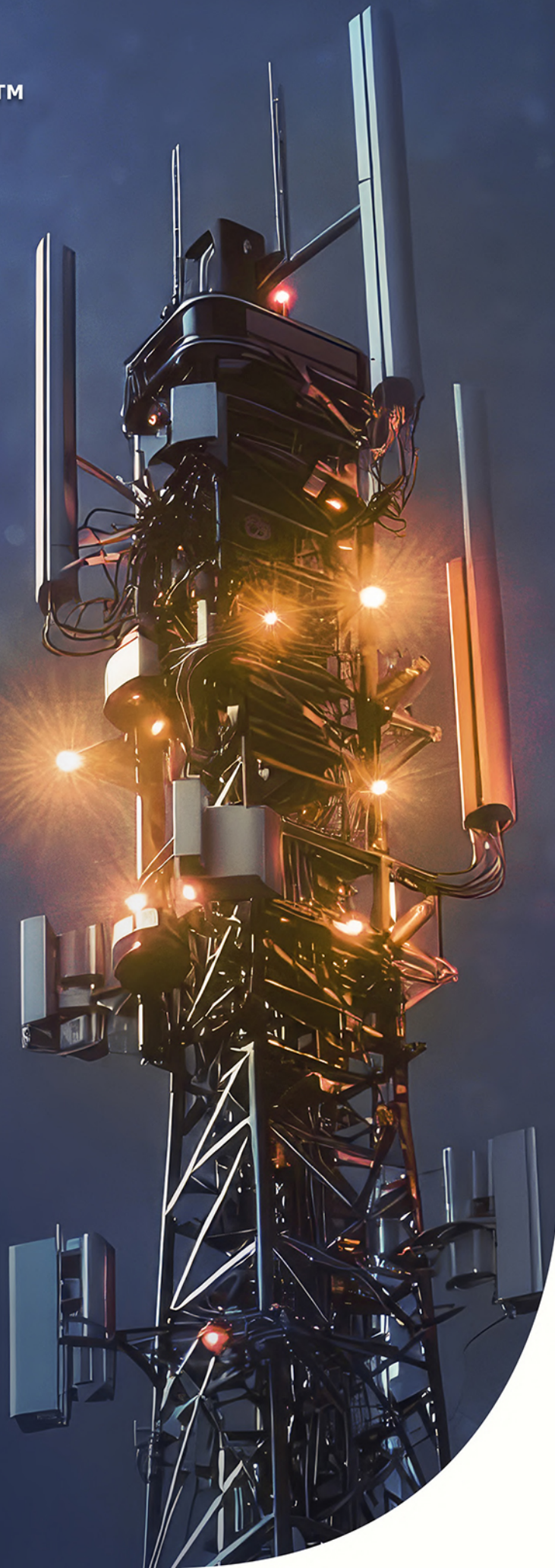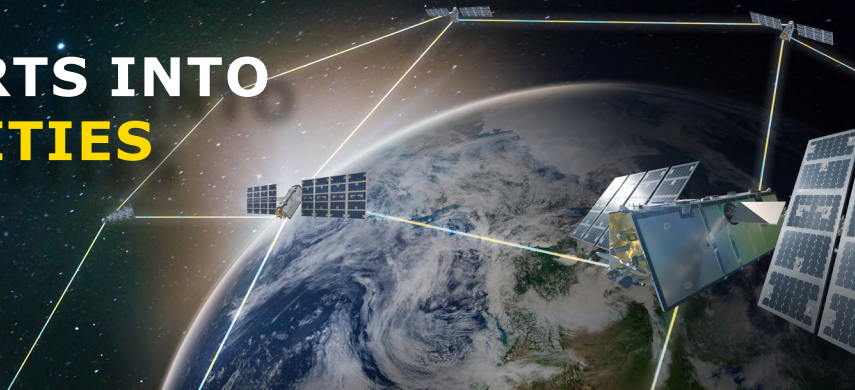# TELESAT
LIGHTSPEED™

Elevate your telecom network with Carrier Ethernet from space

TELESAT™

TURN DIGITAL DESERTS INTO GROWTH OPPORTUNITIES

Today, there are still many parts of the world where digital transformation is extremely difficult, even with available pre-defined Low Earth Orbit (LEO) satellite offerings and legacy high-latency satellite solutions.

