Telesat LEO
Service Starting in 2022

Enabling operators to deliver high quality network universally to improve customer experience and drive revenue growth

Contact Telesat for more information
Unlock Revenue Pools

Disruptive Access Network TCO

Lower Terrestrial Network Cost

**Telesat** is a leading global provider of satellite communications, headquartered in Ottawa, Canada with a 50-year history of innovation.

- **C$ 900+ Million** revenue per year
- **17 Satellites** in service

**Telesat LEO** is our latest innovation.

**About Telesat LEO**

- State-of-the-art global network:
  - Hundreds of advanced satellites in Low-Earth-Orbit (LEO)
  - Seamless integration with terrestrial data networks
  - Advanced technology (Antennas, Signal processing, Optical comms, AI & ML)
  - Terabits of high performing, low cost, low latency over a software defined network
  - Service starting in 2022

**Low Earth Orbit (LEO)** delivers low latency critical for a Fiber-quality internet experience.

- **LEO** ~30-50 ms RTT
- **GEO** ~600 ms RTT

**BENEFITS TO OPERATORS WITH TELESAT LEO SERVICE**

- **Unlock Revenue Pools**
  - Expand coverage of 4G/5G networks, increase revenue by selling more data services and lower churn with better network quality

- **Disruptive Access Network TCO**
  - Lower cost, flexible infrastructure, economical terminals and economies of scale in procurement

- **Lower Terrestrial Network Cost**
  - Standardized interface for easy integration, and true diversity on demand reducing cost to improve availability
Layer-2 Ethernet Service (“Virtual Fiber”)

Telesat LEO space and ground network

Operator Remote Network

User Terminal

Ethernet Interface

Operator Core Network

Ethernet Interface

POTENTIAL APPLICATIONS OF TELESAT LEO FOR OPERATOR

Mobile Backhaul
2G/3G/4G/5G

Backup Connectivity
Fully diverse routes for high availability and continuity of networks

Connect Remote Institutes
(eg. schools, mines, hospitals, etc.)

Occasional Usage
for surge usage and events (eg. concerts, news gathering)

CRITICAL TO SOLVE NON-URBAN BACKHAUL FOR UBIQUITOUS NETWORK QUALITY

Customer rated factors in carrier selection

Network Quality

Customers expect Mobile Network Operators (MNO) to deliver a great network experience

Poor network quality is one of the key reasons behind customer churn

Ubiquitous quality (not just coverage) drives market share

CURRENT ALTERNATIVES UNFIT

In non-urban areas, fiber and multi-hop microwave are expensive

Traditional satellite solutions are high cost with limited throughput and very high latency

Operators need a new tool in their network planning toolbox
Telesat LEO Backhaul Features: Meets All Needs of Next Generation Mobile Backhaul

- **Low Cost**
  - Lower TCO vs any other satellite or multi-hop microwave
- **Flexible and Open terminals**
  - Small antennas, Open architecture
- **High Throughput**
  - Gbps links, Tbps usable capacity
- **Low Latency**
  - <100 msec
- **Flexible and Focused**
  - 100s of Gbps in concentrated area
- **High Network Reliability**
  - High resilience and security, spatial diversity
- **Global**
  - Anywhere, Anytime
- **Plug-n-Play**
  - Quick service deployment
- **Transformative economics**
  - Gbps links for high throughput demands
- **Low Jitter**
  - Removes need for performance accelerators needed in traditional satellite networks
- **Advanced satellites allow dynamic spectrum and resource allocation to best meet customer demand, providing high capacity to areas of concentrated demand**
- **Multiple inter-linked satellites, diverse ground nodes and adaptive beamforming to eliminate single points of failure**
- **Coverage everywhere, from equator to the poles**

Industry standards ensure seamless ‘plug and play’ with terrestrial networks.

High throughput to small antenna-based terminal, open architecture for easy integration and interoperability.

Sub-100 milliseconds round trip time suitable for Voice over LTE, responsive Video experience and future 5G networks.

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Transformative economics for Gbps links for high throughput demands.

Lower TCO vs any other satellite or multi-hop microwave.

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Urban Area
Network with continuous population

Non-Urban Area
Peri-urban and rural areas

Customer rated factors in carrier selection

- Plan Pricing
- National Coverage
- Local Coverage
- Speed of Data Network
- Quality of 4G
- Price of Data
- Availability of Unlimited data plans
- Selection of phones
- Same network as friends/family
- Customer service track record
- Other

Network Quality

Quality ex-urban backhaul critical for ubiquitous network quality

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