

nog.fi meeting 2026.06

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Managing mobile access
network investments with
evolving application
requirements





Background

Past: network development and investments driven by downlink capacity.
Now: new AI-powered applications are changing the access network requirements.

Change needed

Access network development shifts to a combination of **customer-experience-driven capacity** investments and ensuring the **requirements of new applications are met**.

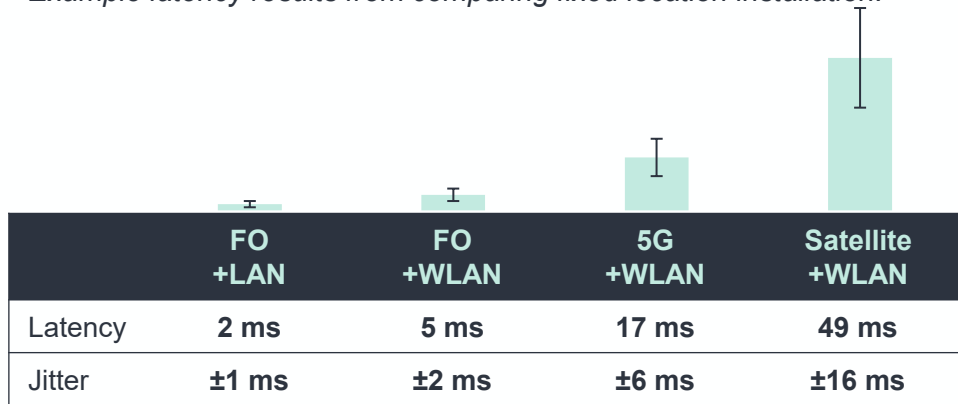
Primea

FusionLayer Primea is an in-house developed solution that helps MNOs navigate the RAN investments amid the ever-evolving customer requirements



End-user point of view: public access options differentiated by communication delay

Example latency results from comparing fixed location installation.



- ✓ **fibre** is ideal for fixed locations
- ✓ **mobile** is the only meaningful option to connect devices on the move
- ✗ **Satellite** is not yet ready for low-latency services

Fibre is superior if feasible, satellite is fast evolving, but mobile is often still the optimal compromise for most.

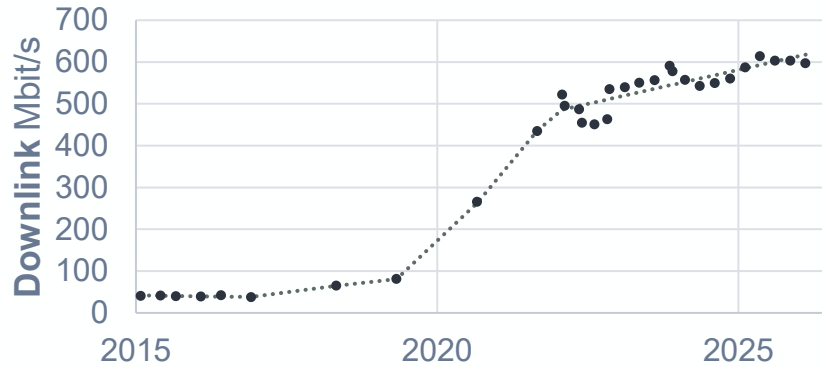


Access	Pros	Cons
Satellite	<ul style="list-style-type: none"> ✓ anywhere 	<ul style="list-style-type: none"> ✗ high latency ✗ capacity not for mobile
Mobile	<ul style="list-style-type: none"> ✓ near everywhere ✓ capacity upgradable 	<ul style="list-style-type: none"> ✗ urban-rural gap
Fibre	<ul style="list-style-type: none"> ✓ stable ✓ capacity ✓ latency 	<ul style="list-style-type: none"> ✗ no mobility ✗ rural availability

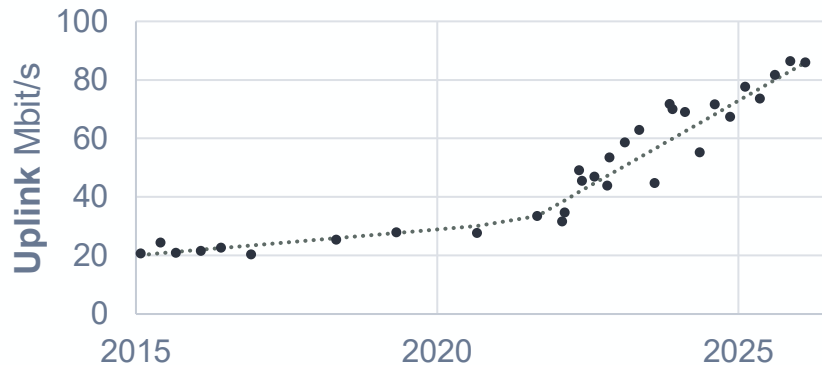


Mobile network technology development enables answering the capacity needs

Mobile network performance capability development in urban-dominated areas between 2015–2026 from field tests in Finland.

