

ACADEMIC COUNCIL REPORT

SESSION:

Public
Non-Public

ACTION REQUESTED:

Decision
Discussion/Direction
Information

TO: Academic Council

DATE: May 23, 2023

PRESENTED BY: Dr. Lori Livingston, Provost and Vice-President, Academic

SUBJECT: 2023-2028 Integrated Academic-Research Plan

BACKGROUND/CONTEXT & RATIONALE:

Since 2019, the Office of the Provost has led an institution-wide effort to create an Integrated Academic-Research Plan. The first two versions of the plan spanned two year periods (i.e., 2019-2021 and 2021-2023). As our planning processes have improved and matured over time, and given the recent addition of defined metrics against which to evaluate our efforts on an annual basis, the temporal framework of the plan now spans a five year period.

The 2023-2028 Integrated Academic-Research Plan (IARP) charts our course towards our ultimate goal of being a preeminent STEM institution. The IARP is the anchoring planning document that guides other initiatives in place or underway at the university. It works in tandem with the already existing Ontario Tech *Driving the Future with Research Excellence: Strategic Research Plan 2020-2025* and it drives our year-over-year budgeting and capital planning processes.

This document aligns our key strategic areas with explicit commitments (or goals) and the actions required to achieve them. It is informed by our previous integrated plans as well as the multiple annual plans generated by Ontario Tech’s academic and administrative units. It aligns with our Vision, Mission, and Values statements and it follows the rolling plan format first introduced in 2019. The IARP identifies the priorities and strategies that anchors our integrated planning framework. This ensures that our annual review and evaluation cycles provide the opportunity to determine the success of our actions, align resources as well as adjust to our realities. It is intentionally brief.

CONSULTATION:

This year’s planning exercise began with members of the Ontario Tech community being invited to engage in planning activities at the unit level. The process was led by our academic and administrative leaders who worked with their colleagues to update strategies as well as evaluate the progress made on the action items contained in their 2021-2023 unit level plans. The evaluation processes are a critical step in identifying what actions have been completed, remain

in progress, or have yet to be addressed. From there, each unit was positioned to identify what previously identified actions would carry forward into and what new initiatives might be included in their unit plans.

Following the completion of individual unit plans, in late November, 2022 a day long retreat with all academic and administrative unit leads was held to identify key points of intersection (or integration) between the various plans. Thereafter, a draft Executive Summary version of this document was used as the basis for university-wide town hall sessions beginning in March, 2023.

A summary of the consultations that took place may be found below. Members (i.e., students, staff, and faculty) of the Ontario Tech community were notified of and afforded opportunities to provide oral and/or written feedback on the IARP as follows:

- February 28 Notification to Academic Council of upcoming Town Hall sessions
- March 10 Draft Executive Summary version posted to the Planning Office website
- March 10 Ontario Tech Community Town Hall 1
- March 16 Ontario Tech Community Town Hall 2
- March 20 Senior Leadership Team
- March 20 Faculty Association Joint Committee
- April 10 Senior Academic Team (i.e., Deans, Registrar, Chief Librarian)
- April 25 Notification to Academic Council that the draft full-version of the plan is posted with request for feedback by May 1
- April 25 Draft Full-Version of the Plan is posted to the Planning Office website
- May 9 Senior Leadership Team
- May 11 Board Strategy and Planning Committee
- June 28 Board of Governors

SUPPORTING REFERENCE MATERIALS:

Integrated Academic-Research Plan 2023-2028

**Integrated Academic-Research Plan
2023-2028**

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Vision, Mission, and Values

The University of Ontario Institute of Technology Act¹ envisioned a new type of university, one focused on offering programs that were innovative and responsive to the individual needs of students and to the market-driven needs of employers. Over the past 20 years, Ontario Tech has embraced this vision with its strategic commitment to being a change-maker and leader in technology-driven research, teaching and scholarship. As the institution enters into its third decade of operation, this commitment is stronger than ever. These Vision, Mission, and Values² statements differentiate us from other universities and capture the essence of our potential.

Vision

Embracing technology with a conscience to advance knowledge and promote sustainability.

Mission

We equip future leaders to solve complex problems.

We respond to the needs of students, and the evolving world, by providing superior undergraduate, graduate, and lifelong learning experiences. To this end, ‘what we do’ to achieve our mission and to ‘tell our story’ is guided by a community-focused approach on our strategic priorities:

- **Tech with a conscience:** *Innovating to improve lives and the planet by incorporating technology-enhanced learning strategies, and promoting the ethical development and use of technology for good through intensive research and inquiry.*
- **Learning re-imagined:** *Co-creating knowledge by adapting to the ever-changing educational landscape through the provision of flexible and dynamic learning and research opportunities.*
- **Creating a sticky campus:** *Cultivating student- and community-centric engagement opportunities by encouraging an inclusive culture for our institution through online and on-campus activities.*
- **Partnerships:** *Uncovering innovative solutions for their most pressing problems through purposeful research and collaboration with industry, community, government and academic partners especially as it relates to all facets of global sustainability and well-being.*

Values

Ontario Tech is a place where every person belongs and is free to grow their skillsets and mindsets. We cultivate lasting relationships through:

¹ See <https://www.ontario.ca/laws/statute/02u08>

² Most recent version approved by the Board of Governors on February 25, 2021.