Telesat Lightspeed empowers you to bring mission-critical connectivity to these digital deserts. This revolutionary LEO satellite network seamlessly extends the reach of your terrestrial networks across land, sea, and air so you can take advantage of new opportunities and unlock greater value from your business.

Telesat Lightspeed: Designed and built for telecom network operators

Telesat Lightspeed is the only global LEO satellite network that meets your unique operational and service delivery requirements, and it is only available to network operators and government organizations, never directly to end users or consumers.

Reliable

Deliver robust connectivity that's easy to configure and monitor

Telesat Lightspeed provides guaranteed performance that's backed by service level agreements (SLAs). The resilient, self-healing network includes redundancies on the ground and in space to ensure high availability. Our MEF standards-based Carrier Ethernet service allows you to configure and monitor services in real-time through APIs or a portal.

Flexible

Support multiple use cases and customer requirements

Telesat Lightspeed supports dynamically scalable Carrier Ethernet services and the ability to redirect capacity as needed. You can interconnect the Telesat Lightspeed network with public and private terrestrial infrastructure and choose user terminals from an ecosystem of manufacturers.

Secure

Protect your network security posture

Telesat Lightspeed features a Zero-Trust Architecture that reduces risks and aligns with major security standards. Our cybersecurity experts closely monitor the threat landscape for satellite systems and the latest industry regulations to ensure the Telesat Lightspeed network remains aligned with the latest security industry standards.

Unleash new business potential with Telesat Lightspeed

Extend network reach

Take cost-effective network transport wherever it's needed. You can easily provide high-capacity backhaul services for public and private 5G mobile networks, community networks, and universal broadband initiatives as well as core network trunking services.

Connect businesses with mobile and remote operations

Give businesses access to high-throughput, low-latency broadband connectivity everywhere they operate. Now companies in sectors ranging from oil & gas, rail, and mining to banking, retail, and smart farming can digitally transform across their operations.
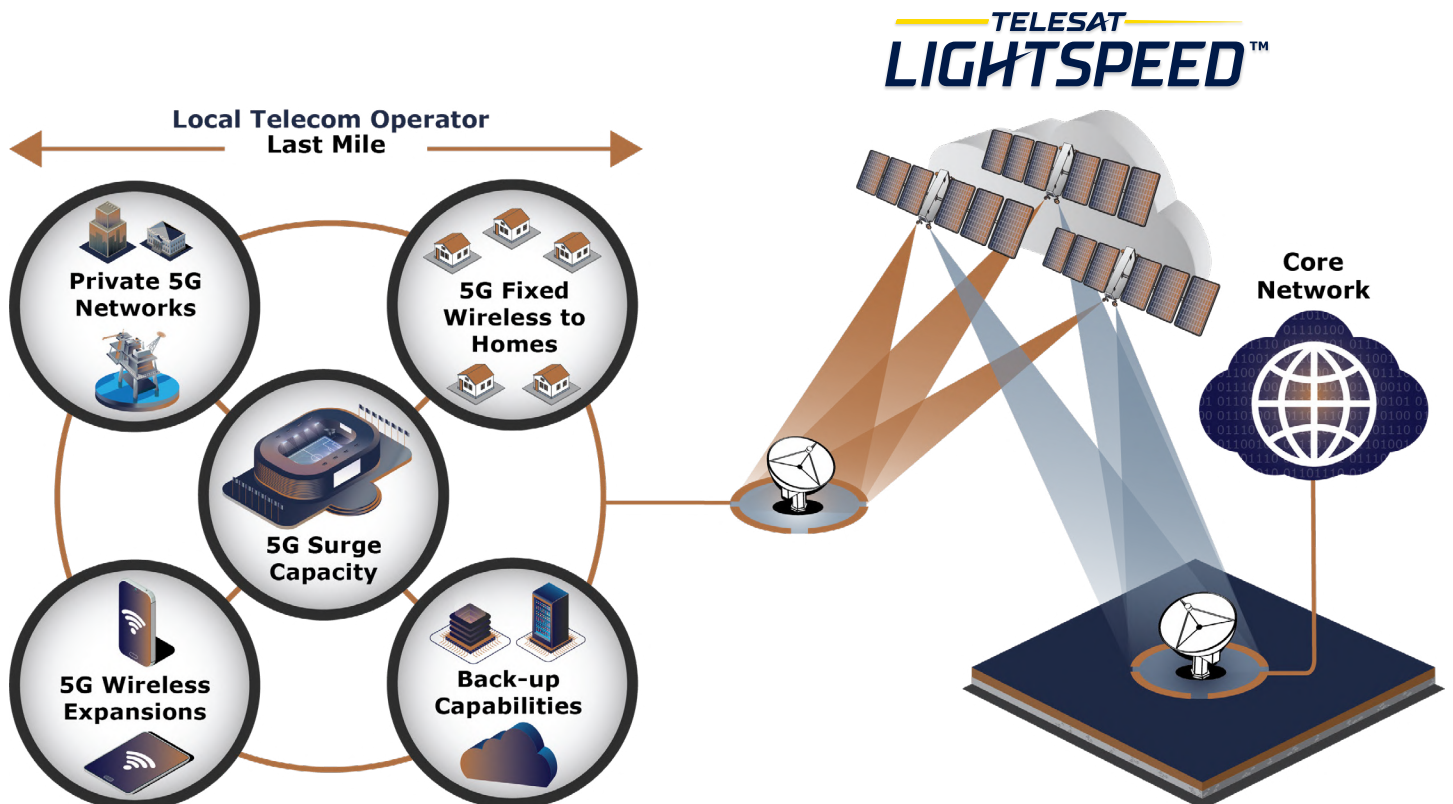
Guarantee backup connectivity

