WSIS+15 FORUM 2020

5G Broadcast/Multicast Future of content distribution

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ROHDE&SCHWARZ

Make ideas real

Agenda

- R&S future vision
- 5G BC/MC – New Business Verticals
- 5G BC/MC – Technical solutions
- 5G BC/MC – Multicast as a Service
- Trials – Worldwide

Customer Challenges meet r&s future

BNO

- Change in customer behavior
- Linear TV is loosing popularity against streaming services
- Smartphone/Tablets are gaining importance
- No possible access to portable devices

MNO

- Exponential increase of Mobile video consumption
- Live events are very important
- Consumers desire premium content anytime-anywhere
- No Quality of Service guaranteed – Bad user experience

R&S vision: Efficient Media Delivery – Anywhere, Anytime, to everybody

- Usage of Broadcast/Multicast approach together with Unicast → eMBB
- Deployment of overlay network with One-to-Many concept
- Deployment of SDL mixed mode and/or dedicated mode in existing Cellular sites
- Usage of frequency below 1GHz (i.e. UHF, SDL, etc.)
- Enable Multicast as a Service (MaaS) and profit form existing resources
- Making broadcasting infrastructure more dynamic
- Avoid infrastructure over-provisioning while reducing CAPEX & OPEX

Medical & Health
Internet of Things
Chipset Manufacturer
MNO
Device Manufacturer
5G
Media & Entertainment
Automotive
Industrial Applications

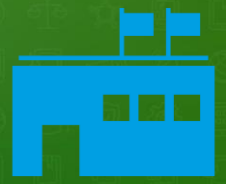
5G BC/MC – New Business verticals

Live Casting – Live big/popular events and linear content

OTA Multicast – SW/FM Updates, Centralized Configuration and Control

Vehicle Casting – M&E inside the vehicle, OTA updates, OTA real-time traffic

Venue Casting - Enhance in-venue atmosphere with Live Home Experience



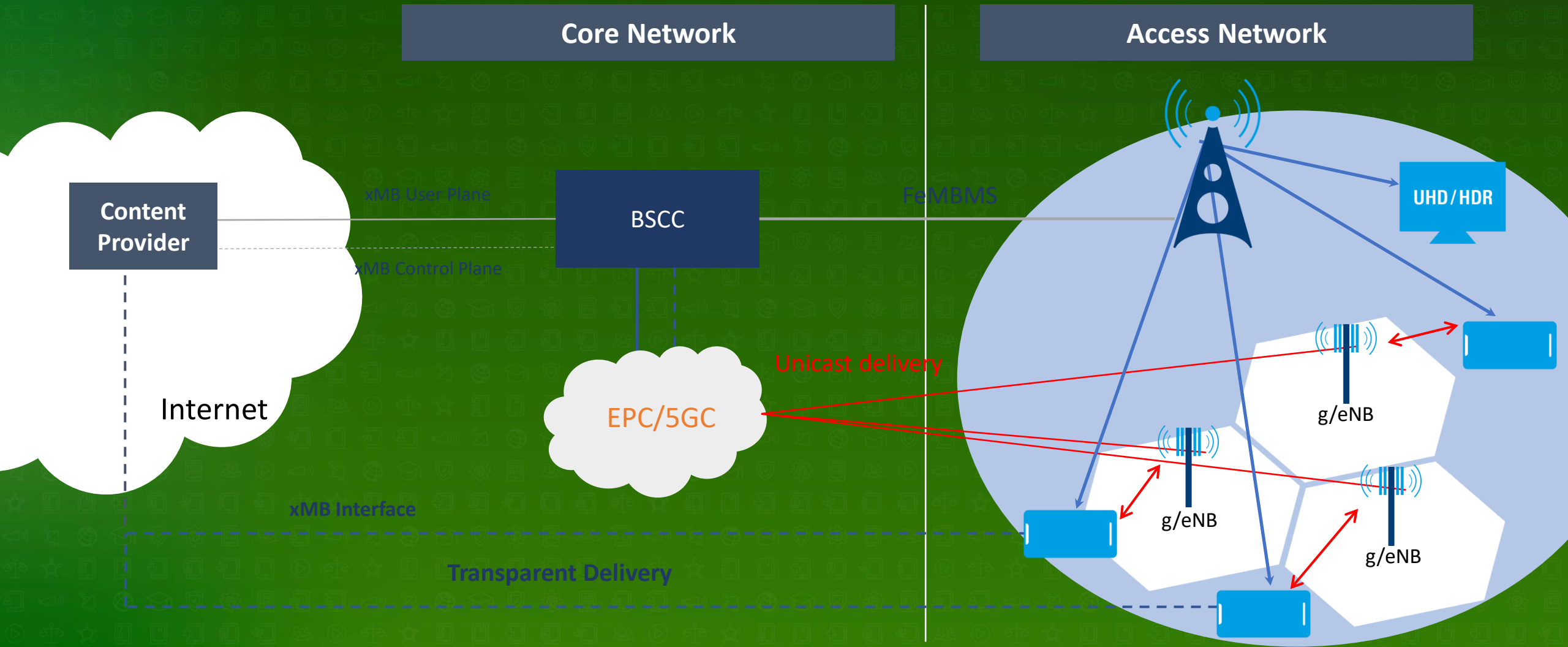
Public Safety Multicast – Emergency alerts, and Weather warning systems