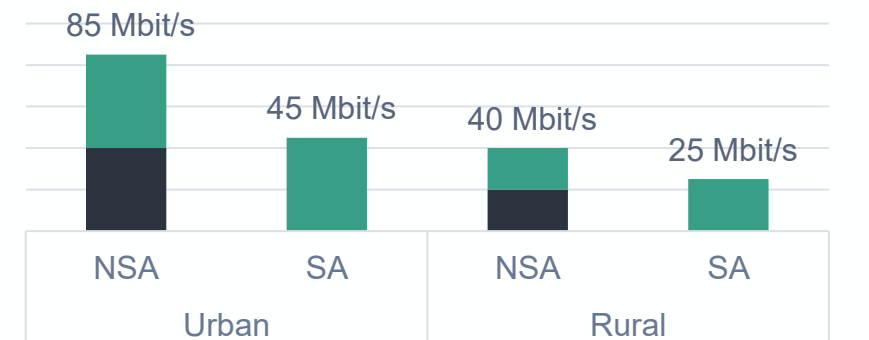
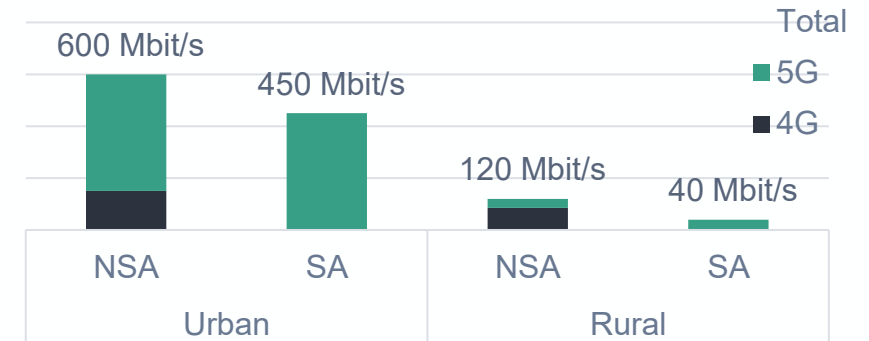


Major step change was achieved in DL throughput from <100 Mbps in 4G era to hundreds of Mbps in the 5G era



In Uplink, achieved average results up by nearly 3x, from 30 to 90 Mbps

Urban-rural gap is still the biggest challenge for 5G networks in 2026



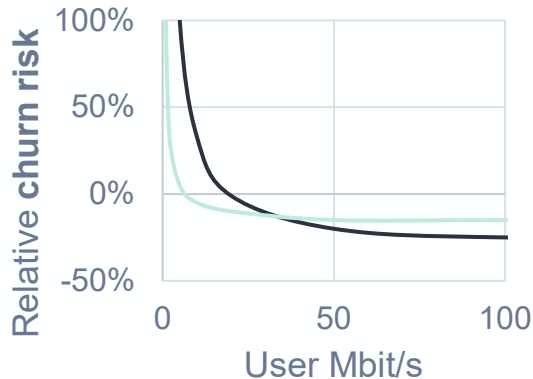


Mobile network operators face the challenge of balancing between different, fast-evolving requirements

New requirements

- Low latency
- Uplink revolution
- Evolving application needs

Traditional mobile services



When the service does not meet the evolving customer needs, they will look to other service providers

Mobile network development shifts from traditional capacity planning to a combination of ensuring the **requirements of new applications** are met and **customer-experience-driven capacity** investments.

Traditional rule-based approaches are no longer sufficient, and operators need to dynamically adapt to changing requirements.

PRIMEA

In-house developed solution that predicts improvement from different expansions, for impact-driven decision making.



Based on PM/CM data

No integration needed

24/7 Web Dashboard access

Multi-vendor compatible



Thank you.



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