Restore connectivity to customer sites in real time by redirecting network capacity from primary sites to replace damaged terrestrial transport links and continue serving individual enterprise sites during local outages.

Support temporary and surge connectivity requirements

Use satellite network capacity to support short-term business requirements and urgent scenarios. Telesat Lightspeed is ideal to connect areas identified for future fibre extensions and to temporarily increase network capacity for large sporting events, concerts, and disaster recovery efforts.

Keep government organizations securely connected everywhere

Provide a secure, private global WAN that delivers low-latency connectivity over very long distances to support government sites. Encrypted data travels through the Telesat Lightspeed network with no need to touch third-party ground infrastructure between source and destination endpoints.

TELESAT LIGHTSPEED™

Local Telecom Operator Last Mile

Private 5G Networks

5G Fixed Wireless to Homes

5G Surge Capacity

5G Wireless Expansions

Back-up Capabilities

Core Network

Carrier Ethernet network with enterprise-class features that meet your reliability needs

Granular SLAs and multiple classes of service

Telesat Lightspeed SLAs include Mbps to multi-Gbps committed information rates (CIRs) as well as enterprise-class availability, latency, jitter, and packet loss rates. These guarantees mean you can support cloud-based services, secure web browsing, VPNs, video conferencing, and gaming with a consistently high quality of experience. You can also tailor the traffic rate and bandwidth classification for your offerings to meet the most demanding customer requirements.

Around-the-clock network monitoring and live technical support

The entire Telesat Lightspeed network is monitored 24x7x365 from our Cybersecurity Operations Centre (CSOC) as well as our Satellite Operations Centre (SOC), and our full-service Network Operations Centre (NOC) team is always available to speak with you to accelerate issue detection, mitigation, and resolution.

Highly available network architecture

The Telesat Lightspeed network architecture includes multiple mechanisms to ensure there is no single point of failure:

- ▲ On the ground, each terrestrial landing station antenna has multiple satellites in view for uplink diversity and seamless landing station switch-over capabilities provide redundant paths to terrestrial Points of Presence (PoPs).