E-Sports – Group gaming Multicasting, All you can Broadcast

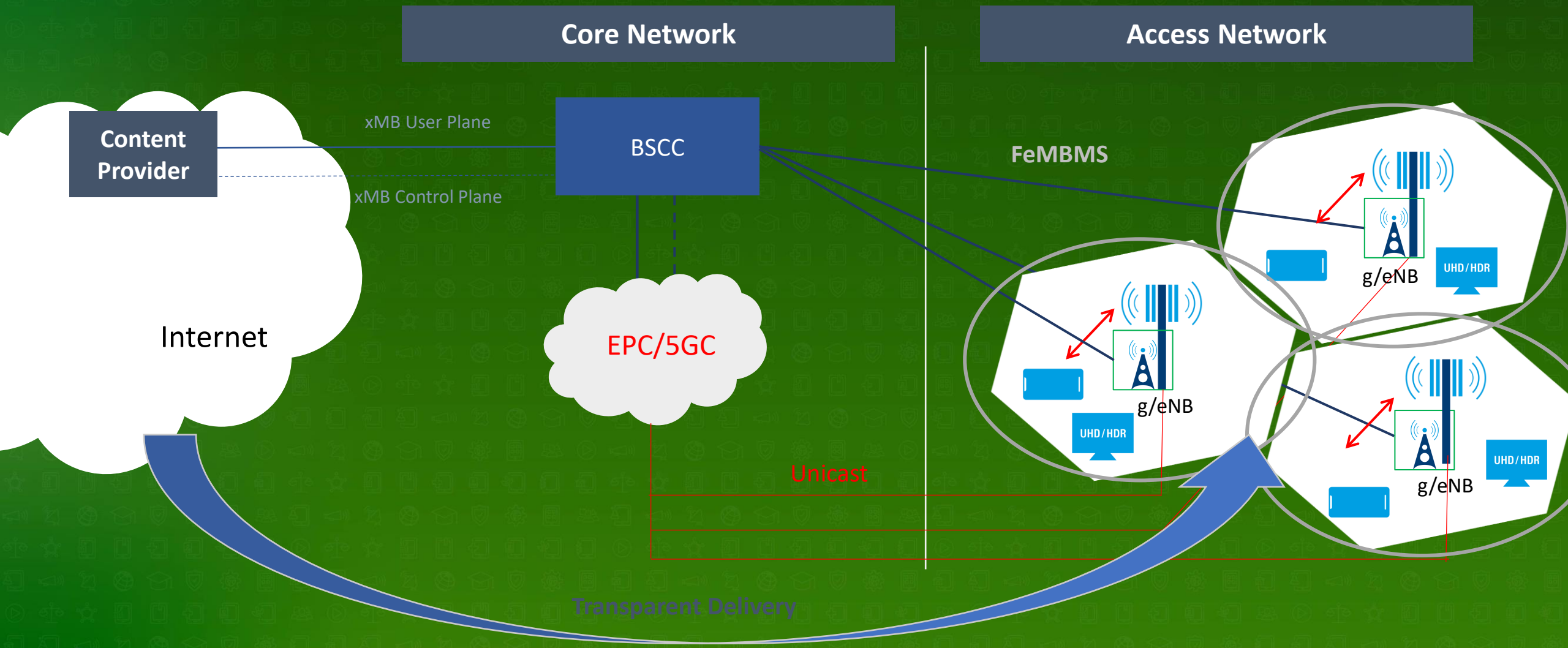
Live Commerce, Rural/Remote E-Learning

E-Agriculture, VoD with preloaded content on TV and mobile

Solution 1 : Overlay NSA/SA Simplified Architecture