- **Integrity:** *Supporting a culture of trust and belonging by consistently promoting equity, fairness, kindness and ethics.*
- **Inclusion:** *Advancing a learning community where we achieve success by prioritizing reconciliation, valuing diversity and eradicating discrimination and hate.*
- **Intellectual resilience:** *Pursuing excellence in all that we do by respecting different points of view and engaging constructively when exploring ideas and advancing knowledge.*
- **Innovation:** *Inspiring world-changing ideas by re-imagining learning and in so doing, fostering an environment that provokes curiosity, creativity, ingenuity and failure while stimulating growth.*

Twenty Years and Counting

In 2002, Ontario Tech was established as a differentiated university where students, staff, and faculty were immersed in a technology-enriched learning environment with a commitment to science, technology, engineering, and math (STEM), and professional and career-oriented degree offerings. Our founding mandate required us to be labour market-focused³ while advancing the highest quality of learning, teaching, research, and professional practice, and a special mission “to provide career-oriented university programs...with a view to creating opportunities for college graduates to pursue a university degree.”

Our updated Vision (i.e., “Embracing technology with a conscience to advance knowledge and promote sustainability”), Mission (“We equip future leaders to solve complex problems”), and Values add to these founding commitments. At twenty years of age, we are emerging as a new role model in higher education – a leading public university and up-and-comer dedicated to being student-, employee-, and community-centric.

There are several key indicators of our growing strengths and reputation. One very salient example is our year-over-year percentage increase in the number of undergraduate student applications. Leading the entire provincial system by a wide margin, Ontario Tech applications jumped more than 33% during the 2021-2022 recruitment cycle, along with a 28% increase in Ontario high school students making Ontario Tech their first-choice university.⁴ In January, 2023 data from the Ontario Universities Application Centre once again had us leading in these two categories for the 2022-2023 recruitment cycle. Ontario Tech’s reputation continues to rise as evidenced by being named one of the world’s Top 200 youngest universities⁵ and by our demonstrated strong results in various national⁶

³ See <https://www.ontario.ca/laws/statute/02u08>

⁴ See [More students applying to Ontario Tech than ever before | News and announcements \(ontariotechu.ca\)](https://news.ontariotechu.ca/archives/2022/03/more-students-applying-to-ontario-tech-than-ever-before-news-and-announcements)

⁵ See <https://news.ontariotechu.ca/archives/2022/03/ontario-tech-cracks-top-200-among-the-worlds-youngest-universities-for-first-time.php>

⁶ See <https://news.ontariotechu.ca/archives/2022/10/macleans-2023-university-rankings-affirm-ontario-techs-impressive-reputation-for-a-student-experience-based-on-quality.php>

and international rankings.⁷ Our students are winning awards⁸ and competitions^{9,10} and our researchers are securing major research awards and recognitions.¹¹

We have come a very long way in a very short period of time, in part, because we deliberately embrace our research strengths and role in stimulating and enhancing the economy and social fabric from the Region of Durham, Northumberland County, the eastern GTA, and a growing expanse across Canada and other parts of the world. We accomplish this by working closely with university, college, community, and industry partners to sustain the aforementioned objectives and generate new and innovative future-facing opportunities in the post-secondary education and economic sectors.

Ontario Tech is situated in one of the fastest growing areas of the province. We started as a regional university that readily supported the needs of our rapidly changing local populations, employers, and communities. As we enter into our third decade, our reach has stretched around the globe. Our enhanced use of technology (e.g., online and hybrid/blended learning platforms), and growing suite of flexible learning options (e.g., microcredentials, stackable credentials) advances our commitment to accessible post-secondary education while promoting continuous lifelong learning and workforce upskilling no matter where students are situated.

By providing employment, educational, and infrastructure development opportunities, we are maintaining our commitment to revitalize the City of Oshawa's downtown core, supporting development and growth in the north end of the city as well as providing opportunities for international students and scholars. The social, intellectual, and bridging capital provided by our faculty, staff, and students is building resilience across the Region of Durham and Northumberland County and giving much needed support to community organizations in their efforts to address poverty, homelessness, crime, opioid addiction, and quality of life issues.

Through our research (e.g., with an emphasis on energy, digital technology, intelligent manufacturing, environmental sustainability, clean technologies, autonomous vehicles, aerospace, computer science, cybersecurity, forensic psychology, criminology, health and life sciences, dementia care, and much more), we are helping to re-shape the local and provincial economic landscape. The importance of this cannot be overstated as we address past and current challenges in our efforts to build a better sustainable future.

Looking Back: Turmoil, Turbulence and Tenacity

⁷ See <https://news.ontariotechu.ca/archives/2022/11/ontario-tech-again-ranked-a-top-3-engineering-school-in-ontario-international-universities-survey.php>

⁸ See <https://news.ontariotechu.ca/archives/2022/11/ontario-techs-first-ever-cihr-doctoral-research-award-highlights-list-of-new-federal-graduate-studies-funding.php>

⁹ See <https://news.ontariotechu.ca/archives/2022/05/tops-in-the-province-ontario-tech-masters-degree-candidate-wins-provincial-three-minute-thesis-title.php>

¹⁰ See <https://news.ontariotechu.ca/archives/2022/01/ontario-tech-teams-earn-medals.-including-a-gold-at-major-business-competition.php>

¹¹ See <https://news.ontariotechu.ca/archives/2022/09/ontario-tech-researcher-dr.-marc-rosen-awarded-highest-recognition-a-canadian-academic-can-receive.php>

The COVID-19 pandemic created previously unforeseen levels of emotional, mental, and physical discomfort for every person on the planet. The pandemic upended our lives, habits, and traditions.¹² Like it or not, it forced us to re-evaluate every aspect of our university operations and try new things. It accelerated changes that were already underway on our campus, provided us with an opportunity to display a level of organizational agility not seen at our sister institutions, and laid bare our fiscal challenges.

