Interconnecting Realities

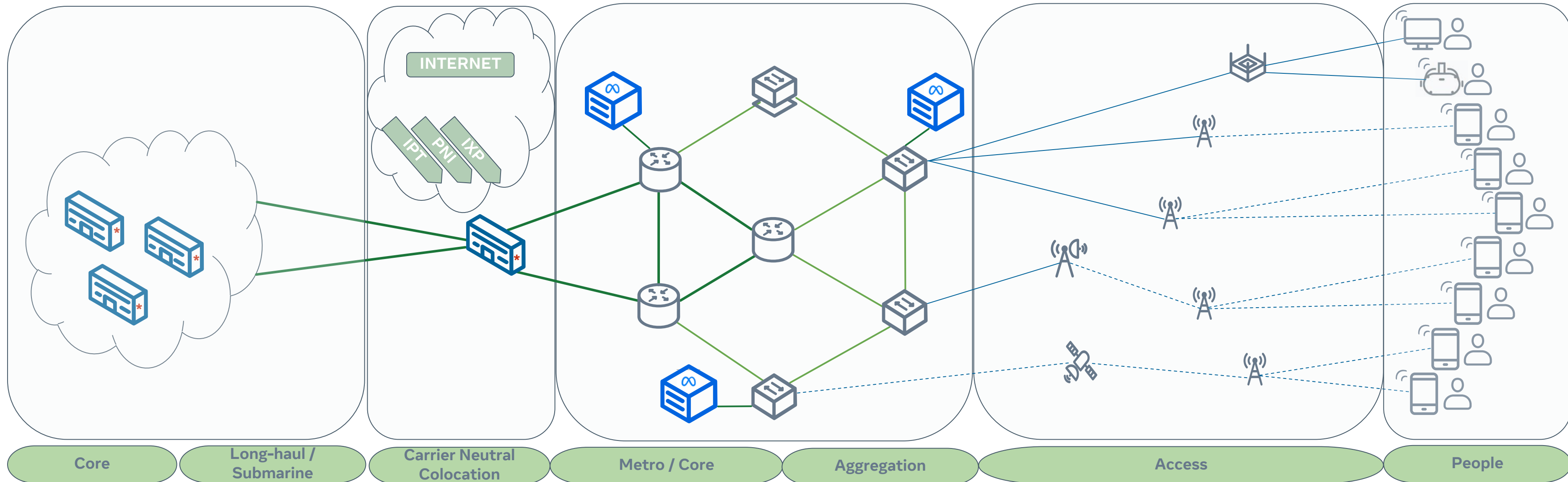Ben Ryall
AfPIF 2023 | Accra, Ghana

∞ Meta

The Edge of Tomorrow

- New immersive experiences require traffic delivery at the Edge be optimized for GPU compute streamed from close proximity to client devices at scale.

- Meta is working with partners on industry-wide evolution in how and where Communication Service Providers (CSPs) can interconnect.

- We have improved data driven analysis for determining optimal Edge placement and market development opportunities.

Content Coverage

Connecting Meta with People

| Core | Long-haul / Submarine | Carrier Neutral Colocation | Metro / Core | Aggregation | Access | People |

- All sessions terminate on Edge
- MNAs talk to Edge, Edge talks to DCs
- Placement of Edge is a major factor in Quality of Experience

Edge* (on-net)
*includes GPU clusters

MNA (off-net)

"Wow, Saturn is so cool!"