Solution 2 : SDL NSA/SA Simplified Architecture



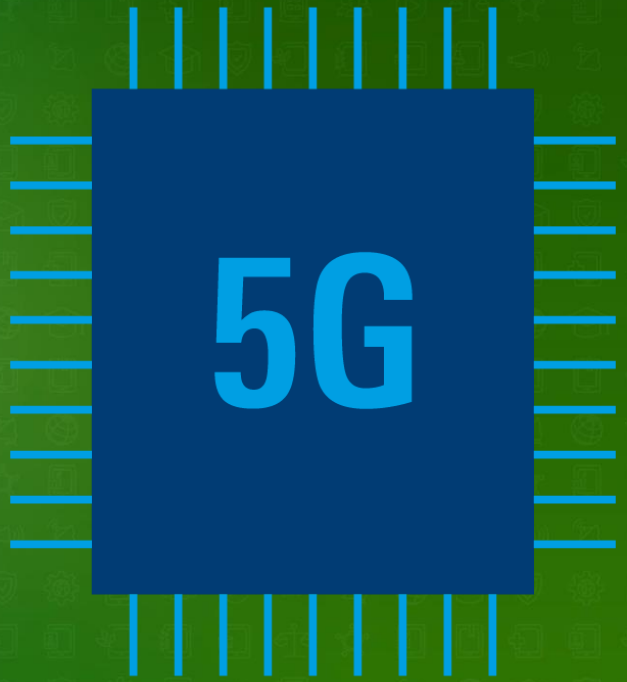
MNO: INDUSTRY ANALYSIS – MOBILE DATA 2018/2019

- ✓ 69 selected MNO Worldwide
- ✓ Number of Subscribers
- ✓ Data Plan Usage/Month
- ✓ Price/Gb/Month

