O N . L A B
M - C O R D

M. Oğuz Sunay
M-CORD Bi-Weekly Meeting
April 20, 2017

AGENDA

1 STATUS
Where are we?
What have we accomplished?

2 NEW PARTNERS / COLLABORATORS
We are growing

3 M-CORD PRIORITIES & ROADMAP
What is next?
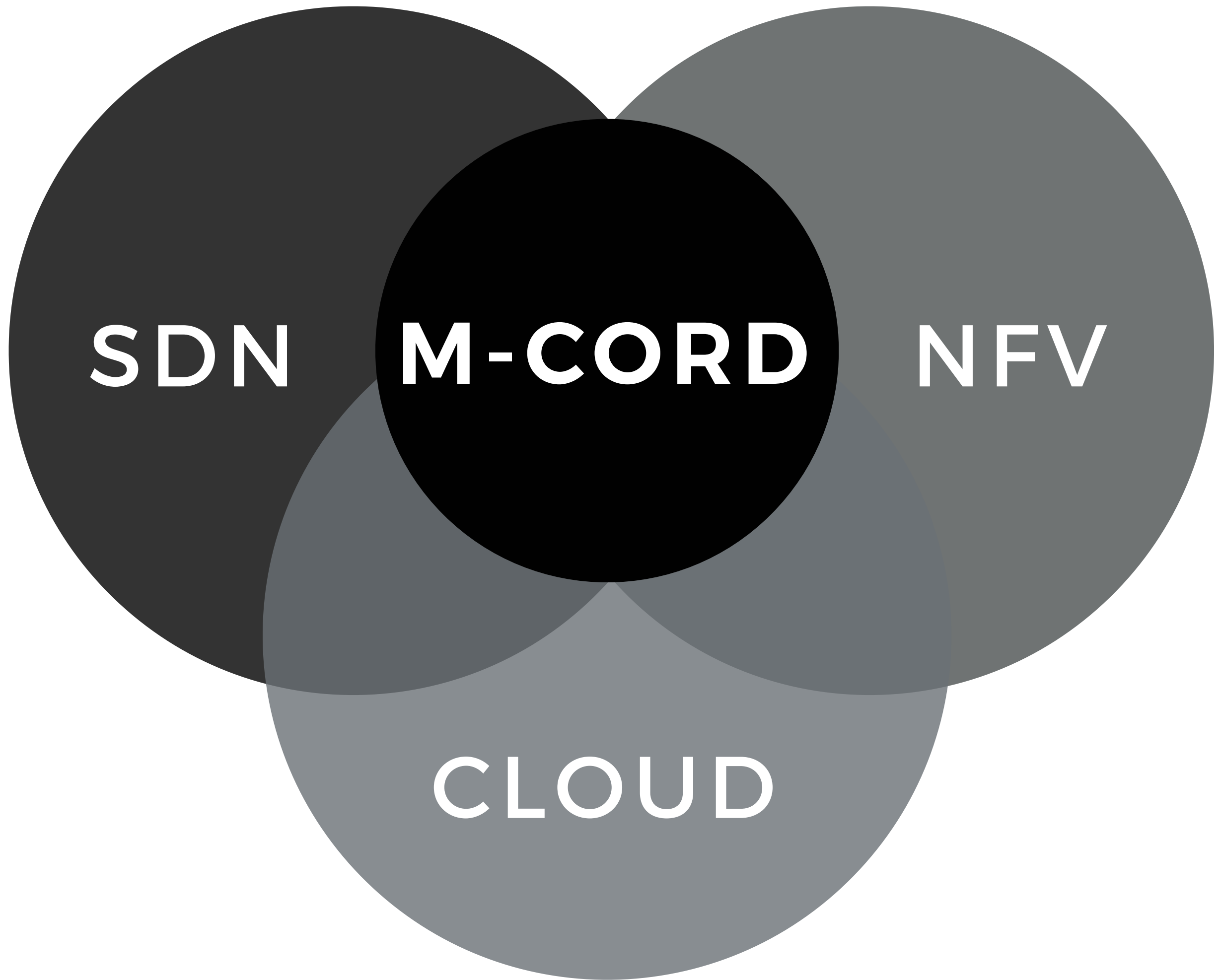
4 UPCOMING PROJECTS
Open call for participation