TEXT
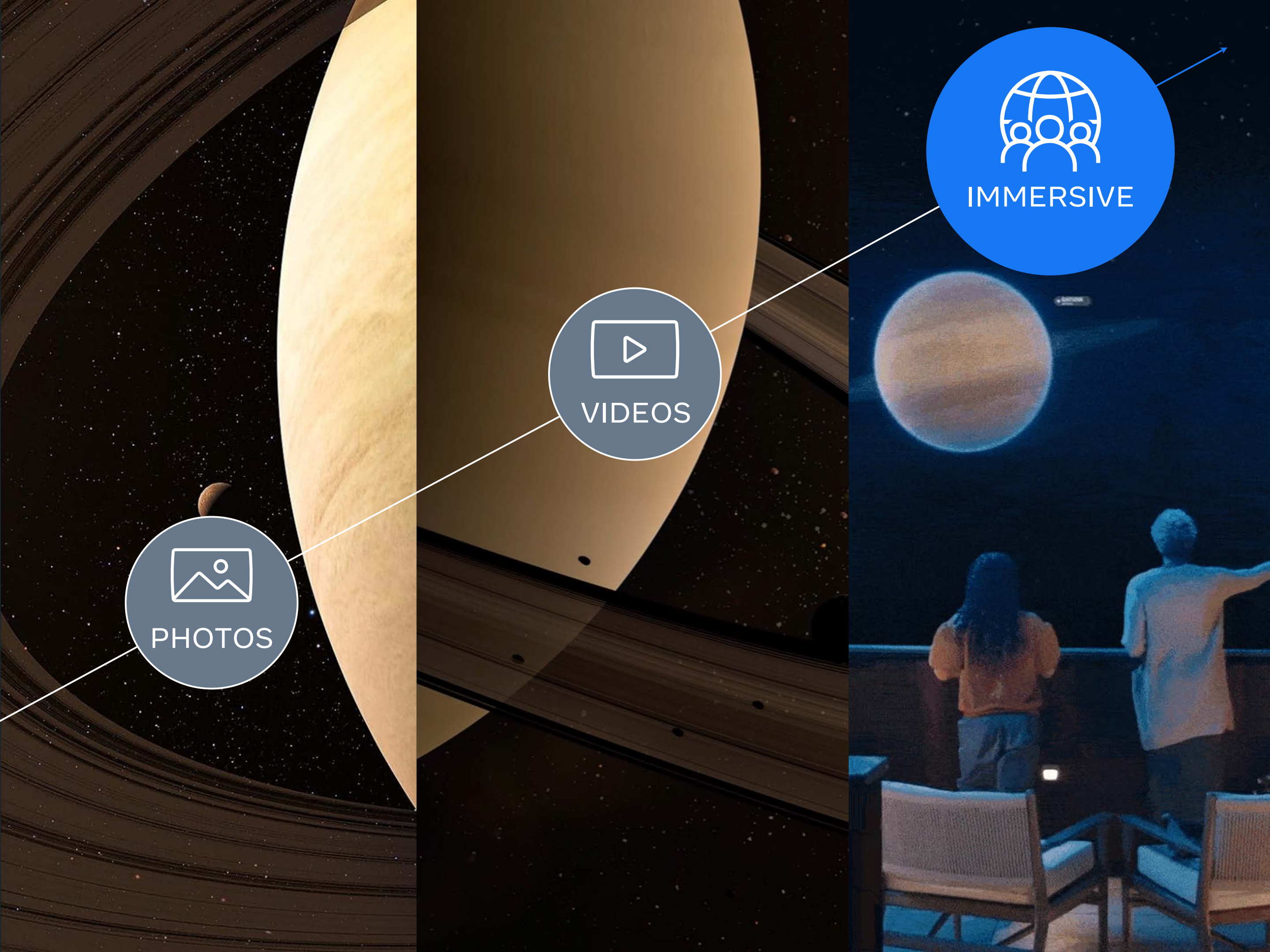
PHOTOS

VIDEOS

IMMERSIVE

Different experiences have different latency requirements