- ▲ In space, on-board processors and Optical Inter-Satellite Links (OISLs) create a mesh network and next-generation networking technology finds the most robust and reliable route for customer data between any two points on earth. Each satellite can simultaneously connect to multiple landing stations to ensure data is always reliably delivered.
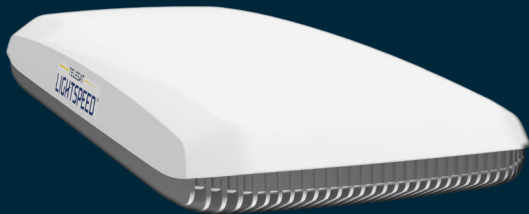
Stringent cybersecurity standards

The Telesat Lightspeed system has cybersecurity built in at every level. Telesat has adopted the National Institute of Standards and Technology (NIST) Cybersecurity Framework (CSF) in its entirety for its corporate systems, and has included the CSF controls in its Telesat Lightspeed systems specifications. Additionally, you have complete control over data encryption and benefit from special security add-ons for government traffic.
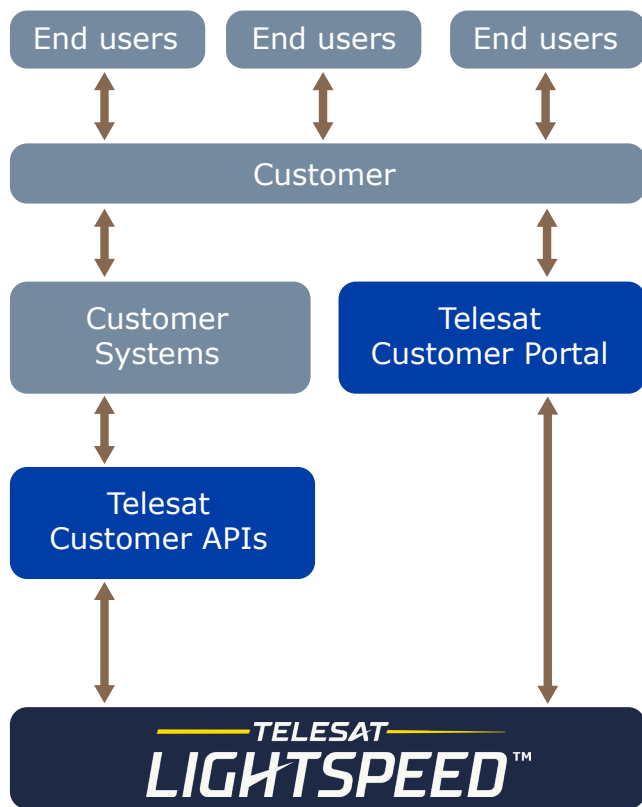
Enterprise-class user terminals for your top-priority use cases

Telesat Lightspeed supports flat panel antennas (FPAs), parabolic antennas, and modems from an ecosystem of manufacturers so you can meet customer requirements and avoid vendor lock-in:

▲ Choose from a variety of size, form factor, and performance options

▲ Access critical new antenna and modem innovations faster

▲ Easily support customers with multi-orbit satellite strategies

Flexible services and network configurations to fit your operations and economics

Smart Virtual Network Operator (VNO) pool

What it is

Programmable and highly flexible VNO pool based on capacity (Gbps) or volume (TB/month). Your VNO pool can cover any geography and can be used to provide customers with the individual quality of service they need.

How it works

Use our MEF standards-based API to integrate with your existing systems or a user-friendly portal to manage your dedicated VNO pool. You can configure, activate, and modify individual customer service plans, and view the status of terminals and services as well as performance and usage metrics.