5 COMMENTS
Q&A

M-CORD

STATUS

SDN **M-CORD** **NFV**
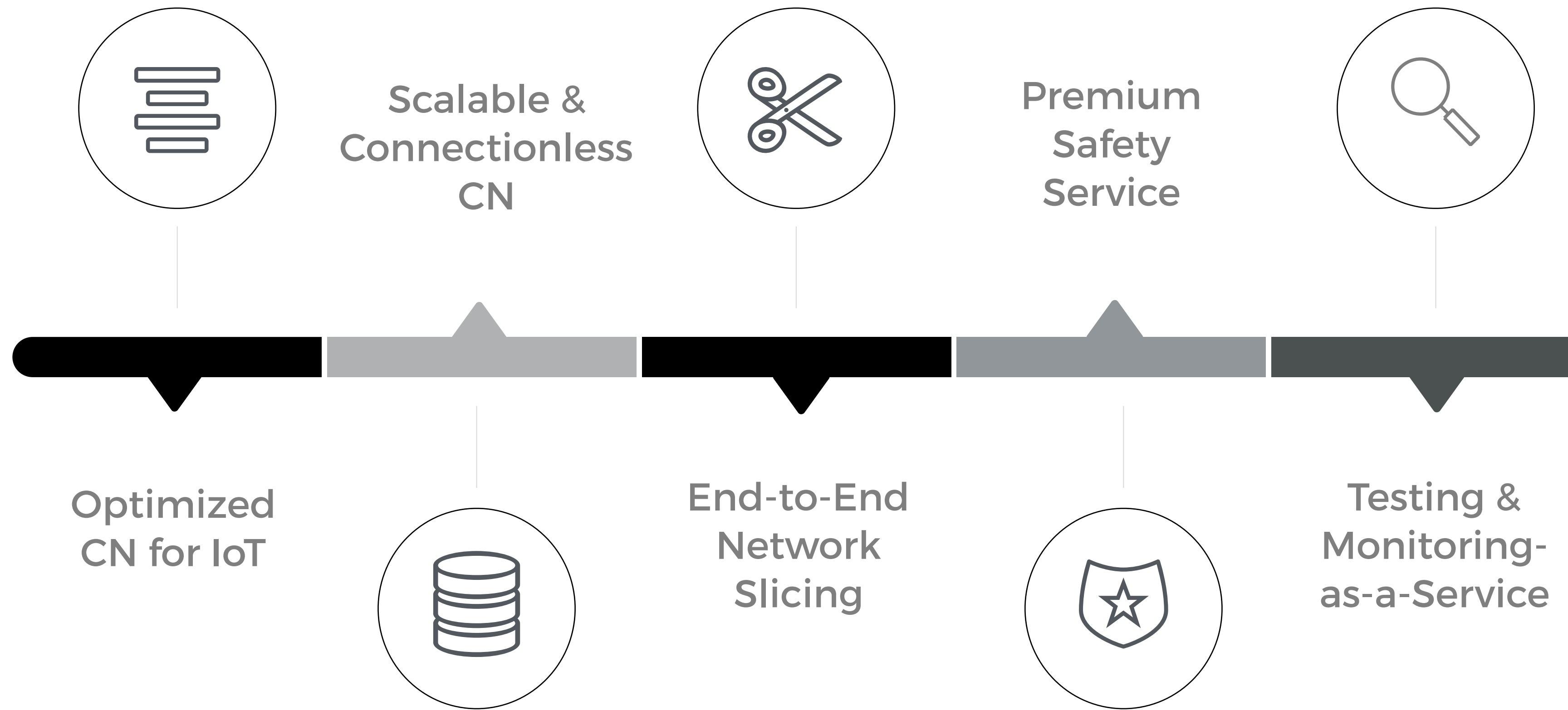
CLOUD

C N

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Disaggregated, virtualized EPC
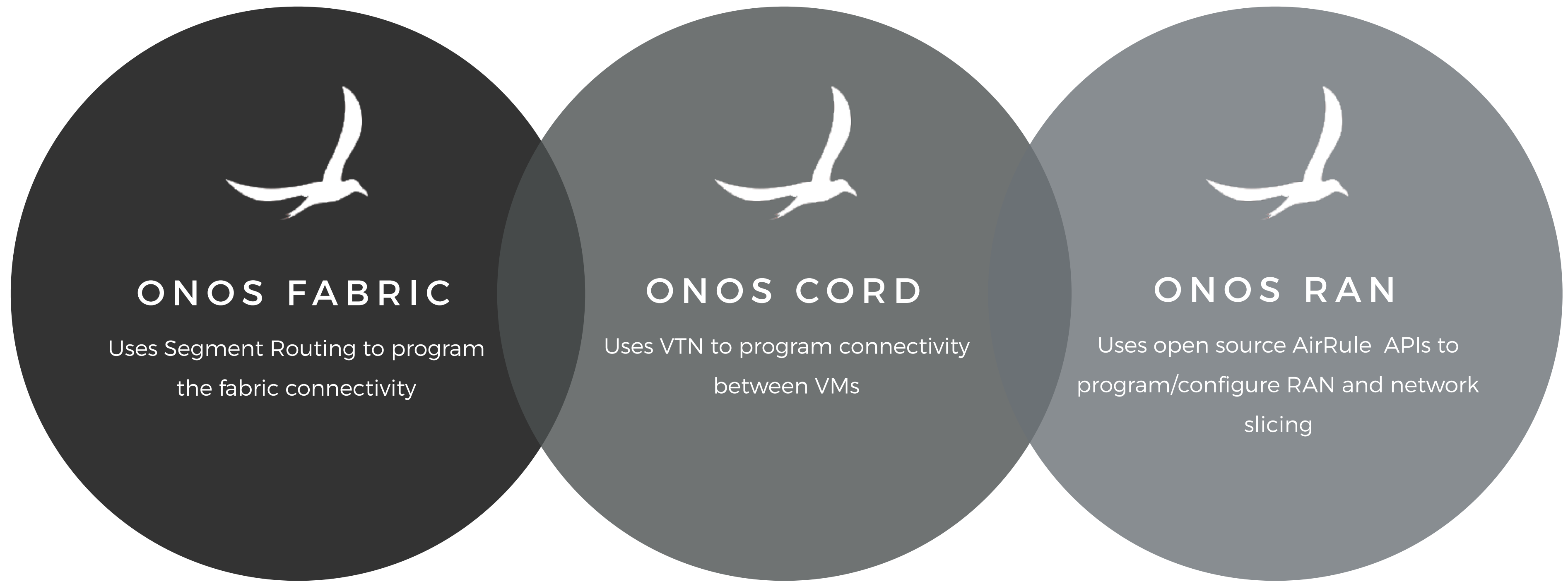running on edge access cloud
over programmable VN/fabric

R A N

_____

Disaggregated (horizontally
into CU and RU), virtualized
(CU), programmable RAN
configured by ONOS

MWC'17 & ONS'17 PoCs

Scalable &
Connectionless
CN

Premium
Safety
Service

Optimized
CN for IoT

End-to-End
Network
Slicing

Testing &
Monitoring-
as-a-Service

ONOS STATUS

ONOS FABRIC

Uses Segment Routing to program the fabric connectivity

ONOS CORD

Uses VTN to program connectivity between VMs

ONOS RAN

Uses open source AirRule APIs to program/configure RAN and network slicing

XOS STATUS

NETWORK FUNCTION		NETWORK SERVICE

RAN-CU
MME, MM, SM
S-GW-u, S-GW-c
P-GW-u, P-GW-c
HSS
Network Cookie VM
Monitoring & Testing VMs