~150ms   ~70ms   ~50ms   ~25ms
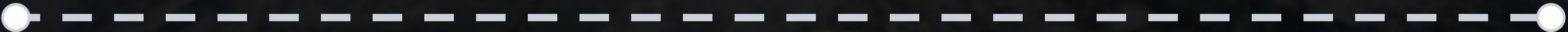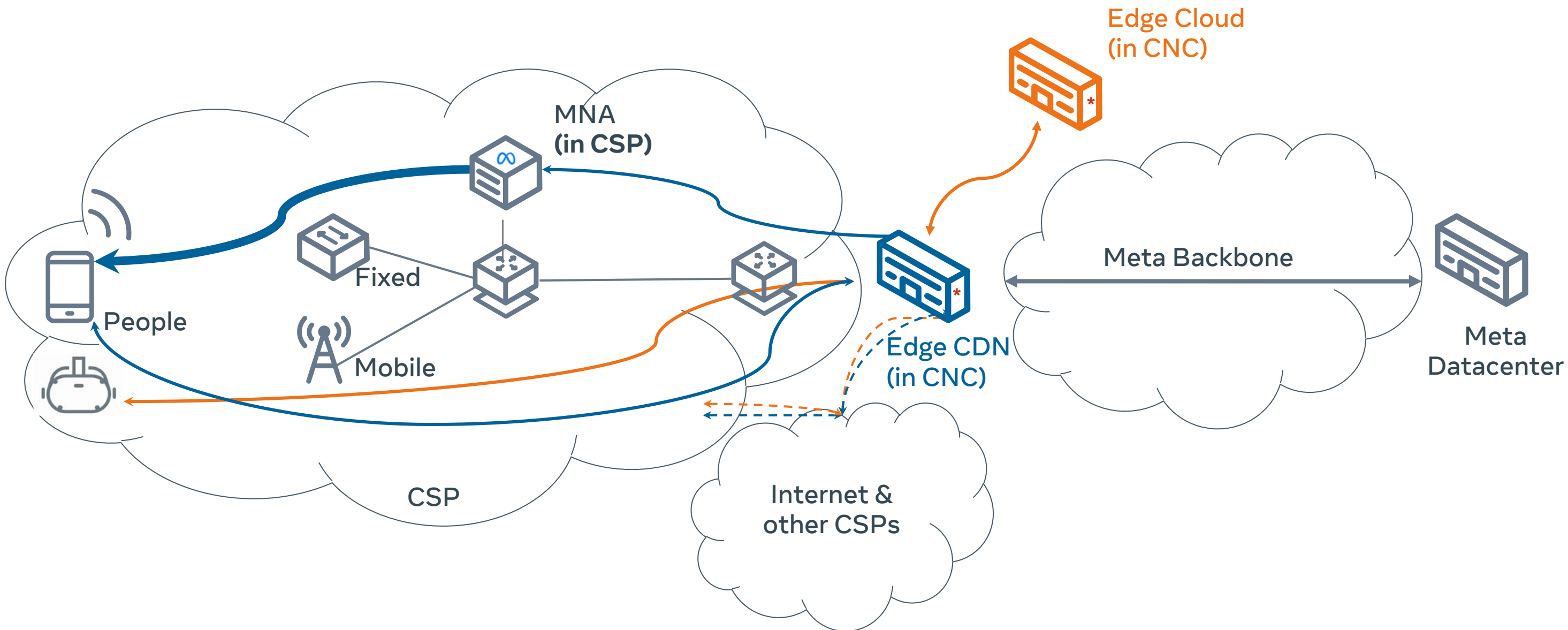
Network RTT

