ORION Nexus Project Outcomes

DISCOVERIES FROM A STRATEGIC JOURNEY

orion

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Foreword

In ORION's continual effort to support Ontario's research, education and innovation (RE&I) progress, we embarked on a long-term strategic project called the Nexus Project. The planning was strategically guided by the question, "**What does ORION need to do to ensure that the digital infrastructure supporting Ontario's research, education and innovation ecosystem is sustainable into the future?**"

As a starting point, ORION's mission is to support big, transformational ideas that are made in Ontario through cohesive digital infrastructure and services. This means collaborating with our users and their organizations, in order to understand their needs and enable them to transform themselves for greater achievement.

To do this, our Nexus Project engaged stakeholders of multiple levels – key influencers, champions, info seekers and end users – in order to help map ORION's future journey. During the Nexus Project, ORION undertook specific outreach activities to solicit input from our community:

- In April 2014, organized the THINK Conference: Create Possibilities to launch discussions about how connectivity-based technologies should enhance research capacities and learning outcomes
- Reached out to educators to find out about the digital challenges in the K-12 classroom
- Regularly conducted interviews and research with stakeholders
- Commissioned a report by the Conference Board of Canada to reveal ORION's socioeconomic impact on Ontario

The collective results of the Nexus outreach are used to inform ORION's outcomes, detailed in this summary. Discovery is a collaborative process – read on to learn about the milestones ORION has reached with its community in 2015.

Areas of Inquiry

The following are the main areas of inquiry ORION delved into with our community. Those consulted were asked to consider their responses in light of the future outlook over the next five years (2015 – 2020).

- Connectivity needs, i.e. external electronic data sources
- Requirements to collaborate with like-minded organizations
- Types and sources of digital content required
- Need for advanced computing capabilities
- Need for cloud-based services
- Perceived value of ORION
- Forecasted industry changes that may change an organization's use of ORION's services
- Level of expertise required to maximize utilization of ORION's services
- Cost-benefit evaluation of ORION's services

Scope and Methodology

Over the course of the Nexus Project, ORION conducted independent interviews and studies with our stakeholder groups. We spoke with more than 500 stakeholders at 100 institutions representing Ontario's RE&I landscape. These include teachers, researchers, IT professional, administrators and managers from universities, colleges, school boards, teaching hospitals, research institutions, as well as cultural or educational facilities.

Strengths

Based on the Nexus survey responses, ORION's community identified the following strengths:

Theme	Details
Network Service	• Reliable service and strong connectivity that users can lean on for critical RE&I applications • The network's high bandwidth supports considerable usage • ORION plays a leadership role in facilitating RE&I network development • Provision of network redundancy for other RANs, i.e. GTAnet • The 24/7 support from ORION customer service is widely appreciated • IT customer service and technical expertise is very thorough
Cost-Effective	• Relative to large data consumption, users cite low costs
Connector	• ORION brings the RE&I community together through events and forums • Provision of connection to national (i.e. CANARIE) and international RE&I networks • Peering relationships are plentiful and valuable
Expertise	• ORION is perceived to wear many hats, including a trusted advisor, a collaborator, and a technology service provider, thus delivering service and support on many levels.

Opportunities

Identified by our users, the following are the key opportunities for ORION to undertake in 2015 to ensure a coordinated digital infrastructure for Ontario:

Theme	Details
Content (Data)	• Create cultures of long-term collaboration and open data that allow for sustainable future research by adjusting funding and ownership structures. • To support this type of collaboration, develop data security and privacy standards, and a better integrated national network of research data repositories, including libraries, as a key partner.
Connectivity	• Improve connectivity to and within northern and small communities, as well as remote areas that are hampered by the digital divide. • Help ensure equal access to the digital tools required by tomorrow's diverse leaders by providing higher capacity bandwidth and connectivity to the researchers and institutions who need it, especially in data-intensive fields. • Develop a cost-effective solution for first/last mile challenges.
Computing	• As modern research is increasingly dependent on advanced computing, coordinate the purchase and management of such services for efficiencies in access, costs and use of resources to better serve the local researcher. • This could ensure standards are met and that highly qualified persons are available to guide technology decisions with greater expertise.

Key Outcomes

In response to Ontario's RE&I community feedback, ORION has embarked on implementing the following outcomes relating to connectivity, the cloud, sharing, creating or consuming high-quality content, computing, and our community.

Theme	Outcome
Connectivity	• ORION has launched Internet service for ORION's members, introduced in response to member demand. Having a cost-effective, reliable ISP connection that reaches across the province was a clear need that ORION met, in efforts to bridge the digital divide. In order to provide this, ORION purchase Internet access in bulk and passes the savings along to members. • To help improve connectivity and improve access to digital tools for innovation, ORION has installed a new Point-of-Presence (PoP) at Southlake Regional Health Centre in Newmarket: • A new PoP provides dedicated connectivity for data-intensive health research initiatives, as well as acting as a gateway for York Region. • The municipality of York Region now has the expanded capability to advance its economic development through its regional broadband strategy. This further supports the creation of an intelligent community.
Cloud	• ORION now offers connected institutions protection from DDoS attacks, free of charge, in partnership with Canadian Internet Registration Authority (CIRA) and their D-Zone Anycast DNS solution. • ORION's Nebula cloud partners offer more value through shared technology services, preferred pricing and reduced transit costs, and ORION is hosting regular webinars to increase awareness of these opportunities for user institutions. • ORION added Edsby as a new Nebula partner to address EdTech tool and delivery needs. Edsby is an innovative, cloud-based education engagement learning management system (LMS) built for K-12 school boards.
Content	• ORION is working on providing improved access to more high-quality content providers • Specific to the request for live streaming and videoconferencing in the classroom and beyond, ORION is increasing awareness of the tools available to our users by hosting webinars with Nebula service partners. • In response to the request for a coordinated provincial research data strategy, which ORION could lead, ORION submitted digital research infrastructure recommendations to Industry Canada's National Science, Technology and Innovation Strategy, along with collaborating with partners to achieve this reality.
Computing	• ORION and Compute Ontario are partnering to offer a joint event at diTHINK in 2016. This signals greater collaboration between the two

	organizations in providing innovation leadership and support across Ontario. • ORION is working to promote greater awareness of high-performance computing resources.
Community	• Recognizing the power of collaboration and the strengths each community stakeholder can offer to the whole region, ORION has initiated catalyzing municipal partnerships, visiting regions and bringing together different members of the community – such as hospitals, school boards, police, libraries, research institutions – to explore a regional connectivity framework that promotes innovation. • ORION worked with the Conference Board of Canada to produce ORION's socioeconomic impact report, which reveals ORION's impact on the province's innovation industry. The findings in the report clearly affirmed the importance of connectivity for the ongoing RE&I work in Ontario. ORION advocated on behalf of its community to the government to continue its support in this matter.

What's Next for ORION's Community

ORION remains committed to supporting Ontario's RE&I community through new and evolving initiatives.

We're working with some new commercial partners to enhance our offerings and support for our users. We're also collaborating with provincial regions to help empower municipalities, libraries, hospitals and local government with new tools to tackle their challenges in data-driven ways – whether that's traffic congestion, community health care, citizen scientists, or education, just to name a few. Through these unfolding opportunities, ORION will support better and more intelligent communities for Ontario's future.

THERE'S MORE AVAILABLE

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