Subscription Plans

What it is

Ready-to-use connectivity service that provides guaranteed performance to a single customer site.
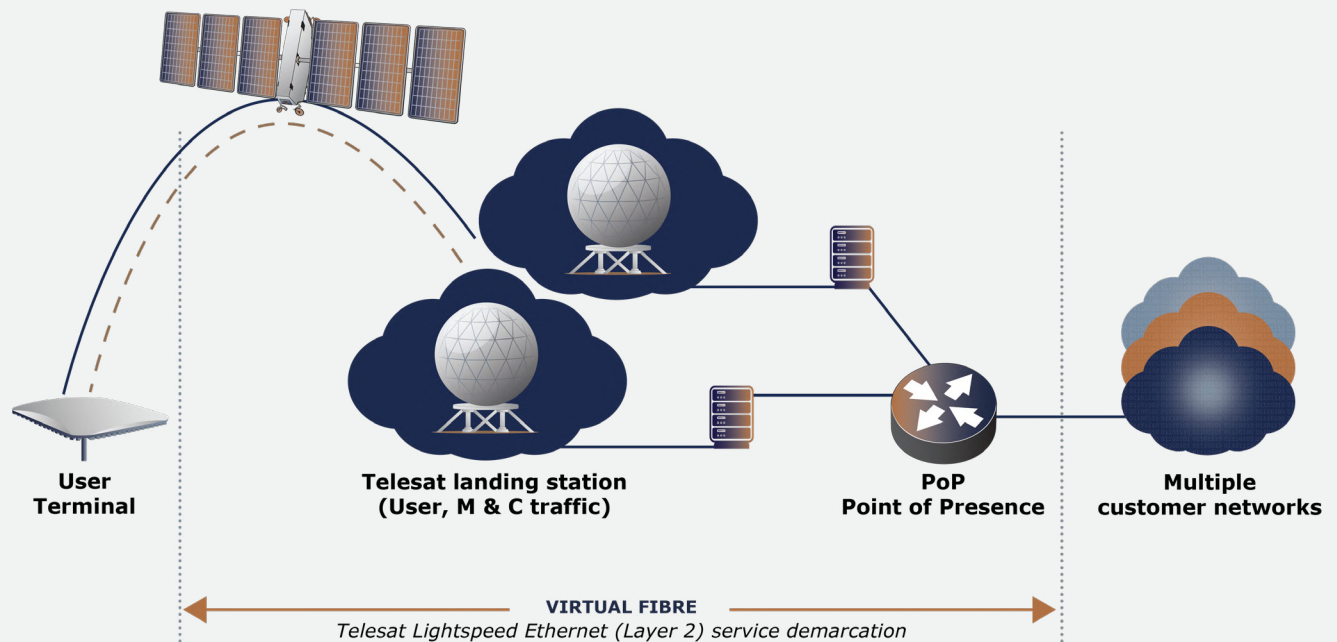
How it works