Data Volume

Revenues / Year

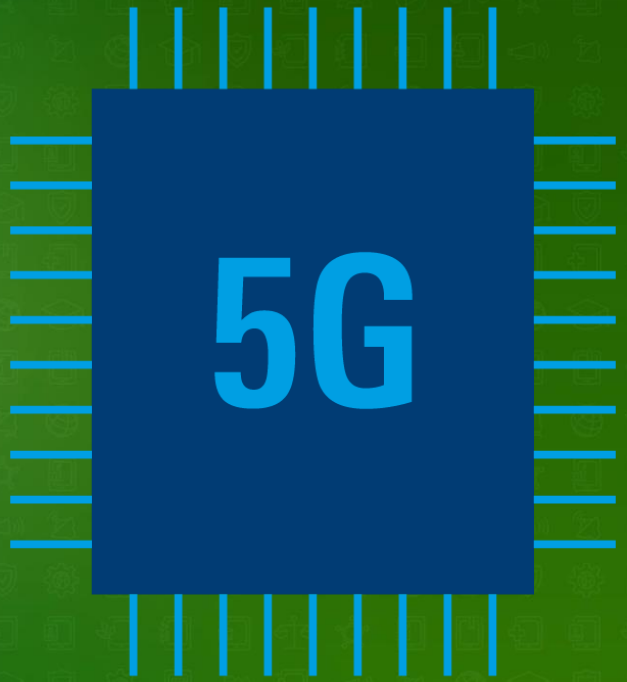
Multicast as a service



Voice over NR
IoT
Industry 4.0
Remote Medical Operations…
Remote Building…
High quality VoD
C-V2X
E-Sports
Live/Linear Casting
OTA Multicast
Public Safety Multicast
Venue Casting
Live Commerce
Rural/Remote E-Learning
E-Agriculture

OPTION 1
=
5G UNICAST ONLY

Multicast as a service



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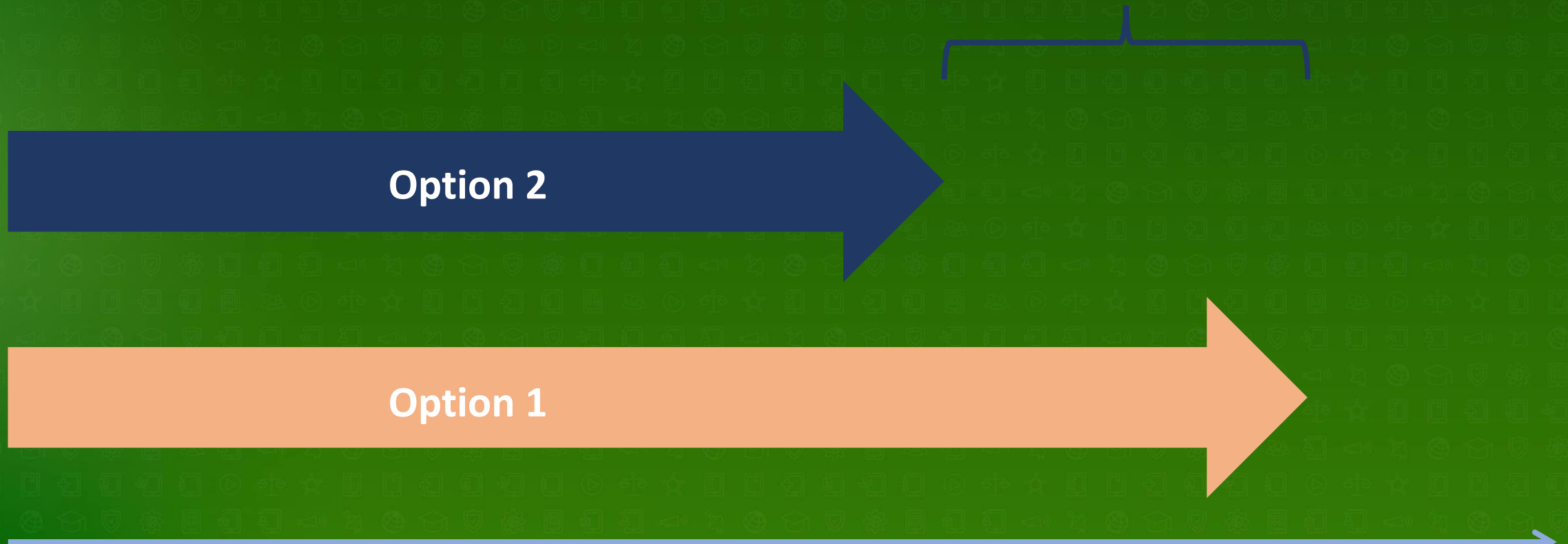
OPTION 2
=
5G UNICAST + MULTICAST

Multicast as a service

Saving at least 19.5% CAPEX with less OPEX and better QoS/QoE



BENEFITS FOR ECOSYSTEM PLAYERS

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Content Providers

1. Lower CAPEX
2. Better Coverage
3. Lower Latency
4. Higher Reliability
5. More Flexibility
6. Higher Efficiency
7. More Business