In September 2020, we began the 2021-2023 planning process during the height of the pandemic. Our founding commitment to a technology-enhanced work and learning environment had allowed us to rapidly adapt to using technology to maintain our core business operations with minimal delay. At the outset of COVID-19 there were many of us who wanted to return to the familiar ways of life, work, and learning on our campus.¹³ However, with no end in sight to the pandemic, staying connected online gradually became the norm as we all worked tenaciously to engage in our teaching and scholarship activities in the virtual environment.

The disruption caused by the pandemic challenged us to explore new, exciting, previously unforeseen, and spontaneous opportunities. We realized that our success would depend on our ability to value, celebrate, and respect our collective strengths as well as our individual differences. Continuing to collectively rally around our shared priorities was once again crucial if we were to succeed in navigating the emerging and yet to be anticipated opportunities and challenges for post-secondary institutions provincially, nationally, and globally. We knew that staying committed and focused on our four key strategic areas was essential to our success.

The following summary, while not exhaustive, provides a few examples of our achievements during the 2021-2023 planning cycle. Despite (or in spite of) the pandemic, we accomplished a great deal as evidenced by the following.

Aligned with “**Tech with a Conscience**,” Ontario Tech once again earned a gold rating in the North American Sustainable Campus Index.¹⁴ We also added a new interdisciplinary research institute (i.e., Institute for Disability and Rehabilitation Research¹⁵), and added more research centres (i.e., International Atomic Energy Agency (IAEA)¹⁶ Collaborating Centre, Age with Dignity Campus of Care and Best Practices Research Centre), and chairs (i.e., UNESCO Chair in Hate Studies¹⁷, Ontario Tech University Research Excellence Chairs¹⁸). In 2022, with additional resources from provincial and federal sources, researchers at Ontario Tech expanded upon and committed to an extended period of monitoring for traces of the COVID-19 virus in local

¹² See <https://www.future-ed.org/how-the-pandemic-changed-higher-education/>

¹³ See <https://er.educause.edu/articles/2021/4/reimagining-higher-education-the-post-covid-classroom>

¹⁴ See <https://news.ontariotechu.ca/archives/2022/01/top-marks-again-for-ontario-tech-universitys-sustainability-focused-practices.php>

¹⁵ See <https://research.ontariotechu.ca/discover-research/institute-for-disability-and-rehabilitation-research.php>

¹⁶ See <https://research.ontariotechu.ca/discover-research/iaea-collaborating-centre/index.php>

¹⁷ See <https://news.ontariotechu.ca/archives/2022/11/ontario-tech-university-expert-dr.-barbara-perry-appointed-to-major-international-research-chair.php>

¹⁸ See <https://research.ontariotechu.ca/discover-research/research-chairs.php>

wastewater systems.¹⁹ We committed to new undergraduate (i.e., Minor in Indigenous Studies) and graduate (i.e., MA in Social Practice and Innovation) degree program offerings and supported our student, staff, and faculty usage of digital and virtual platforms governed by robust future of learning discussions and future of work policies and pilot programs.

Under “**Learning Re-imagined**” we were extremely nimble in using digital and online resources to deliver our academic programming in new and previously unforeseen ways. It was a team effort requiring cooperation from all of our students, staff, and faculty. Less visible were the supports provided by some key units on campus. For example, the Library expanded its digital collections, offered an increased array of online supports, and introduced some new open access journals (e.g., Journal of Digital Life and Learning, Journal of Educational Informatics)²⁰ while the Teaching and Learning Centre championed the creation of a growing array of Open Educational Resources²¹ (OERs). The Teaching and Learning Centre²² moreover played a pivotal role in supporting virtually every aspect of academic instruction during this time period, including the provision of assistance to a number of projects funded by the eCampus²³ virtual learning strategy. Our affiliated for-profit-entity Ontario Tech TALENT²⁴ began to develop and deliver a collection of industry-approved microcredentials to introduce a unique and differentiated lifelong-learning model to bridge the skills gap. We also broadened our degree program offerings (e.g., with the addition of new Bachelor degree programs in Health Administration, Educational Studies, Energy Engineering, Industrial Engineering) and new graduate programs in Business Analytics and AI, Financial Data Analytics, Software Engineering, and Education.

In terms of our “**Sticky Campus**” strategy and our people, we launched the first every demographic survey of our campus populations to gather data to inform current and future equity, diversity, inclusion, decolonization, and accessibility (EDIDA) initiatives. Our efforts in this area were broad, as evidenced by the university joining the national Indigenous and Black Engineering and Technology PhD Project to provide financial support and foster a safe, supportive, equitable and inclusive research and academic environment for Black and Indigenous scholars.²⁵ On September 30, we recognized National Truth and Reconciliation Day by making it a meeting-free day filled with a series of events to recognize our role in promoting reconciliation through education. In the fall of 2021, Ontario Tech became a signatory on the Scarborough Charter to show its commitment to continuing the dialogue and actions for more inclusive higher education. Ontario Tech also earned a Moose Hide Campaign Ambassador designation in support of a nationwide Indigenous-led grassroots movement to end violence against women and

¹⁹ See <https://news.ontariotechu.ca/archives/2022/04/new-funding-ensures-ontario-tech-researchers-will-continue-to-monitor-covid-19-and-other-indicators-of-health-in-wastewater.php>