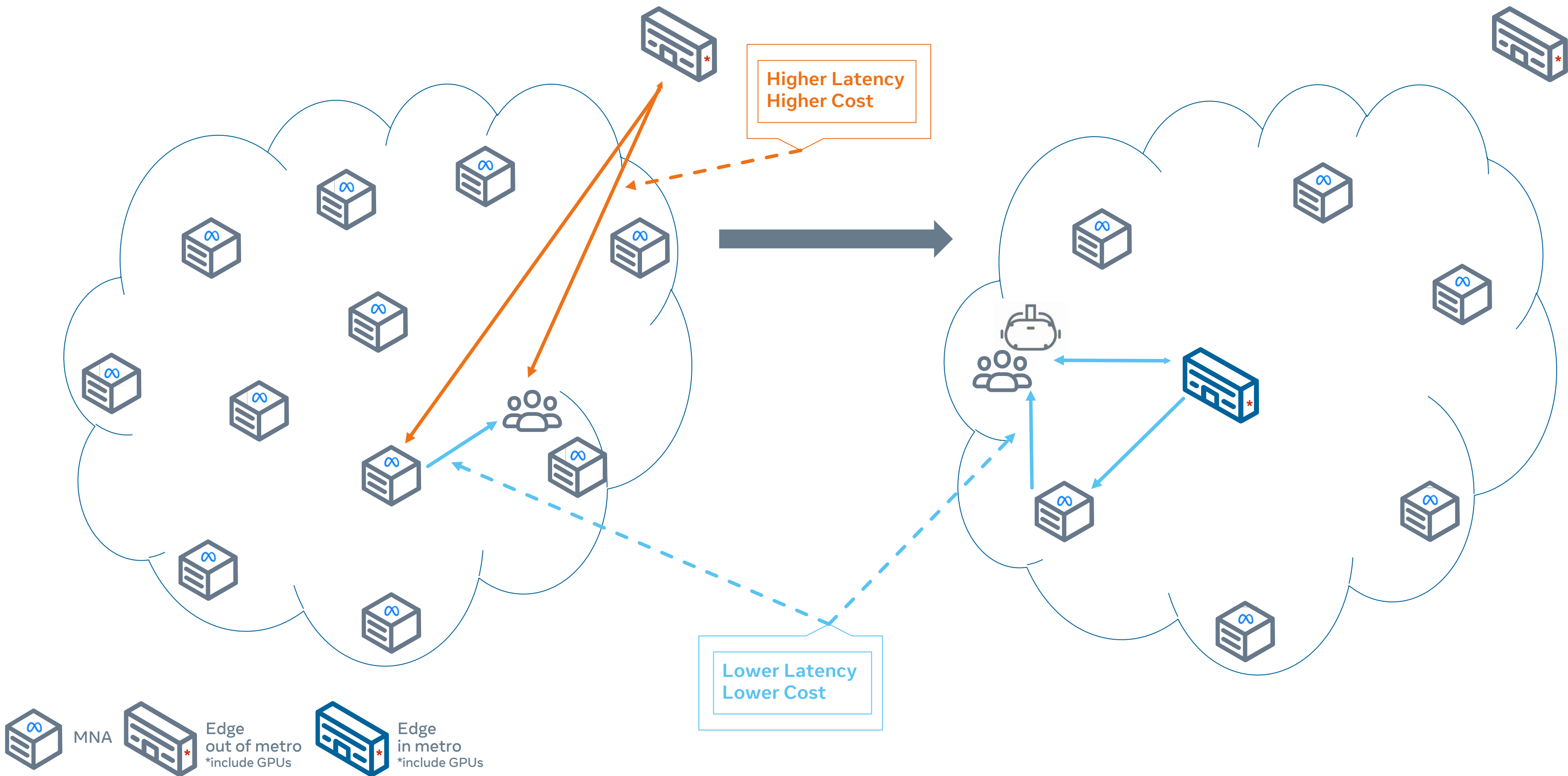Highest   Lowest

What problem are we solving?

- Edge Compute vs Edge CDN
- Caching still important but can't solve this problem
- Requirement to bring PoPs closer to people

Better for Everyone

Infrastructure optimization with improved QoE

Higher Latency Higher Cost

Lower Latency Lower Cost

MNA

Edge out of metro *include GPUs

Edge in metro *include GPUs

Increased Presence
Reaching more people directly

Moving beyond dedicated cache appliance to full Edge enables more services at higher quality for more people.

