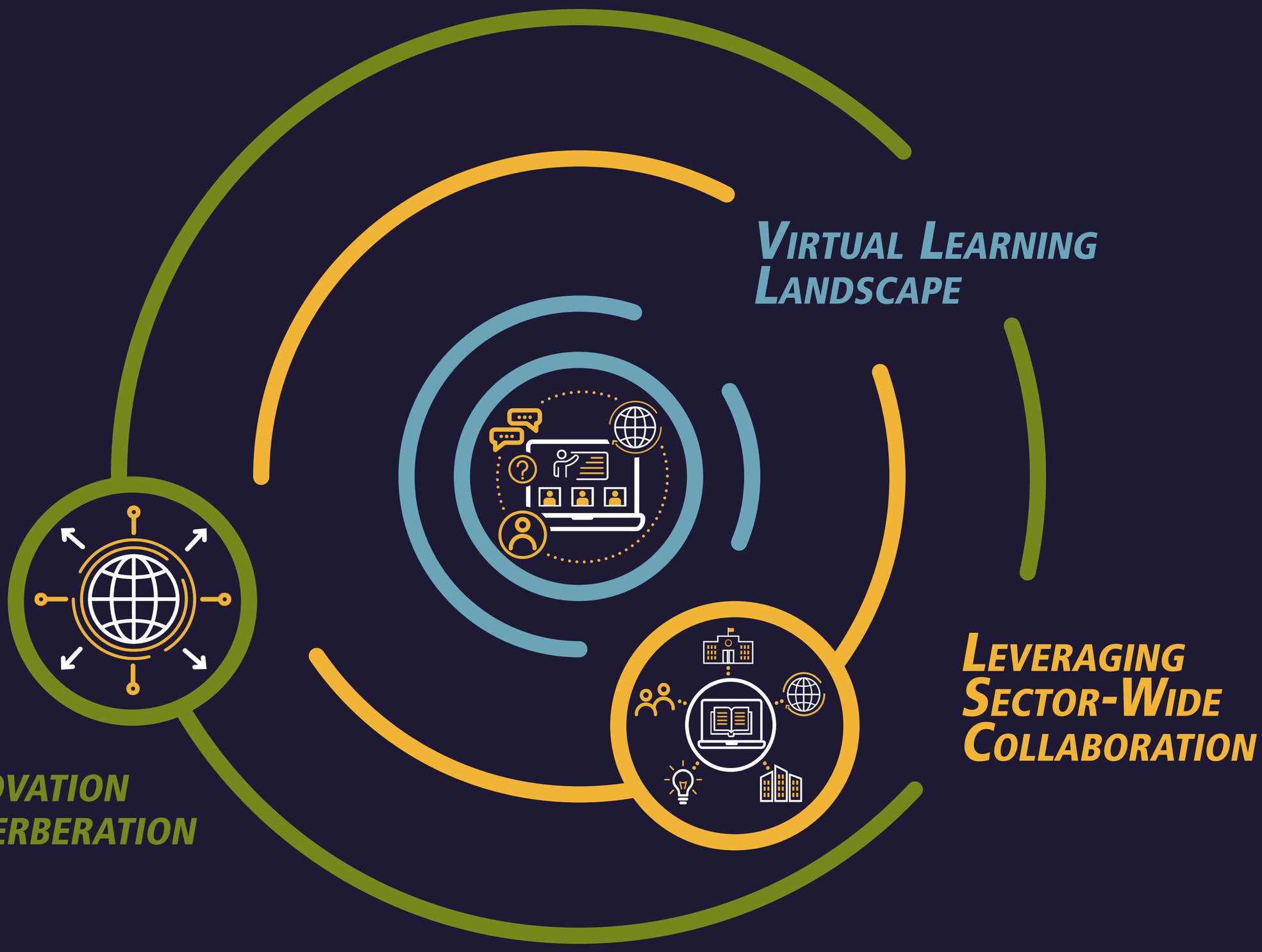
2022 FORESIGHT REPORT

Leading Virtual Learning Innovation

This report explores:

Leading Virtual Learning Innovation

Ontario co-creating better postsecondary education futures for all.



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2022 FORESIGHT REPORT

Leading Virtual Learning Innovation

The *Virtual Learning Strategy (VLS)* is preparing Ontario postsecondary institutions for Hybrid Futures

The VLS is supporting ongoing and future virtual learning needs at all Ontario Indigenous Institutes, colleges, and universities.

The VLS (*link here*) is built on three key pillars:

Being the Future | **Being a Lifelong Learner** | **Being a Global Leader**

By applying strategic foresight approaches, the Ontario postsecondary sector can co-create hybrid futures by monitoring maturing trends and identifying future possibilities. This work aligns with the VLS pillar of *Being the Future*.

What is a *Foresight Report*?

Foresight reports are tools to support the navigation of uncertain and complex futures. Using strategic foresight (i.e., a research-driven, systematic exploration of possible futures), Foresight Reports help inform present-day decision-making by identifying patterns of change that may have significant lasting impacts for digital-by-design futures.

