What ORION can do for researchers and innovators

Our bandwidth and speed are helping Ontario's best minds get to the truth—and the finish line—faster.

We're helping them do things that have never been done before.

Like transforming patients' bedsheets into vital-sign monitoring systems. Creating a national diabetes repository with massive amounts of de-identified patient-level data for researchers. Developing life-saving therapies using advanced computational science.

Participating in a ground-breaking collaborative science experiment spanning 38 countries and 174 institutions.

We're also enabling TVO to help small northern communities share their news as their local media outlets close.

We're helping physicists make discoveries about dark matter and neutrinos.

"The tremendous amount of data gathered by our detectors underground at SNOLAB needs to be analyzed using very substantial computational power. ORION...is absolutely essential to the work we do." *SNOLAB*

We're helping doctors save premature babies in a neonatal intensive care unit.

"We need a connection that can guarantee the delivery of the data because we're looking at the patient's health state in real time, 24 hours a day, seven days a week. We can't be competing with public Internet traffic and we have to be sure that personal health data remains private. ORION provides the dedicated service we need."

Ontario Tech University

Key features	ORION	Other networks
Network	Exclusively for Research, Education & Innovation (RE&I) users More secure than public networks Not for profit	Public – open to all For profit
Internet	Speeds up to 100 Gbps Vast bandwidth for big data, high traffic Low latency for streaming media Rates based on sector and capacity needs	100x-1000x slower* Rates must provide a profit
Access to RE&I networks	Direct, easy access to Canada's National Reserarch and Education Network as well as other RE&I networks worldwide	No direct access Bandwidth too low for big data
Cybersecurity	DDoS Threat Protection included Anycast DNS service included 24/7 DDoS Threat Protection available Cybersecurity awareness training available	May not be included Greater vulnerability to viruses, hackers, breaches, malware & ransomware**
Community training	Professional development for RE&I cybersecurity & IT professionals Flexible online training CodeRed learning platform	Quality, cost and scope vary widely Training geared to general audiences
Access to research data repositories	Direct access to the Federated Research Data Repository, the Ontario Health Data Platform and others	Quality of connection varies widely due to bandwidth requirements
Access to high-performance research tools	Fast, direct access to ARC / HPC facilities for big data research, e.g., SHARCNET, SOSCIP Unsurpassed ease & quality of connection	Quality of connection varies widely due to bandwidth requirements
Access to advanced technology commercialization tools	Direct access to ENCQOR & NGN network testbeds prior to commercialization	Quality of connection varies widely due to bandwidth requirements

*In 2020, Canada's highest reported download speed among public networks was 583.7 Mbps – just over half of one Gbps. The next highest was a quarter of that. PCMag, Statista
**1 in 4 organizations in Canada had a security breach in 2020; another 38% were unsure if they had. CIRA

What can we do for you?
Find out by calling 416-507-9860 or by emailing communitydev@orion.on.ca

ORION Empowering Innovation

Part of Canada's National Research and Education Network