Telesat manages delivery of the agreed-upon connectivity service on your behalf for fast, easy, and cost-effective access to the Telesat Lightspeed network.
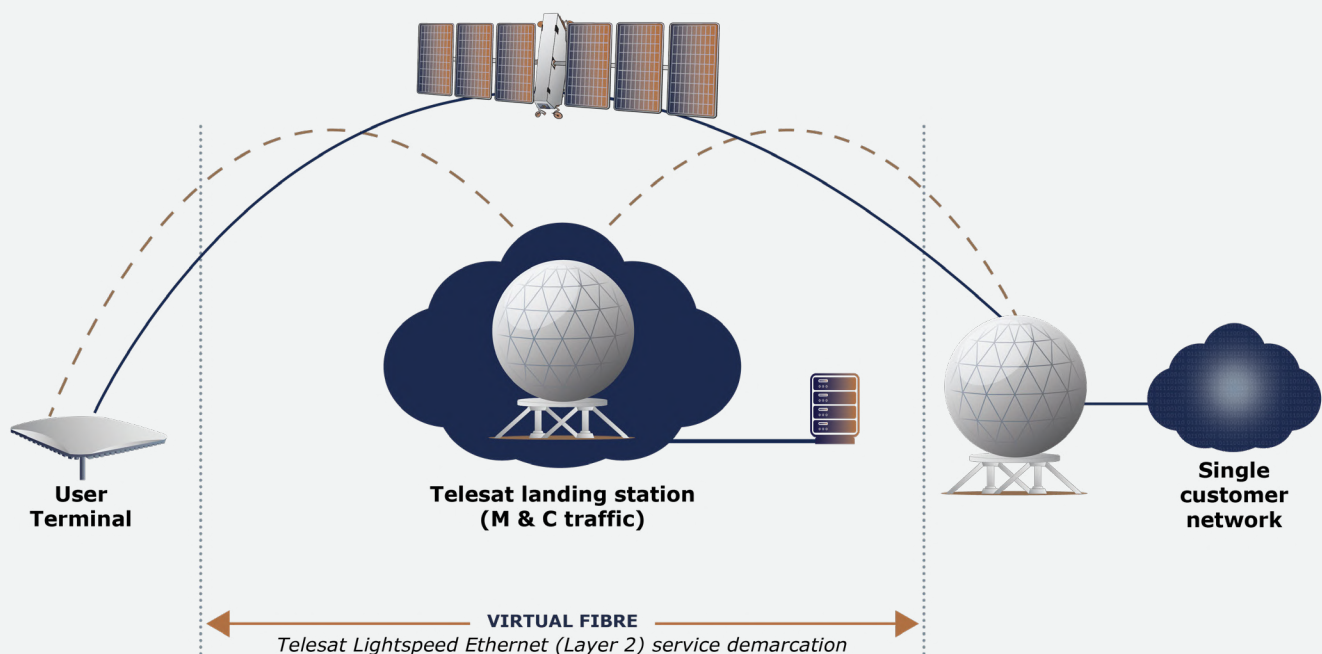
Public and private point of interconnect options

You can interconnect with Telesat's terrestrial landing station infrastructure and Points of Presence (PoPs) globally and establish private access stations at your facilities. This flexibility is essential to support customers that require the use of private infrastructure and data centres, and to meet regulatory requirements for landing traffic in-country.
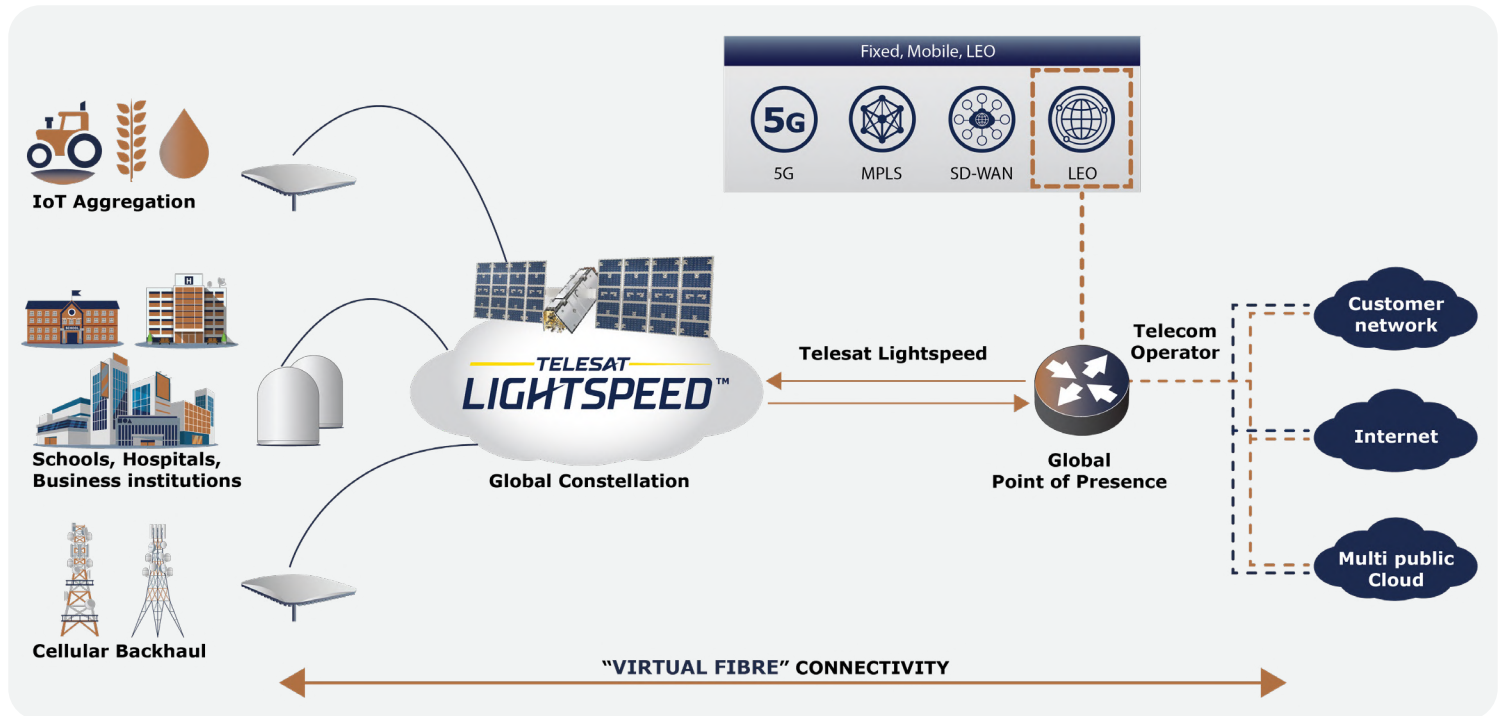
Point of Presence (PoP)