How do I *use* this Foresight Report?

This foresight report is a high-level overview of maturing trends within the postsecondary education sector. We recommend readers to use this report as a map for further exploration. Readers can click on the links provided to learn more about topics of interest. At the end of this report, readers will find a conversation guide to spark futures-facing conversations and explore gradients of possibility.

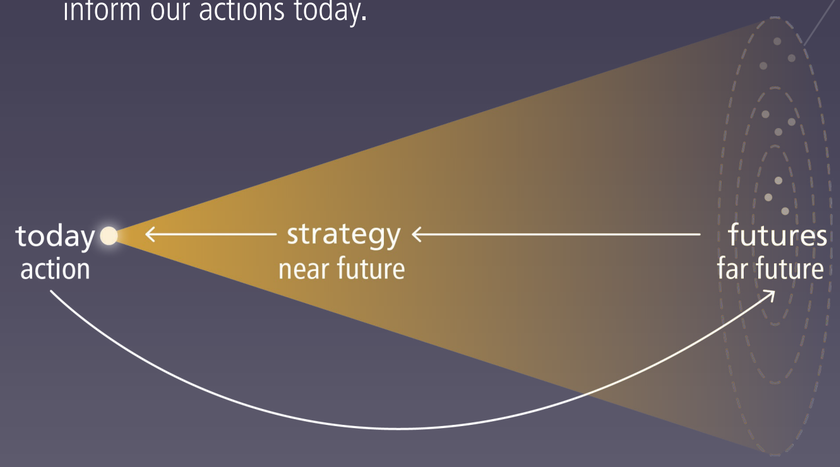
Why is Strategic Foresight *important* to Ontario postsecondary education?

The COVID-19 pandemic and the shift to emergency remote teaching amplified challenges across the Ontario postsecondary system. Strategic foresight supports institutions in navigating transformation by building awareness of some possible forces of change. Strategic foresight can help address immediate and short-term challenges, while articulating long-term visions for systems level evolution.

FUTURES INFORMING STRATEGIES OF TODAY

Emerging or maturing trends **today** allow us to imagine possible **futures**.

These futures are useful in informing our **strategies**, while our strategies help inform our actions today.



Adapted from Joseph Voros , The Futures Cone

Why do we use futures instead of future?

In foresight practice, we refer to the future in plural.

As we cannot predict the future, there is no definite image or vision of it. Thus, the future will always be an infinite range of possible outcomes rather than a single destination.

REPORT OUTLINE

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FURTHER READING

1 **What is *Futures Literacy* and Why Is It Important?**
Medium

2 **What is Foresight?**
Organization for Economic Co-operation & Development

Systemic Innovation in Virtual Learning

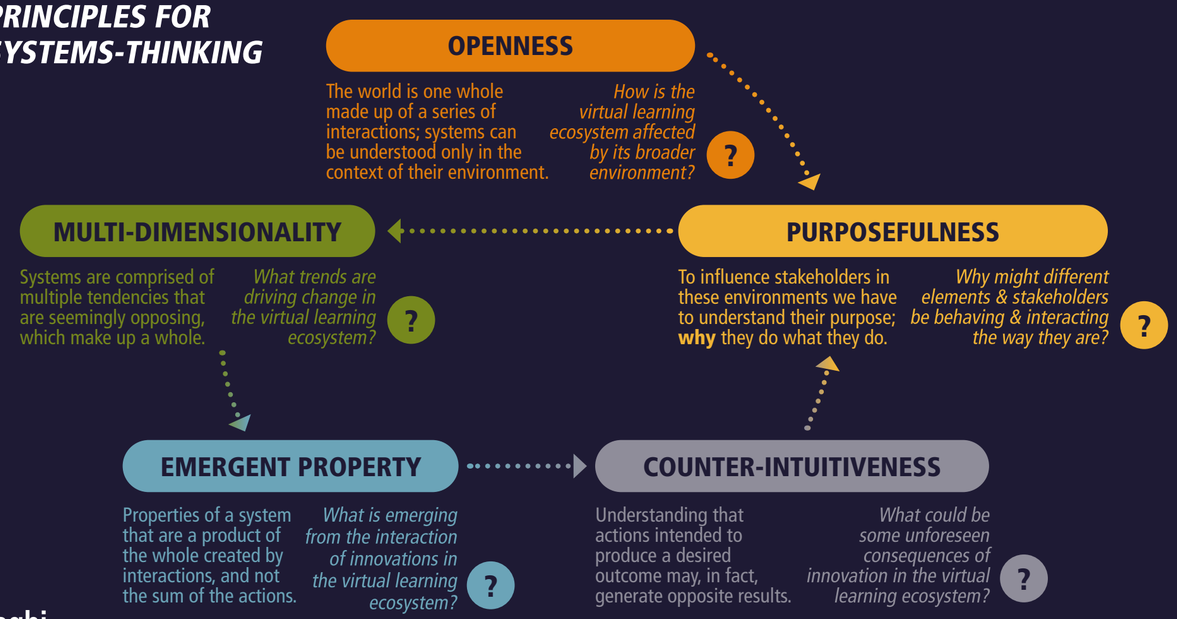
The transition from emergency remote teaching and learning to digital-by-design education in Ontario's postsecondary ecosystem prompted initiatives that shape new futures possibilities.