²⁰ See <https://guides.library.ontariotechu.ca/openaccess/journalpublishing>

²¹ See <https://learninginnovation.ontariotechu.ca/oer/creating/oer-lab.php>

²² See <https://tlc.ontariotechu.ca/index.php>

²³ See <https://vls.ecampusontario.ca/>

²⁴ See <https://ontariotechtalent.ca/>

²⁵ See [Ontario Tech joins national Indigenous and Black Engineering and Technology PhD Project | News and announcements \(ontariotechu.ca\)](#)

children²⁶ and the university's Institute for Disability and Rehabilitation Research organized a series of international virtual speaker discussions on the topic of advancing disability rights around the world.²⁷ With the world experiencing considerable geopolitical turmoil, Ontario Tech established an international emergency bursary to support students from countries experiencing war or environmental catastrophe.²⁸ In terms of our physical spaces, construction was completed on the award winning Shawenjigewining Hall,²⁹ creating new and expanded study, work and social spaces for all of our students, staff, and faculty, but more specifically the Faculty of Health Sciences, Ontario Tech Student Union, Mukwa's Den, Student Mental Health Services, and other vital student support services (e.g., Student Accessibility Services, Test Centre). The Faculty of Education also moved into Charles Hall, affirming the university's long-term commitment to finding space and cost efficiencies while at the same time helping to revitalize Oshawa's downtown core. In contrast, we leveraged our outdoor spaces on the north campus location to begin two new traditions – the hosting of convocation on Polonsky Commons and the Chancellor's Challenge, a 5 km walk run event which raised over \$160,000 for student scholarship and bursaries.

In line with "**Partnerships**," bolstered in part by a generous donation from the estate of Nicholas Sion,³⁰ Ontario Tech's Brilliant Energy Institute³¹ gained momentum as it built upon the energy research and expertise at the university to meaningfully contribute to Canada's leadership in reducing carbon emissions, and to strengthen energy sector outcomes regionally, provincially and nationally. Ontario Tech's and ACE's partnership with FEL Motorsports entered its second year, connecting students to hands-on practical experiences and co-op placements in the auto-racing industry.³² Throughout 2022, top-secret research led by Ontario Tech³³ took place inside the Innovation Garage at ACE, where experts were developing Project Arrow, a national endeavour to create the prototype for a made-in-Canada zero-emissions electric vehicle. And finally, furthering its commitment to improving lives and the health of the planet, researchers in the Faculty of Social Science and Humanities collaborated with local police forces, community development corporations, and the Canadian Civil Liberties Union to launch a facial recognition technology partnership³⁴ that could have a significant impact on the future of policing.

The aforementioned summaries paint a picture of an innovative institution that presses itself to excel. Opportunity abounds and when opportunities present themselves, we are willing to embrace them. This, along with our longstanding commitment to STEM

²⁶ See <https://news.ontariotechu.ca/archives/2022/04/ontario-tech-prepares-for-upcoming-moose-hide-campaign.php>

²⁷ See <https://news.ontariotechu.ca/archives/2022/08/ontario-tech-hosting-virtual-speaker-series-to-advance-disability-rights-around-the-world.php>

²⁸ See [Ontario Tech establishes international emergency bursary | News and announcements \(ontariotechu.ca\)](https://news.ontariotechu.ca/archives/2022/07/shawenjigewining-hall-at-ontario-tech-recognized-with-an-oshawa-urban-design-award.php)

²⁹ See <https://news.ontariotechu.ca/archives/2022/07/shawenjigewining-hall-at-ontario-tech-recognized-with-an-oshawa-urban-design-award.php>

³⁰ See <https://news.ontariotechu.ca/archives/2022/12/ontario-tech-universitys-largest-gift-to-date-to-support-research-hub-for-innovative-clean-energy-technologies.php>

³¹ See <https://research.ontariotechu.ca/discover-research/brilliant-energy-institute.php/>

³² See [Ontario Tech's partnership with FEL Motorsports creates exciting hands-on learning opportunities for students | News and announcements \(ontariotechu.ca\)](https://news.ontariotechu.ca/archives/2022/06/ontario-tech-partnership-with-fel-motorsports-creates-exciting-hands-on-learning-opportunities-for-students)

³³ See <https://ace.ontariotechu.ca/project-arrow.php>

³⁴ See <https://news.ontariotechu.ca/archives/2022/06/facial-recognition-research-and-partnership-could-have-significant-impact-on-future-of-policing.php>

programming and the implementation of a technology-enabled learning environment (or TELE), means that we are viewed differently from other universities within Ontario. We are differentiated – but not as different from other institutions as we were prior to the pandemic.

The pandemic accelerated changes that were already underway on many university campuses around the world. This is because technology fuels just about everything an institution like Ontario Tech needs to do.³⁵ In 2017, futurists³⁶ were predicting that by the year 2040, academic instruction in higher education would be almost entirely virtual in nature. Where we once stood alone as leaders in hybrid and online course and degree offerings, others have quickly caught up – albeit not necessarily by choice. The question that we must now answer is how are we going to continue to differentiate ourselves and rise above others in the Ontario university sector amidst growing financial pressures, competition for students, and changing consumer, employer and industry expectations?

Looking Forward: Trends and Transformations

The emotional roller coaster created by the pandemic appears to be mostly behind us, yet it will have a lasting effect on virtually every aspect of our operations. We have emerged more resilient³⁷ than ever and we are hitting our stride as an institution. Now is the time to build on our accomplishments and the creativity we displayed over the last two-and-a-half years to develop a bold forward-looking plan, one that moves us beyond our current realities with the goal of rising to the forefront of the post-secondary education sector in Ontario and beyond.