User
Terminal

Telesat landing station
(User, M & C traffic)

PoP
Point of Presence

Multiple
customer networks

VIRTUAL FIBRE
Telesat Lightspeed Ethernet (Layer 2) service demarcation

Private Access Station

User
Terminal

Telesat landing station
(M & C traffic)

Single
customer
network

VIRTUAL FIBRE
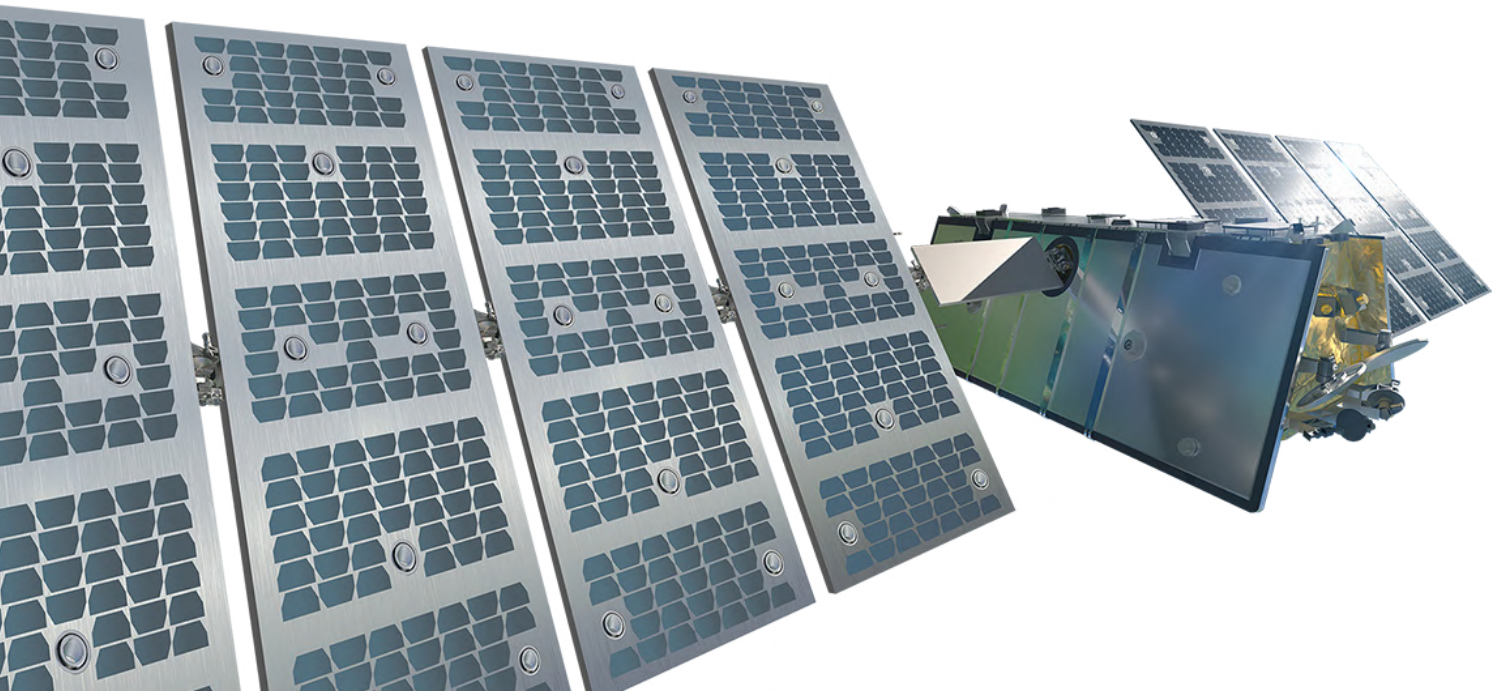*Telesat Lightspeed Ethernet (Layer 2) service demarcation*