Through this report, we analyze how Ontario is enabling digital transformation through local innovation with ripple effects for global impact. First, we explore some key initiatives in Ontario for innovation in digital-by-design education and highlight some key impacts for learners, the sector, Canada, and beyond. Then, we discuss how we can leverage collaborative structures across the province to amplify the impacts of those innovations. Finally, we discuss the change-making capacity found in the relationship between local innovation and global development goals.

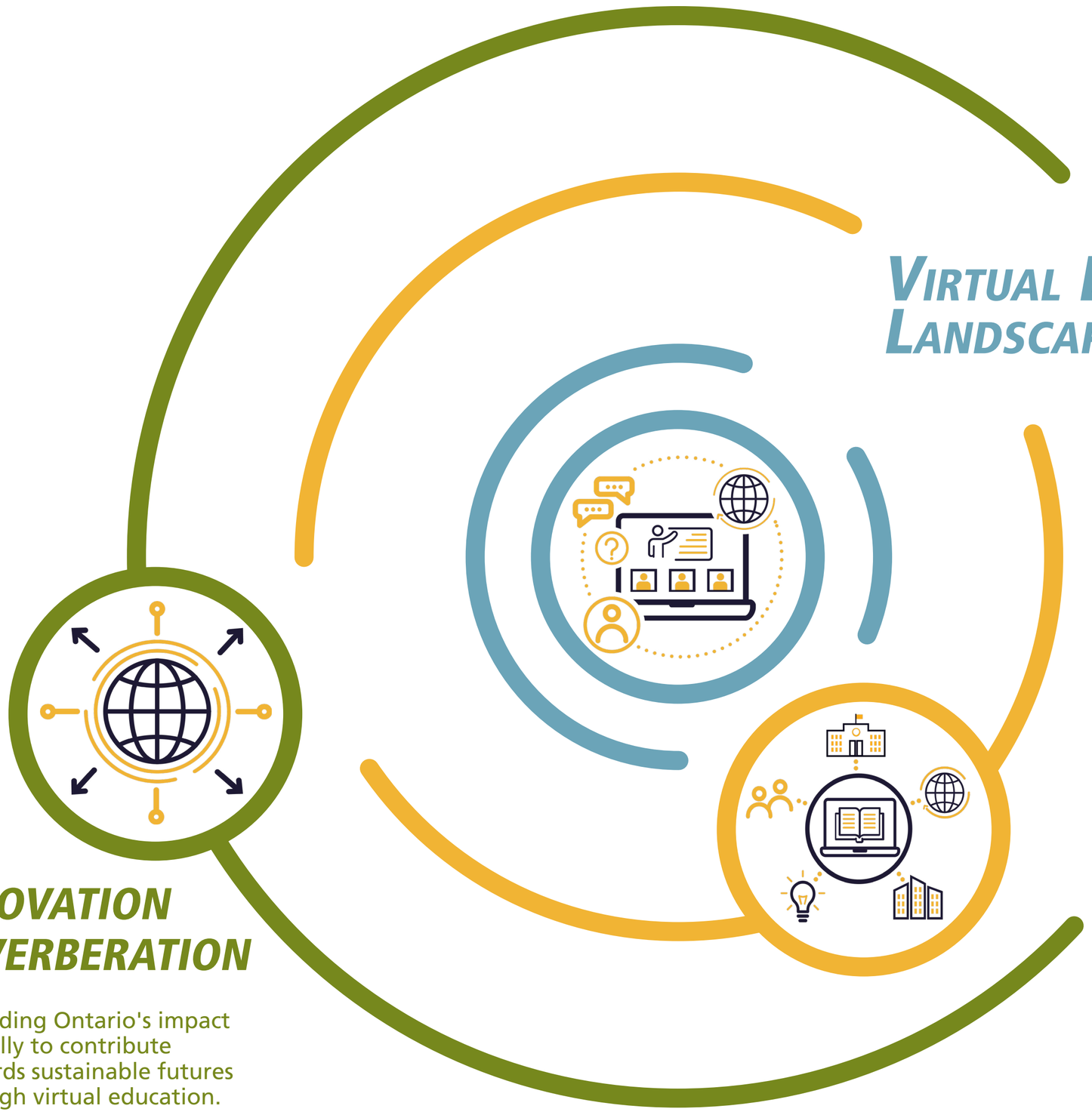
LEADING IMPACTFUL INNOVATION REQUIRES A SYSTEMIC PERSPECTIVE

Effective collaboration towards common goals requires adopting and applying a systemic lens. In bolstering Ontario's position as an innovative hub and a global leader in virtual learning, systems thinking can help identify key stakeholders and patterns of behaviour, relationships, causality, and variables. A systems approach is inherently holistic and participatory, with a strong potential to develop strategic solutions that best accommodate the needs of all stakeholders involved.