This goal is very ambitious given some of the longstanding and newly emerging fiscal challenges we are currently experiencing. The ongoing financial pressures, created by the imposed 2019 cut to tuition, followed by the ongoing freeze in domestic tuition rates and static grant funding, are growing in magnitude. The grant funding model, moreover, is scheduled to shift to a new, previously untested performance-based funding model with potentially less predictable outcomes. Skyrocketing inflation and rising interest rates, moreover, are reducing our spending power and having a negative impact on our students' cost of living expenses. Rising rental accommodation rates due to low rental unit availability in Oshawa, as well as bottlenecks in the processing of international student study permits and visas, are a few examples of the real and unanticipated barriers for students wishing to pursue their studies at Ontario Tech. These challenges will require all of us – every member of the Ontario Tech community – to accept a role in supporting our students and the sustainable future of our institution.

We must pursue a bold transformation agenda that builds on our unique program offerings and the current momentum of our student demand. This transformation would

³⁵ Grajek, S., & the 2022-2023 Educause IT Issues Panel (2022, October 31). Top 10 IT issues, 2023: Foundation Models. *Educause Review*.

³⁶ See van der Zwaan, G.J. (2017). *Higher education in 2040: A global approach*. Amsterdam: Amsterdam University Press and the University of Chicago Press.

³⁷ See <https://www.amacad.org/news/post-pandemic-future-higher-education-virtual-convening-american-academy-affiliates>

see us growing to 18,000 students by 2030 to meet the needs of the growing GTA university-aged population and international demand for STEM and professional programs. The growth will provide revenues needed to cover the costs of expansion (including enhanced academic and non-academic student, staff, and faculty support services) as well as invest in our priorities and differentiation. Growing our total student population to 18,000, with a purposeful mix of undergraduate and graduate programs will transform us into a comprehensive research intensive institution, and change our place in the higher education sector to one that has greater influence and impact in research and learning outcomes. Such growth will rely on our ability to differentiate ourselves as a preeminent STEM institution and as a destination of choice for top notch students, staff, and faculty.

The technologies and strategies we immersed ourselves in to adapt to the realities of teaching, conducting research and learning during the pandemic are now permanently embedded in our everyday lives at Ontario Tech. “Learning from everywhere”³⁸ is the new norm and students will demand the flexibility to choose between in-person and online courses. They will also expect a variety of credentialing options (e.g., microcredentials, stackable credentials, courses, degree programs, etc.) and a flexible academic calendar allowing for multiple admission points throughout the calendar year.³⁹ With technology supporting such changes, we’ll increasingly have the opportunity to marry the inclusive elements of remote learning with the social benefits of being on campus making the traditional classroom more accessible, inclusive and engaging.⁴⁰ This will require us to continue to build and expand upon our virtual and digital infrastructure, while at the same time determining the right balance between in-person and virtual services. This will tie directly into the strong and lasting demand among faculty and administrative staff to continue to have flexible work-at-home and other virtual work options.⁴¹ Suffice it to say that post-pandemic, Ontario Tech and all other institutions of higher education cannot return to their old way of doing business and expect to survive in an era where “optionality” is the new norm.⁴² **We will grow our proportion of online and hybrid course offerings and use “tech with a conscience” to “re-imagine learning.”**

It is easy to see that enormous change is on the horizon, yet that change will not displace the inherent value of the on-campus experience. Engagement and performance in the higher education environment is greatly influenced by a sense of safety and belonging and it is this aspect of our everyday lives that suffered the most during the pandemic.⁴³ We have a strong sense of community at Ontario Tech and it allows us to thrive on a daily basis.

³⁸ El-Azar, D. (2022). 4 trends that will shape the future of higher education. *World Economic Forum*. See <https://www.weforum.org/agenda/2022/02/four-trends-that-will-shape-the-future-of-higher-education/>

³⁹ Busteed, B. (2021). Pandemic-to-permanent: 11 lasting changes to higher education. *Forbes*. See <https://www.forbes.com/sites/brandonbusteed/2021/05/02/pandemic-to-permanent-11-lasting-changes-to-higher-education/?sh=431be85c452f>

⁴⁰ Curtin, R. (2021). Reimagining higher education: The post-COVID classroom. *Educause Review*. See <https://er.educause.edu/articles/2021/4/reimagining-higher-education-the-post-void-classroom>

⁴¹ Busteed, B. (2021). Pandemic-to-permanent: 11 lasting changes to higher education. *Forbes*. See <https://www.forbes.com/sites/brandonbusteed/2021/05/02/pandemic-to-permanent-11-lasting-changes-to-higher-education/?sh=431be85c452f>

⁴² Selingo, J. (2022). How the pandemic has changed higher education. *Future Ed*. See <https://www.future-ed.org/how-the-pandemic-changed-higher-education/>

⁴³ Curtin, R. (2021). Reimagining higher education: The post-COVID classroom. *Educause Review*. See

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Facilities such as our Library, Hunter’s Kitchen, and the Campus Recreation and Wellness Centre are key activity hubs. By continuing to invest in research aimed at understanding the demographics of our campus populations – our students, staff, faculty, alumni and community stakeholders – we will be able to build upon this strong sense of belonging to create an environment that is inclusive and welcoming of all. This will require a heightened commitment to advocacy and philanthropy such that we may continue investing in scholarships, physical assets (i.e., upgrading existing and adding new buildings and technological infrastructure) and programs in response to the most pressing and acute needs of our students, staff and faculty. **We will continually build and evolve the “sticky campus” experience.**