MNOs

1. No OPEX
2. Better QoS
3. Higher QoE
4. Higher Reliability
5. Lower CAPEX
6. Higher Efficiency
7. More Business

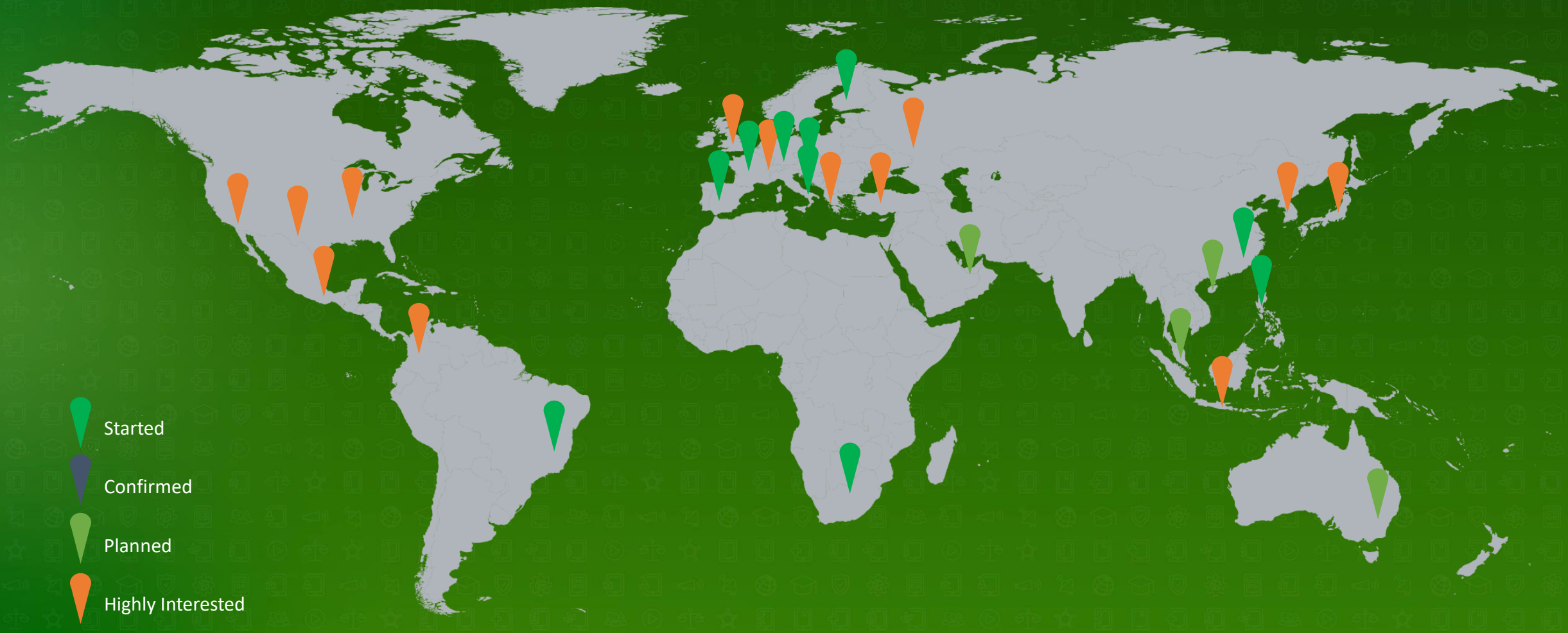
BNOs

1. More Dynamic
2. Lower CAPEX
3. Higher ROI
4. More Flexibility
5. Higher Efficiency
6. New B2B Model
7. New B2C Model

End User

1. No data volume
2. Better Coverage
3. Lower Latency
4. One contract only
5. Better Service
6. Higher Experience
7. More Real-Time Apps

trials worldwide



Thank you for your attention!

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