PRINCIPLES FOR SYSTEMS-THINKING



Adapted from Jamshid Gharajedaghi.



VIRTUAL LEARNING LANDSCAPE

Major trends shaping Ontario's virtual learning initiatives and their potential impacts.

more on page 4

LEVERAGING SECTOR-WIDE COLLABORATION

Amplifying Ontario's sector-wide collaborative innovation impacts to enhance digital-by-design teaching and learning across the province.

more on page 5

INNOVATION REVERBERATION

Extending Ontario's impact globally to contribute towards sustainable futures through virtual education.

more on page 6

FURTHER READING

1 **Managing Chaos and Complexity: A Platform for Designing Business Architecture**
Jamshid Gharajedaghi

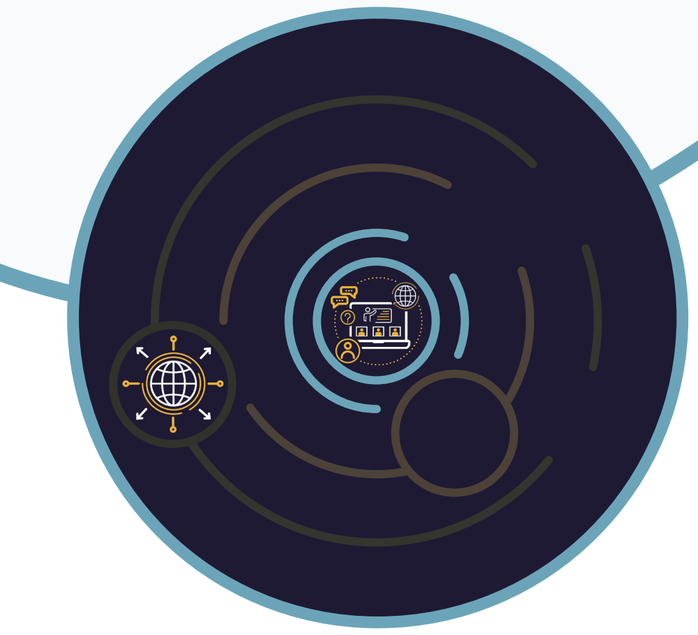
2 **Introducing Systems Thinking into Public Sector Institutions: Learning by Doing?**
OECD

3 **Learning Ecosystems: Knowing When You Are Ready for Change**
WISE

Virtual Learning Landscape

The plausible futures of Ontario's postsecondary education are likely to include approaches that harness the best of in-person and virtual learning experiences to support learners and instructors. Increased investments in digital-by-design resources, as well as enhanced collaborations towards distributing and sharing those resources for the benefi of the learners and the sector, have contributed to major advances in Ontario's virtual learning landscape.

In this section we broadly examine some of the most important initiatives and innovations in the virtual postsecondary education ecosystem and how they relate to a greater provincial strategy and vision.



By continuing to promote innovation in the development of educational technology and virtual learning offerings, we are giving learners the flexible access to training they need to enter the workforce and obtain good jobs, regardless of their location."

– Jill Dunlop,
Ontario Minister of Colleges and Universities

A CHANGING LANDSCAPE: TEACHING & LEARNING DELIVERY METHODS

According to the 2021 National Survey of Digital Learning by the Canadian Digital Learning Research Association, 82% of Ontario institutions considered it likely to offer more fully online courses and programs, and 94% considered it likely to offer more partially online courses and programs as of Winter 2022. Furthermore, 82% of institutions indicated that some of their programs would be offered with a choice of delivery method. Below is a snapshot of how Ontario's institutions anticipate teaching and learning delivery for 2022.

ANTICIPATED COURSE & PROGRAM DELIVERY METHODS

More courses & programs offered in a *fully* online format

More courses & programs offered in a *partially* online format

MAJOR TRENDS IN VIRTUAL LEARNING

The following are some examples of trends that have accelerated as the need for virtual learning materials and resources has increased rapidly.

Expansion of Open Educational Resources (OER)

The use of OER (i.e., free & open resources such as e-textbooks) has seen a massive growth due to disruptions brought by the pandemic and increased financial pressure on learners.

IMPACT: A culture of inter-institutional collaboration on content development & the ability to easily distribute digital resources.

Ontario's EdTech ecosystem & industry partnerships

Ontario is well positioned to be an EdTech global leader with more than 75 established and recent start-ups in the field

IMPACT: Setting Ontario apart as a leading international hub in quality virtual learning through industry partnerships.

Use of AI, AR, & VR in the postsecondary experience

Artificial Intelligence (AI) is being increasingly embedded into education to streamline and improve learner experience. The COVID-19 pandemic emphasized the benefits of Augmented Reality (AR) and Virtual Reality (VR) technologies at a faster adoption rate than previously anticipated.

IMPACT: Innovation & re-imagining of courses & approaches to delivery *(e.g. adaptive learning, simulation, gamification)*.

Micro-credential development & uses

Timely and accessible reskilling and upskilling options for career agility.

IMPACT: Enabling & normalizing lifelong learning across sectors.

