

Insights On New Networks And Use Cases: Measure First, Deploy Later

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We are the world's preeminent tech policy advisory.

Our mission is to make sure as many people as possible have access to transformative technologies without eroding competition or consumer choice.

We work with companies to enable and optimise their participation in markets across the globe and advise governments on how best to regulate existing and emergent technologies.

We believe tech policy must treat all stakeholders fairly



Who is Access Partnership?



Where we operate

6

offices worldwide allow us to offer both a global and local perspective



200+

jurisdictions where we devise strategies to overcome technical, regulatory and political barriers

140+

employees with deep understanding of areas ranging from policy to legal and engineering

35

the number of languages – from Arabic to Mandarin – spoken by our teams

Future of Network Technologies

Terrestrial Networks

5G Advanced or 5.5G

6G in 2030

Private Networks

High Altitude Platform Stations

Non-Terrestrial Networks

Satellite IoT

Direct-to-Device

LEO and Multi-Orbit Constellations

The diagram illustrates the convergence of two network types. On the left, under 'Terrestrial Networks', are listed '5G Advanced or 5.5G', '6G in 2030', 'Private Networks', and 'High Altitude Platform Stations'. On the right, under 'Non-Terrestrial Networks', are listed 'Satellite IoT', 'Direct-to-Device', and 'LEO and Multi-Orbit Constellations'. Two blue arrows point from 'High Altitude Platform Stations' and 'LEO and Multi-Orbit Constellations' towards a central section titled 'Single Network?'. Below this title are the terms '5G NTN', 'Complementary Use', and 'Backhaul'.

Single Network?

5G NTN

Complementary Use

Backhaul

Use Cases

- **Metaverse?**
- **Connected mobility**
- **Agriculture**
- **Education**
- **Telemedicine**
- **Smart Cities**
- **Disaster Resilience**



Industry Observations

- Consolidation in network industries.
- Most consumer decisions are made purely on price rather than other factors.
- Lack of coverage is a bigger detriment than speed.
- Broadband internet price reductions may trigger further competition.
- Sovereignty debates may shade connectivity options.

A transmitter call to every valley in Uludağ

Uludağ Mountaineering Club member İsmet Şentürk said that a transmitter should be installed in the blind spots of Uludağ, where amateur mountaineers often get lost.



Sena Tufan



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Government of Canada announces new framework for improved connectivity and innovative 5G applications

From: [Innovation, Science and Economic Development Canada](#)

News release

Local licensing will mean easier access to spectrum for small Internet service providers and innovative industries as well as rural, remote and Indigenous communities

May 3, 2023 - Ottawa, Ontario

Access to fast, reliable and affordable Internet and mobile services is essential for Canadians. And Canadians rightfully expect—and deserve—it. That is why the Government of Canada continues to make more spectrum available to support better connectivity and access to the latest wireless technologies.

Up-to-date Indicators

- Ability to use NB vs Broadband.
- Territorial coverage vs. population coverage when massive IoT is enabled and utilised.
- Tier 2 indicators of affordability of Internet-enabled devices are heavily dependent on geographical location.
- Indicators such as rural and urban are becoming increasingly harder to define; proving the need for more distinctions.
- Infrastructure will be more than «infrastructure availability and quality of mobile and fixed networks»

Tier 1 indicators

- Percentage of population covered by a mobile network, by technology, total and by urban/rural location;
- Population within reach of transmission networks, by distance;
- International bandwidth usage, per Internet user and per capita;
- Average monthly mobile broadband Internet traffic per active mobile broadband subscription;
- Average monthly fixed broadband Internet traffic per fixed broadband subscription;
- Median upload and download speeds;
- Number of Internet exchange points.

Tier 2 indicators

- Percentage of households covered by fixed networks;
- Amount of spectrum allocated for International Mobile Telecommunications (IMT) systems, in megahertz (MHz);
- Amount of spectrum licensed for IMT systems, in MHz.

To fully capture the availability of connectivity infrastructure, alternate technologies to mobile and fixed networks could be considered, such as fixed wireless deployments and dynamic spectrum allocation. **Since satellite, fixed and mobile terrestrial connectivity can all contribute to achieving meaningful connectivity, it would be relevant to include an indicator on satellite take-up.** Best practices encourage the creation of coverage maps as a superior form to

New Coverage Requirements

- Connected mobility > highway/railway coverage
- Smart agriculture > narrowband coverage
- Smart manufacturing > industrial zones

Then Deploy

- Define speed and coverage needs of different geographical zones
- Define technologies that require connectivity
- Decide on most efficient option.