RAN
CN
RAN Slice
CN Slice
Connectionless EPC
Static Device EPC
EPC Monitoring and Testing
Public Safety

SERVICE ON-BOARDING - Partially complete
SERVICE CONFIGURATION - Manually done
SCALABILITY - Not there yet

NEW PARTNERS / COLLABORATORS

PRIORITIES

OPEN SOURCE EPC

A single, multi-vendor, disaggregated EPC will be officially released.

MISSING PIECES: HSS, Diameter Support for MME

DESIRABLE: The possible most recent release

x.RAN INTEGRATION

ONOS will be enhanced to control / configure ends via x.RAN APIs

MISSING PIECES: Availability of x.RAN compliant eNB solutions

(software + hardware) at ON.Lab.

DESIRABLE: Help from Radisys, Aricent , Intel and others
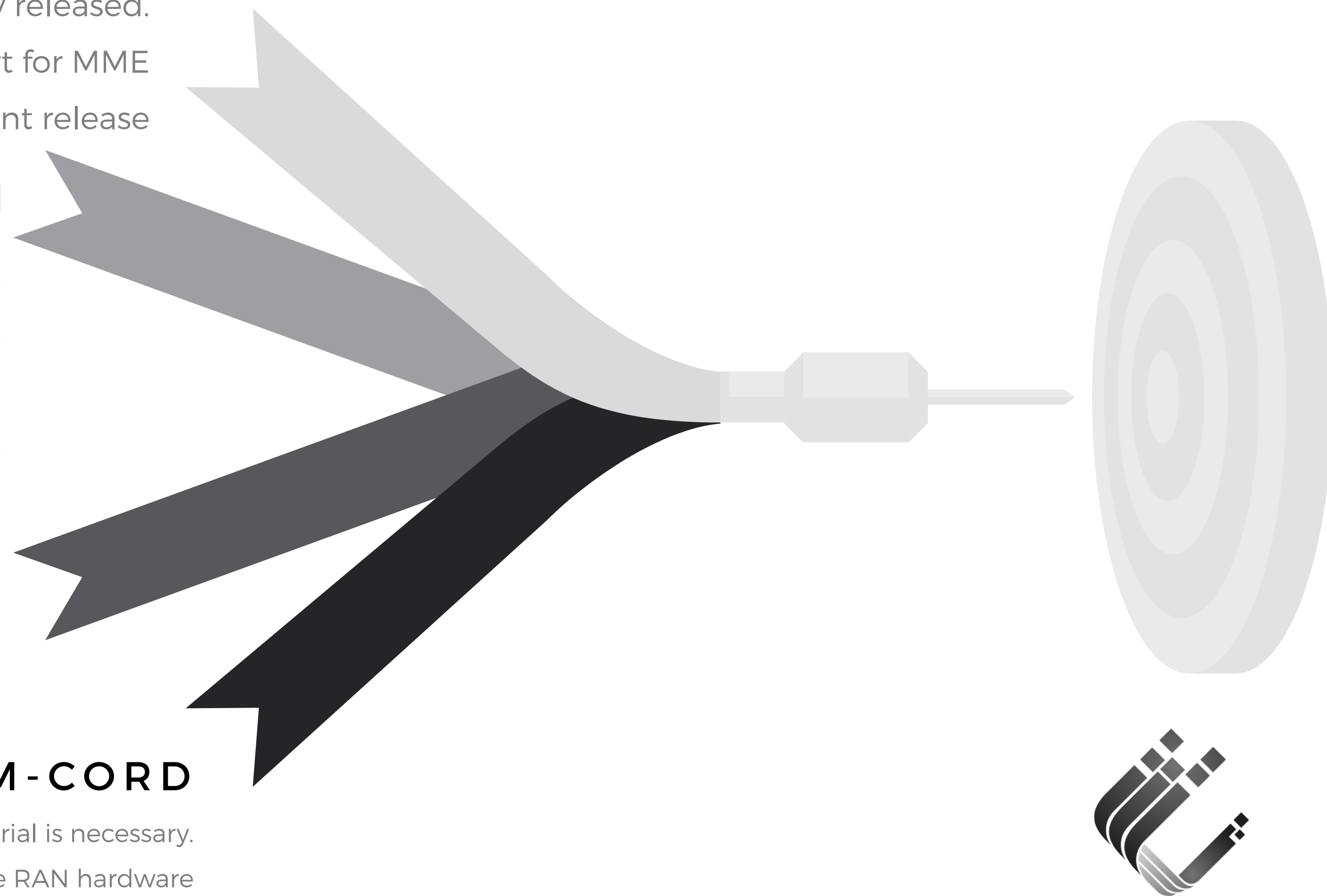
PRIVATE LTE