Professional learning

As demands for online learning have increased, faculty and instructor development for technology fluency has also increased to support seamless online learning and teaching experience.

IMPACT: Proliferation of high quality digital-by-design learning & development opportunities.

ONTARIO'S VIRTUAL LEARNING STRATEGY (VLS)

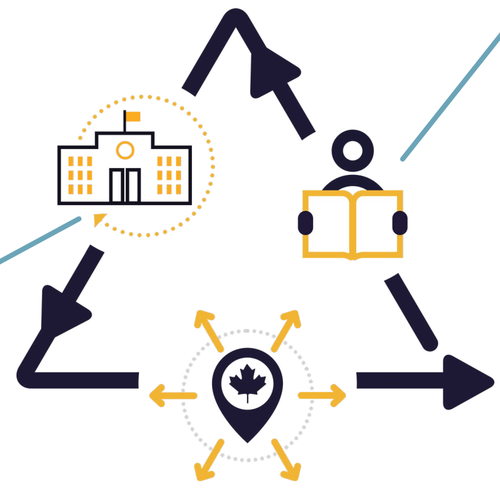
In response to the major trends in virtual learning, the VLS has invested over $60 million to date in virtual learning and EdTech to increase access to high-quality, digital-by-design resources that are learner-driven, market-responsive, globally competitive, and Ontario-made.

Built on three pillars: ***being the future***, ***being a lifelong learner***, and ***being a global leader***, the VLS enables Ontario's publicly-funded colleges, universities, and Indigenous institutions to:

1. Develop digital content including courses, programs, resources, & micro-credentials
2. Enhance digital fluency by creating supports & resources for educators & learners
3. Build digital capacity through wraparound services & marketing

IMPACTS OF SHARING DIGITAL-BY-DESIGN RESOURCES

VLS-created digital materials are shared through the eCampusOpen Library, which is available to all educational institutes and learners. Digital resources bring a number of positive impacts for learners, instructors, institutions, and beyond. Here we share the impacts identified by VLS project teams.



LEARNERS

Increasing learner opportunities *(e.g. for reskilling & upskilling)*.

Reducing barriers to postsecondary education *(e.g. cost saving)*.

Financial savings for learners at institutions developing & using VLS materials.

Supporting positive learner experiences through high-quality, adaptable, & flexible learning materials.

VLS-developed materials can be accessed and reused by any learner at any Ontario institution.

THE SECTOR

Fostering a culture of collaboration across postsecondary institutions.

Ontario institutions are committed to ongoing adoption of the VLS-developed materials.

Increasing efficient use of institutional resources through collaboration *(e.g. human & financial)*.

Project teams report that over 2,400 courses or course sections could use VLS-funded materials in one term at institutions that developed the VLS materials.

CANADA & BEYOND

Sharing Ontario-made digital resources throughout the Canadian postsecondary education system & beyond.

Some components may be converted into distinct, globally available OER.

FURTHER READING

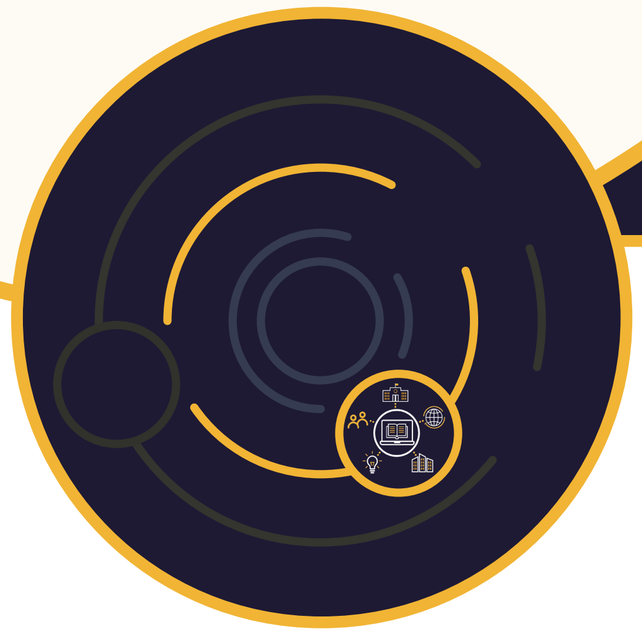
1. **220 Pockets of Innovation in Online Learning**
   Contact North
2. **10 charts to explain the Global Education Technology Market**
   Holon IQ
3. **Virtual Learning Strategy**
   eCampusOntario
4. **Higher Education Digital Capability Framework**
   Holon IQ
5. **DX: Digital Transformation of Higher Education**
   EDUCAUSE

Leveraging Sector-Wide Collaboration

Sector-wide collaboration in Ontario has accelerated, with various members within this ever-evolving virtual learning ecosystem needing to quickly adapt and respond to disruption.