Amidst public concerns about the growing ineffectiveness of universities to produce career-ready graduates⁴⁴, a key to differentiating ourselves from other post-secondary education institutions includes staying true to our founding roots of being a STEM institution that offers credentials that are labour market-focused and career-oriented. However, it is time for us to take this commitment to new heights. We must and we will focus on expanding our existing co-operative education and career services programming. Our efforts must be student centric, providing opportunities for all of our learners to define a personalized approach to their education through participation in in-person and virtual experiential learning experiences (e.g., co-op placements, internships, practicums, and work-integrated learning opportunities). Engagement in world-class research projects is also an option, thanks to growing research intensity across the institution. We will grow existing internal (i.e., bringing together cross-Faculty curricular and support unit initiatives) and external partnerships and establish new ones to achieve this objective, as well as to support our growing investments in research and philanthropy. Accessing our growing alumni base and leveraging our technological expertise will be key elements of our partnership strategy. **We will continually grow our “partnership” base.**

Attaining a goal of 18,000 students will take considerable time and effort. We will intentionally strive, moreover, to ensure that we have a diverse and appropriate mix of undergraduate and graduate, domestic and international, and full-time and part-time students. We will also continue to invest in retaining students and supporting them from the moment they begin their programs of study until graduation and beyond as lifelong learners and alumni.

All of this will require **every** member of the Ontario Tech community to commit to a spirit of teamwork, continuous improvement, and excellence in all that we do. This includes envisioning ourselves as national leaders in teaching and research excellence and innovation while also intentionally contributing to the social and economic needs of the communities that we serve. Our ability and willingness to work effectively and in partnership with one another, as well as industry, community, government, and other academic partners will underpin our success in this domain.

Moving forward, staying focused on a combined growth-differentiation agenda aligned

⁴⁴ Snyder, B.R., & Thorp, H. (2022, December 15). Universities can’t do everything – they’re pulled in many directions. A refocus on teaching is in order. *Chronicle of Higher Education*.

with our core strategic priorities (i.e., tech with a conscience; learning re-imagined; sticky campus; partnerships) while adapting to a new post-pandemic reality is crucial. In doing so, we will be data driven – constantly evaluating the value of our efforts and holding ourselves capable in a constrained fiscal environment. We will grow our revenues, be efficient in our costs and purposefully invest in our priorities. At the same time, we will continue to be accountable in ensuring that our graduates are employable, and that the generation, analysis, retention, and meaningful translation of our research efforts support the greater good of society. Importantly, as we move into our next decade of existence, we will continue to envision ourselves as a growing community hub – a place where people will come together to meet and engage in social and cultural activities that reflect community needs.

This Integrated Academic-Research Plan has an important role in keeping us collectively focused to realize a sustainable future for Ontario Tech. It also aligns our activities with our vision, mission, values, strategic priorities, and resources. This is exceptionally important during periods of prolonged fiscal restraint such as the one that we have been experiencing now for some time. Our fiscal uncertainty is further complicated by the broader degree granting privileges now found within the province's colleges as well as a growing number of industry-based education and training programs. We are being pressed to do more with less while also being held to greater levels of accountability by government and society in general.

Higher education has changed and will continue to change for sometime to come. We have a lot of work to do to stay relevant and competitive in this sector, yet opportunity abounds. Let's lead the way by embracing this opportunity, being leaders in innovative scholarship, and continuing to build an environment in which everyone can engage in this journey through collaborative and collegial dialogue.

Creating the Plan

Building on previous annual planning efforts, and the determination and successes of our past and present administrative leaders, faculty, staff, students, and alumni, this plan assists us in staying focused as we aspire to new levels of accomplishment and achievement in four key strategic areas:

- Tech with a conscience
- Learning re-imagined
- Creating a sticky campus
- Partnerships.

This 2023-2028 Integrated Academic-Research Plan (IARP) is a five-year plan that charts our course towards our ultimate goal of being a preeminent STEM institution. The IARP is the anchoring planning document that guides other initiatives in place or underway at the university. It works in tandem with the already existing Ontario Tech *Driving the Future with Research Excellence: Strategic Research Plan 2020-2025* and it drives our year-over-year budgeting and capital planning processes.

This document aligns our key strategic areas with explicit commitments (or goals) and the actions required to achieve them. It is informed by our previous integrated plans as well as the multiple annual plans generated by Ontario Tech's academic and administrative units. It aligns with our Vision, Mission, and Values statements and it follows the short-term, annually evaluated rolling plan format first introduced in 2019. This allows us to commit to doing "fewer things better" and to be more action oriented. It also affords the opportunity to implement an annual review and evaluation cycle to determine the success of our previously identified actions, as well as the opportunity to adjust to changing resource realities. It is intentionally brief.

This year's planning exercise began with members of the Ontario Tech community being invited to engage in planning activities at the unit level. The process was led by our academic and administrative leaders who worked with their colleagues to evaluate the progress made on the action items contained in their 2021-2023 unit level plans. The evaluation processes are a critical step in identifying what actions have been completed, remain in progress, or have yet to be addressed. From there, each unit was positioned to identify what previously identified actions would carry forward into and what new initiatives might be included in their unit plans.

Following the completion of individual unit plans, in late November, 2022 a day long retreat with all academic and administrative unit leads was held to identify key points of intersection (or integration) between the various plans. Thereafter an Executive Summary version of this document was drafted and used as the basis for university-wide town hall sessions in February, 2023. The Executive Summary version which will be available to those outside the institution complements this version of the plan which is intended for internal use only.

Before reading the remainder of this document it is important to note that even though these key strategies are sequentially presented, the commitments and anticipated outcomes associated with each are interconnected and therefore not mutually exclusive. Moreover, these strategies and the bulleted lists that follow are devoid of any order of priority and may not reflect the full diversity of activities happening within the university. This is because plans like this one are prone to expressing our common goals and objectives while inadvertently understating the tremendous contributions that each and every member of our university community makes on a daily basis. It is also important to explicitly recognize this shortcoming while expressing our sincere hope that every Ontario Tech community member will see their day-to-day contributions reflected within this document. Additionally, and perhaps most importantly, we hope to accomplish what we have outlined in this document so that we may continue to tell our story.