—— User Traffic

– – – – Maintenance & Control (M&C) traffic

Telesat Lightspeed takes broadband connectivity wherever you need it to go

IoT Aggregation

Schools, Hospitals, Business institutions

Cellular Backhaul

Fixed, Mobile, LEO

5G | **MPLS** | **SD-WAN** | **LEO**

TELESAT LIGHTSPEED™

Global Constellation

Telesat Lightspeed

Global Point of Presence

Telecom Operator

Customer network

Internet

Multi public Cloud

"VIRTUAL FIBRE" CONNECTIVITY

With Telesat Lightspeed, your business is looking up!

- ▲ Bring secure, affordable broadband to customers in any location
- ▲ Offer reliable, low-latency services from Mbps to Gbps
- ▲ Define capacity and customer services your way
- ▲ Select private or public interconnect options
- ▲ Quickly scale services as network demand grows

Experience the Telesat Lightspeed difference today

Request a Telesat Lightspeed Network Emulator to see exactly how the Telesat Lightspeed network will perform under a wide variety of scenarios. This intuitive, plug-and-play platform lets you quickly and easily:
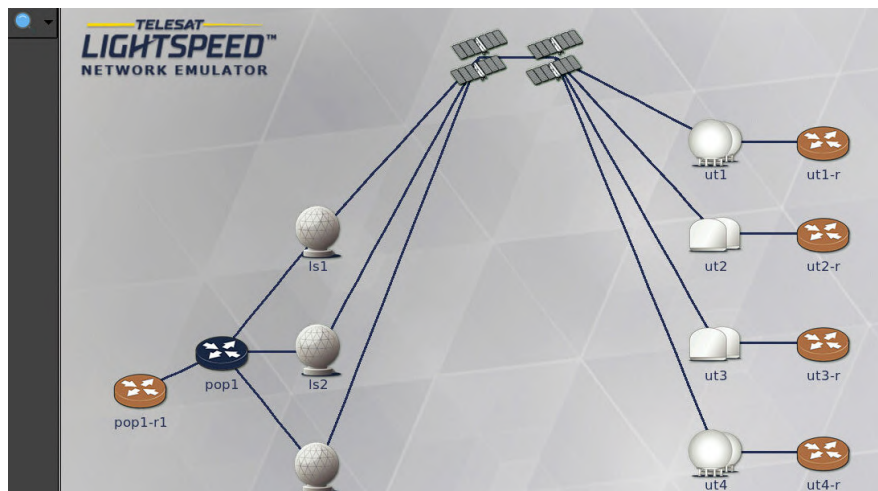
Test and validate use cases

View Telesat Lightspeed service performance data

Pre-plan your PoP and user terminal selections

And more…

Visit https://www.telesat.com/network-emulator/

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