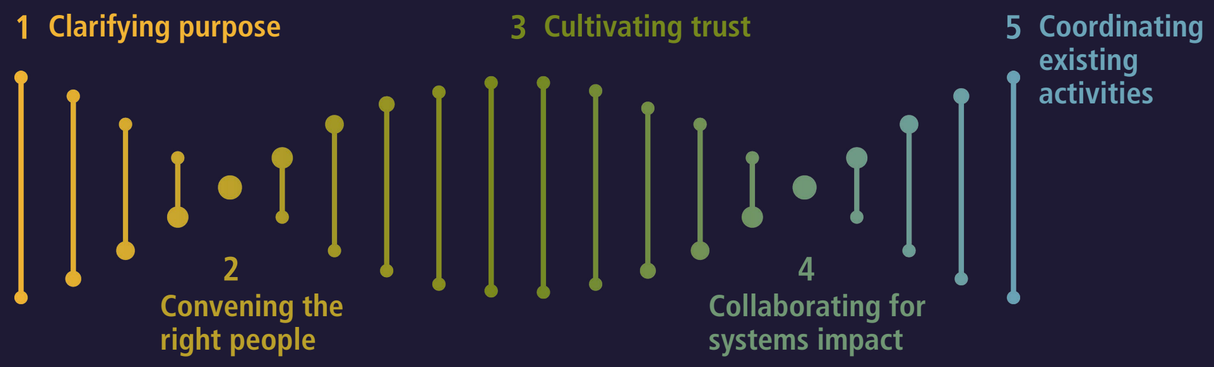
This ecosystem consists of collaborating postsecondary institutions and organizations to develop digital solutions and resources that enhance digital-by-design learning programs and experiences for learners across Ontario.

Increasing partnerships and collaboration will be vital to amplify innovations across the province and strengthen Ontario's position as a leader in the global virtual and hybrid learning ecosystem.



AN ECOSYSTEM OF LEARNING

Meaningful and impactful innovation in an increasingly complex postsecondary education context requires effective collaboration. Launching and sustaining effective collaborations and networks requires the following "**5 C's**":



> ***"Commons creating" is one of the ten core leadership skills for leading in a VUCA (volatile, uncertain, complex, and ambiguous) world. It refers to the ability to seed, nurture, and grow shared assets that can benefit other players.***
>
> ***– Bob Johansen, Author & Distinguished Fellow with the Institute for the Future***

COLLABORATION ENABLERS = IMPACT AMPLIFIERS

Several platforms and organizations across the province foster engagement, collaboration, and partnerships for scaled-impact virtual and hybrid learning innovation.

INDIGENOUS INSTITUTES CONSORTIUM

COLLECTIVE SUPPORT FOR INDIGENOUS POSTSECONDARY EDUCATION

The Indigenous Institutes Consortium (IIC) have advanced and advocated for Indigenous owned and led post-secondary education for over 25 years. Their membership includes 7 Indigenous education and training institutes across Ontario. The IIC played an instrumental role supporting its then 9 institutes in the passage of Ontario's Indigenous Institute Act, 2017 which solidified Indigenous Institutes as a third pillar of post-secondary education in Ontario. Learn more about Indigenous Institutes in Ontario: Leaders in Lifelong Learning.

The IIC's 2020-2023 Strategy Plan includes the goal to further partnerships with post-secondary institutions, provincial associations, the private sector, and public and private foundations. These partnerships can strengthen the impact and reach of Indigenous Institutions futures in growth, capacity, and recognition– expanding funding opportunities, supporting recruitment efforts, developing professional standards, and enhancing collaboration among institutes. Learn more about the IIC.

COLLEGES ONTARIO

ONTARIO COLLEGES AS THE FOUNDATION FOR ECONOMIC RECOVERY

Colleges Ontario is the association representing Ontario's 24 public colleges. Member institutions commit to the mission of providing leading-edge programs and services that empower people to maximize their potential in the rapidly evolving economy.

In its 2021-2024 strategic plan, Colleges Ontario highlights the importance of driving flexibility and leveraging emerging technologies and innovation to respond to rapidly changing market demands and strengthen communities. The strategic plan also outlines that, to unleash the full potential of colleges to advance Ontario's economy, creating more pathways to lifelong learning is essential. Additionally, ensuring equitable success depends on leading and promoting a safe and healthy culture on all college campuses, supporting the success of Indigenous students, and supporting access to technology for all students.

Learn more about how Colleges Ontario is enabling gateways to successful careers.

ECAMPUSONTARIO

eCampusOntario is a provincially-funded non-profit organization with the mission to imagine and co-create Ontario's postsecondary digital learning ecosystem by supporting academic institutions, educators, and learners to navigate change and deliver excellent and innovative digital learner-centric experiences. Through its different programs and platforms it enables sector collaboration for innovation.

COUNCIL OF ONTARIO UNIVERSITIES

PARTNERING FOR A STRONGER ONTARIO

The Council of Ontario Universities (COU) is a forum for Ontario's universities to collaborate and advocate in support of the prosperity of students, communities, and the province.

Driving Ontario's recovery requires partnership and collaboration. Ontario's universities continue to play a critical role as partners, helping lead our province to a more competitive economy with a highly skilled workforce, sustainable community infrastructure and a health-care system that is prepared for the challenges of today and tomorrow.