The 2023-2028 Integrated Academic-Research Plan

This plan, including our goals, objectives, commitments, and actions, necessarily aligns with Ontario Tech's four key strategic directions. In each section that follows, a brief statement on what we aim to accomplish, our commitments (or goals), and the actions we will employ to accomplish them is included.

Tech with a conscience:

Innovation, impact, and the social and ethical implications of technology

We aim to improve the lives of humans and the planet through the ethical application of technology. It's a key component in our teaching and learning practices, administrative processes, and innovative research projects.

Our Commitments

- Intentionally differentiate ourselves as an institution committed to using technology by investing in, and utilizing, an expanded array of technological platforms and assets in research and teaching
- Create core teaching and research facilities that are purposeful and scalable
- Deliberately examine and question the use, application, social and ethical implications and impact of technology on everyday life
- Commit to being national leaders in the conversation pertaining to the future of energy, applied bioscience, environmental sustainability and technology in Canada

Attainment of these goals will be measured against actions that contribute to making Ontario Tech a great place to work, study, and play. We will know if we are on track if by 2028 we have:

- Created and expanded “clusters of excellence” (i.e., including faculty, staff, students, alumni, community partners, industry and global scholars) to add to and build on existing areas of research strength, while continuing to support the establishment of research chairs and research institutes/centres
- Fostered societal awareness amongst our students by providing in-program opportunities to study the real-world impacts and ethics of their field.
- Expanded student, staff, and faculty usage of digital/virtual platforms governed by robust policies and processes that are guided by key principles pertaining to diversity, inclusion and belonging
- Reached beyond our campus walls to establish new advisory boards and/or industry consortia to guide complex interdisciplinary conversations and community-based research and experiential learning initiatives pertaining to technology and its promise for the future, as well as its challenges

Learning re-imagined:

Learner-centred educational options

We adapt to the ever changing educational landscape by experimenting with the most effective ways to deliver flexible and dynamic student-centred learning, giving more choices to more people.

Our Commitments

- Provide flexible and personalized approaches to the student experience to create opportunities to “learn from everywhere”
- Embrace, engage and support students across the full student life cycle, from the time they apply to a program through completion of it and beyond as alumni
- Re-invent learning by defining and constructing flexible and innovative high quality pedagogical practices that combine technological solutions with on-campus and beyond-campus classes and experiential components
- Focus on being leaders in pedagogy, andragogy, and technology-related research and scholarship that is learner-focused

Attainment of these goals will be measured against actions that contribute to making Ontario Tech a great place to work, study, and play. We will know if we are on track if by 2028 we have:

- Developed and launched at least one (1) fully online degree program per academic faculty to access and meet the needs and expectations of newly emerging student markets
- Supported differentiated learning by ensuring a mixture of in-person, online, hybrid (including flexible hybrid) and asynchronous course options, while simultaneously committing to enhancing learner engagement
- Achieved at least a quarter of all undergraduate students participating in work integrated learning opportunities, including co-operative education, internships, and practicums and entrepreneurial activities
- Strengthened student learning experiences by maintaining a judicious student to faculty ratio, and by prioritizing course instruction by full-time faculty members
- Developed and offered a greater number of newly emerging “for credit” offerings (e.g., micro-credentials, stackable credentials)
- Designed and incorporated flexible approaches to the scheduling, structuring and formatting of on-campus and virtual program offerings
- Provided enhanced upskilling, reskilling, and training opportunities and supports for instructors
- Developed and implemented new methods of assessment that clearly align with defined learning outcomes and desired learner competencies while at the same time building resilience against emerging technologies and the challenges they create with regard to academic integrity
- Provided students with flexible learning by offering an open (or build your own) degree program
- Increased usage of existing (i.e., simulation, gaming, AR/VR/XR) and evolving (i.e., artificial intelligence) capabilities, technological platforms and assets to support student learning, engagement, and success
- Increased the development, creation, production, adaptation, adoption and usage of OERs in each of our Faculties
- Increased enrolment in a suite of increasingly diversified Continuous Learning offerings

Creating a sticky campus: A place to make lasting connections

We promote positive social change and encourage an accessible, equitable, diverse, and inclusive culture for our campus community.

Our Commitments

- Create new campus spaces and experiences at our downtown and north locations, in combination with our virtual and technological assets, to define new and unique learning and work environments
- Use technology to provide personalized student, staff, faculty, alumni and community experiences
- Commit to being an educational and social leader in the community
- Celebrate and promote diversity, inclusion, belonging and accessibility in all that we do

Attainment of these goals will be measured against actions that contribute to making Ontario Tech a great place to work, study, and play. We will know if we are on track if by 2028 we have:

- Achieved a baseline response rate of at least 30% on our institutional student, staff, and faculty self-identification survey to allow us to report on our student, staff, and faculty demographics
- Progressed towards a student population mix more reflective of the system medians related to the proportion of graduate students, and of international students.
- Strengthened undergraduate retention rates between Year 1 and Year 2, and Year 2 to Year 3 of their studies
- Achieved our annual intake targets for undergraduate, Masters, and PhD enrolments
- Supported student persistence and success evidence through higher participation rates in transition programming (e.g., orientation events, student supports, etc.)
- Continued to establish a strong and experienced campus community through high annual employee retention
- Continued our commitment to practical and interactive learning by maintaining space efficiency targets based on COU benchmarks for instructional space to overall student FTEs
- Hired a new Assistant Vice-President (Diversity, Inclusion and Belonging) to inform forward thinking university initiatives for students, staff, and faculty
- Constructed new or reconstructed existing capital spaces to support faculty, staff, student, and community educational, research, and service needs
- Reimagined existing physical spaces (i.e., indoor and outdoor) in combination with virtual platforms to create dedicated meeting, recreational, and social spaces and social hubs
- Invited and engaged with students on an ongoing basis to deliberately gather up-to-date and informed perspectives on their experiences, desires and career aspirations