A neutral host private LTE solution framework will be developed.

MISSING PIECES: CBRS Support, Mobile Edge Services
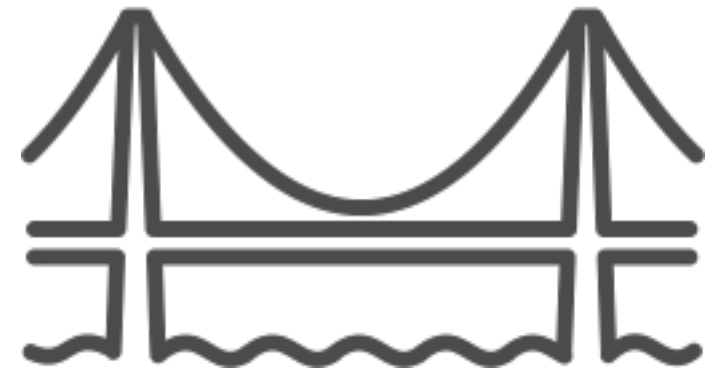
FIELD TRIAL READY M-CORD

RAN and EPC components scalable for a field trial is necessary.

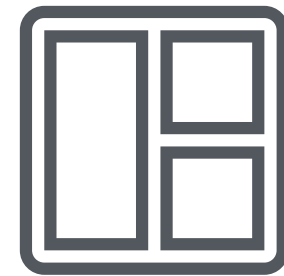**MISSING PIECES:** Operator support, deployable RAN hardware

TIMELINE

WE NEED NEW PoCs

MWC AMERICAS

SEPTEMBER 12, 2017
MOSCONE CENTER
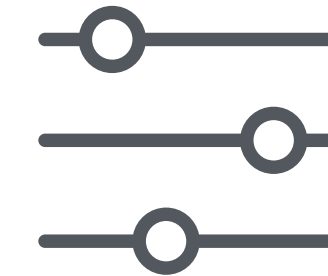SAN FRANCISCO, CA

x.RAN DEMO

An ONOS-controlled x.RAN demo is highly desirable

CBRS

A CBRS-supporting M-CORD is highly desirable

ONAP

An initial ONAP integration may be demo'ed.

OTHER POTENTIAL PROJECTS

MULTIACCESS CORD

M-CORD & R-CORD in a single pod

LINK AGGREGATION

Programmable LTE-WiFi link aggregation

PERFORMANCE TESTING

Testing of EPC & RAN components as well as ONOS against load and mobility

UNIFIED 3GPP-SDN CP

MME, S-GW-c & P-GW-c as ONOS applications

CLOSED LOOP ANALYTICS

Coordinated A-CORD & M-CORD study towards a closed loop analytics story

OPEN CALL FOR VOLUNTEERS TO DRIVE & DEVELOP THE NEW PoCs

QUESTIONS?