"Through various partnerships with government, industry, business, and the public sector, universities are equipping students with skills and experience for the jobs of tomorrow; improving health care for all Ontarians; growing Ontario's economy; and supporting ground-breaking ideas and discoveries through research and innovation."

Learn more about how Ontario's universities are collaborating to support thriving learners, vibrant communities, and a dynamic province.

ONTARIOLEARN

SHARED ONLINE COLLEGE COURSES

A virtual organization of all 24 publicly-funded Ontario colleges and 2 Indigenous Institutes, where they pool their resources to extend their reach and make high-quality, self-paced, and flexible online postsecondary education opportunities available to as many learners as possible. OntarioLearn manages shared infrastructure and operations to provide Ontario's learners with seamless access to high-quality online courses, programs, micro-credentials, and services. Learn more here.

CONTACT NORTH

SUPPORTING RURAL & REMOTE ONTARIO

Contact North | Contact Nord is Ontario's community-based bilingual distance education and training network, helping underserved residents in 1,300+ small, rural, remote, Indigenous and Francophone communities access education and training without leaving their communities. Learn more here.

ONTARIO COUNCIL FOR UNIVERSITY LIFELONG LEARNING

PROMOTING LIFELONG LEARNING OPPORTUNITIES

OCULL is the provincial association representing, and advocating on behalf of, continuing education and lifelong learning interests across Ontario universities. The organization also brings administrators and practitioners together for sharing innovative approaches to designing, developing, and delivering lifelong learning opportunities for adult learners. Learn more here.

FURTHER READING

1. **Leadership Skills in an Uncertain World**
   Center for Creative Leadership
2. **The Reciprocity Advantage: A New Way to Partner for Innovation and Growth**
   Stanford Social Innovation Review
3. **Local Learning Ecosystems: Emerging Models**
   Wise
4. **Unpacking the Learning Ecosystems Framework: Lessons from the Adaptive Management of Biological Ecosystems**
   Marijke Hecht & Kevin Crowley

Innovation Reverberation

As innovation in virtual and hybrid learning enhances ubiquity, learning at any time, from anywhere, the impacts of Ontario's local innovation have the potential to reverberate beyond the province and drive global impact.

By making education more accessible, postsecondary institutions become a critical space where learners and educators from many different places connect with each other to develop the necessary knowledge and skills to drive positive change.

This enables the co-creation of better futures for all by advancing equity in education and, more broadly, sustainable development.

INTENTIONAL IMPACT

The capacity of Ontario's postsecondary institutions to reach and engage with learners in Ontario and beyond through virtual learning, enables its learning innovation to contribute towards positive change for people beyond physical borders. With this influence, postsecondary institutions in Ontario can further intentional global impact, which is articulated through global frameworks such as the Sustainable Development Goals (SDGs).

ALIGNING ON GREATER PURPOSE

WHY

To create better futures for all through education.

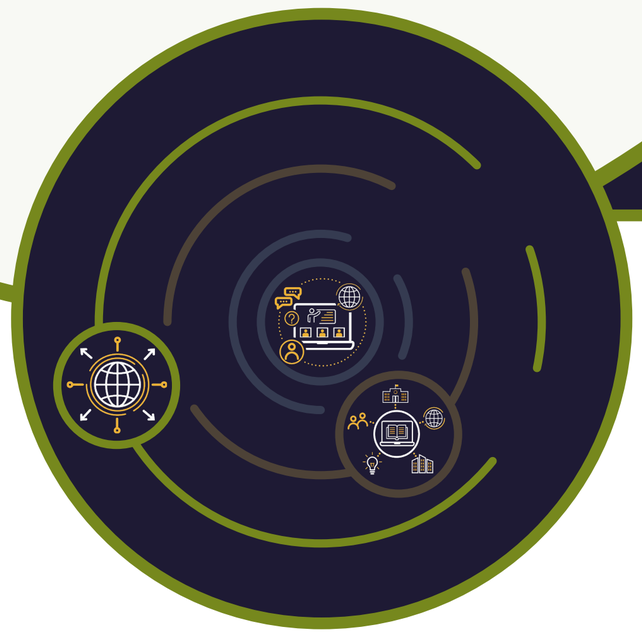
HOW

By leveraging the power of sector-wide collaboration.

WHAT

Developing and sharing digital-by-design materials and approaches that meaningfully engage with learners locally, nationally, and globally.

Adapted from Sinek's *Start With Why*.



"Canadian [...] institutes are in an ideal position to mobilize and train Canadians with the skills needed to build a sustainable future".

– Denise Amyot
President & CEO, Colleges and Institutes Canada

The Critical Role of Postsecondary Education in Global Impact

Introduced in 2015 by the United Nations, the 2030 Agenda for Sustainable Development "*provides a shared blueprint for peace and prosperity and the planet, now and into the future.*" Click here for the complete list of SDGs.

In 2017, the Environmental Association for Universities and Colleges (EAUC) founded and launched the SDG Accord to advance the critical role that education has in delivering the SDGs. Learn more about the tertiary education sector's collective response to the SDGs.