High density secondary markets deeper into regional network presence; aligned with CSP aggregation points

Reduces backhaul need for CSPs

Fostering new or existing carrier neutral colocation ecosystem

Ranked on impact and market readiness
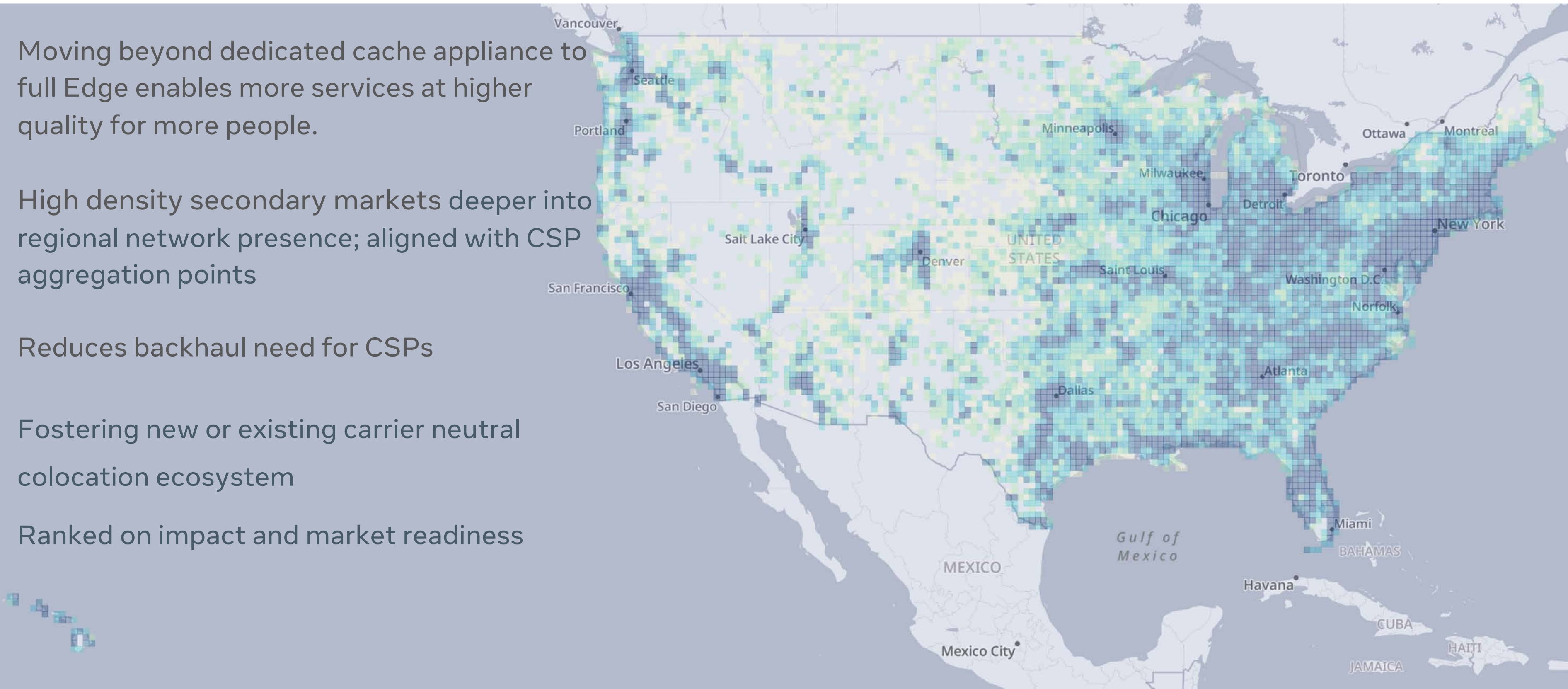
Moving Beyond Legacy Peering

- Decentralization of Interconnection.
- Decrease dependence on large interconnection hubs.
- Future use cases drive higher bandwidth and lower latency, each with their own scaling challenges.

- Enable additional IP interconnection markets.
    - Underserved and tertiary markets.
    - Neutral colocation options remain critical.
    - Additional breakout and reach.

Leveraging this for Africa

- Smaller footprint

- Allows us to continue our Edge expansion across the region

- Compliment our mpMNA Deployments

- and…continue building further into the region