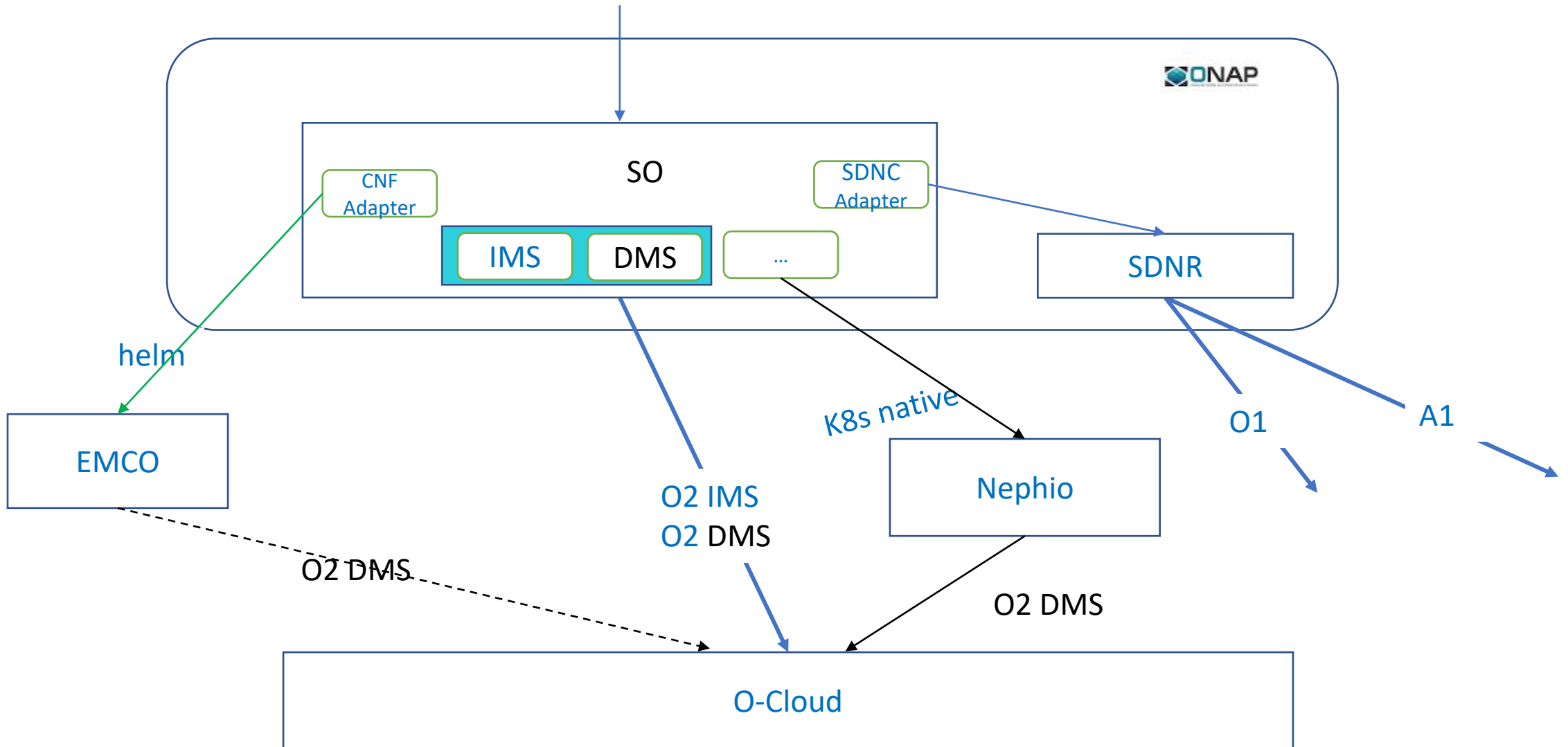
Testing and Integration Focus Group

Standards Development Focus Group

WG6 Scope

ORAN O2 from Wind River

The Critical flows

Topology and Workflow