DEVELOPING CAPACITY FOR IMPACT

By creating virtual learning experiences that are accessible and reflect the diverse learner needs and backgrounds, Ontario-made teaching and learning materials have the potential to equip learners and institutions to contribute towards greater goals of building sustainable and flourishing global futures

Learners as change-makers

Fostering and educating learners to be change-makers tackling some of society's most wicked problems require curricula that informs them with the current and the most accurate sources of knowledge on global issues, the ability to think cross-boundaries, and problem-solving skills that are based on evidence and human empathy. Below is a non-exhaustive list of action-items that postsecondary institutions can embed into learner curriculum:

- Social and environmental responsibility content
- Climate and social justice content
- Opportunities to work on real-world problems
- Emphasizing soft skills (e.g. emotional intelligence)
- Inter-disciplinary and trans-disciplinary mission based learning
- Public engagement and public policy knowledge

Postsecondary institutions as change-makers

Postsecondary institutions can undoubtedly play a central role in global sustainability, and the United Nation's SDG Fund has outlined key roles higher education can play in fulfilling the 2030 Agenda for Sustainable Development.

- Embedding the principles of the SDGs across disciplines and educating learners on the social, economic, and environmental implications of their future careers and work
- Educating non-institution learners virtually with open learning materials and foster lifelong learning
- Conducting action-oriented research geared towards different stakeholders
- Collaborating among institutions to tackle unequal distribution of knowledge and resources
- Creating opportunities for members of the community (e.g. researchers and learners) to participate hands-on in various SDG related projects

CREATING SPACE FOR CHANGE-MAKERS

Building on the progress virtual learning has made in the last two years, Ontario's postsecondary institutions have the opportunity to further increase access to education by pushing the boundaries of the delivery methods and effectively reach local and global learners.

Multi-access learning & learner agency

Leveraging virtual learning technologies that are currently available, Ontario's postsecondary institutions can create multi-access options that put learners agency at the center or learning delivery. The Multi-Access Framework is based on a core principle—to enable learners to choose how they want to access the course. It is different from 'blended learning' in that it "places the learner at the center of the learning experience as opposed to the instructor or the institution."

TIERS OF THE MULTI-ACCESS FRAMEWORK

Tier 1: Face-to-Face
Synchronous-only option

Tier 2: Synchronous
On-campus & online learners access learning synchronously through different mediums

Tier 3: Asynchronous
Learner flexibility without compromising experience

Tier 4: Open Learning
Globalizing the learner experience through openly shared learning materials (e.g. MOOCs)

Adapted from Irvine, Code, & Richards, 2013.

FURTHER READING

1. **Global Education Monitoring Report: Technology and education**
   UNESCO
2. **The Sustainability Tracking, Assessment & Rating System**
   STARS
3. **SDG Toolkit for Canadian Colleges and Universities**
   Colleges & Institutes Canada
4. **How to teach through the lens of the Sustainable Development Goals**
   Times Higher Education
5. **We are not alone: using participatory group activities to engage students in sustainability**
   Times Higher Education

CONVERSATION GUIDE

We invite you to select one or more trends from this report and use the questions provided to spark conversations across your institution.

Remember, this report is simply the beginning.

Please use the additional links and reading resources provided to help guide and support your futures-focused journey.

Reach Out to Us!

For additional guidance, questions, or to share your work, please contact **research@ecampusontario.ca**.

QUESTIONS TO FACILITATE FUTURES THINKING

WHAT
- *What new opportunities and challenges could arise from this trend?*
- *What are the ethical implications of this trend?*
- *What resources are needed to implement this trend (e.g., human, financial)?*

WHY
- *Why is innovating virtual learning important to Ontario and the global community?*
- *Why is this trend valuable for serving Ontario's learners needs? For serving global needs?*

WHO
- *Who needs to be involved in developing digital-by-design resources?*
- *Who will be impacted (positively and/or negatively) by this trend?*

HOW
- *How do we enhance capacity to facilitate the implementation of this trend?*
- *How does this trend impact our current practices?*
- *How can we build this trend to be sustainable?*

WHERE & WHEN
- *Where do we go from here (i.e., what are next steps)?*
- *When can we take action?*
- *When can we explore this trend further?*

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Leading Virtual Learning Innovation is the fifth in a series of five Foresight Reports that expand on the VLS pillar of Being the Future by exploring maturing trends in the Ontario postsecondary sector and situating the VLS in the futures of virtual learning.

Foresight Reports are accompanied by a series of five Focus Reports, that tell data-driven stories about the VLS investment.

2021-22 VLS Reports Outline — Focus Report — Foresight Report

- Launching the VLS (Focus Report)
- Connecting to Create (Focus Report)
- The Hybrid Futures (Foresight Report)
- Tomorrow's Learners (Foresight Report)
- Ontario Open (Focus Report)
- Lifelong Learning (Foresight Report)
- Shaping the Future Workforce (Foresight Report)
- Ontario Working Together (Focus Report)
- **Leading Virtual Learning Innovation** (Foresight Report)

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