- Supported student recruitment, persistence and success through continued investments in the Registrar's Office, undergraduate and graduate student Academic Advising, the use of AI driven analytics (e.g., early alert systems), and dedicated undergraduate (e.g., UPREP, LEAP) and graduate student support (e.g., Grad Pro Skills) programming
- Supported the mental and physical health needs of our students, staff, and faculty via the provision of enhanced health and well-being programmatic supports
- Acted on the Truth and Reconciliation Commission's Calls to Action in support of Indigenous students and the local Indigenous communities
- Welcomed greater participation from members of our local communities and region via age- and interest-specific programming (e.g., Junior Ridgebacks, Age-Friendly University initiatives) and community-specific needs
- Introduced and implemented new orientation, mentorship, and leadership programs for our faculty, staff, and students
- Expanded our commitment to sustainability through ongoing and new energy and waste reduction initiatives

Partnerships:

Meaningful connections with our local and global communities

We help industry, community, government, and academic partners be more effective by bringing them together with students and researchers to uncover innovative solutions for our partners' most pressing problems.

Our Commitments

- Focus on strengthening and expanding current partnerships, philanthropy efforts and community connections to support student learning and employment opportunities, academic programs, and research priorities
- Establish dynamic, synergistic partnerships with government, community, and alumni as a differentiator for Ontario Tech
- Build our international reputation by drawing in partners and researchers from around the world

Attainment of these goals will be measured against actions that contribute to making Ontario Tech a great place to work, study, and play. We will know if we are on track if by 2028 we have:

- Enhanced alumni engagement through a variety of activities, opportunities and partnerships
- Scaled up Ontario Tech TALENT Inc. in conjunction with corporate partners and developed a business model to help our students and all of our employees upskill or reskill to ensure or enhance job-readiness
- Leveraged our career-oriented programs to establish a growing number of partnerships with small- and medium-sized local businesses and industries to support experiential and work integrated learning opportunities

- Established and nurtured respectful, collaborative connections with local and regional Indigenous communities
- Set up satellite research and partnerships offices
- Increased the number of students enrolled in collaborative programs offered between Ontario Tech and other universities and colleges, including international exchange programs
- Established new international partnerships with universities renowned for their technologically-oriented research and academic programs
- Increased the number of university-industry research chairs and institutes
- Increased the number of Ontario Tech-lead pan-university partnership agreements with industry, new startup companies, employers, community partners, and collaborative international research teams
- Experienced an increase in research granting success from funding sources both within and from outside Canada

Tracking Our Success

As part of evolving our integrated planning processes at the University we will be creating an Institutional Metrics report card that identifies specific metrics aligned with the goals we have set out for ourselves. For each metric we will have values, definitions and targets that we want to achieve to demonstrate how we are progressing towards our goals. Dashboards for all our IARP metrics will be created and reported on annually to our community. Performance against plan will be assessed and targets will be revised as required based on progress to date and where we want to be by the end of the planning period. The institutional metrics report card will provide opportunities to reflect on our successes and strategies as well as factors that impacted our progress.

Conclusion: Looking Toward a Sustainable Future

Ontario Tech is continuing to grow, expand, and mature into the promise its founders envisioned when it was established in 2002. It has always been a technologically forward-looking institution characterized by innovation, entrepreneurship, and a strong commitment to the betterment of society and the planet.

With the pandemic growing ever more distant in the rear-view mirror, a new normal is emerging on the road ahead. We cannot return to our old way of doing business and expect to survive in an era where choice and innovation is the new norm. We must expand our virtual and digital infrastructures to create flexible options for our students, staff, and faculty while at the same time supporting in person services and activities to strengthen and grow our already strong sense of community spirit. With intention, we must pursue a bold transformational plan – one focused on a differentiated program mix and growth in student numbers - to ensure a sustainable future for Ontario Tech.

This plan articulates what we aim to do, but it does not define how we are going to get there. To fulfill our priorities, we need a grassroots “all in” approach, to bring the plan to

life, and commit to working differently and pushing the boundaries of the possible. Through our enabling plans we will articulate how we get there from here. This will require each and every member of the Ontario Tech community – students, staff, faculty, alumni, community stakeholders and partners – to collectively engage and contribute on an everyday basis. In doing so, we will hold ourselves capable and pursue our goals with kindness, integrity, and respect. It is with our collective efforts that we will succeed and build on the solid foundation that we have already created and push Ontario Tech towards a bright, sustainable future.

This plan builds on our rapidly rising reputation as a dynamic, conscientious, and innovative technological leader in the province's higher education sector. We want to climb to the forefront of the post-secondary sector in Ontario and establish ourselves as an employer of choice and destination of choice for students, scholars, industry partners, and members of our community. We have a lot to offer and we want everyone to know about us. If we are to achieve this, we must commit to telling our story by excelling in all that we do.

As we enter into our third decade of operation, we now more than ever need to welcome faculty, staff, students, and the greater community to engage in strategic education and research initiatives with the aim of building a better and brighter future for all. Importantly, Ontario Tech is growing and diversifying to include students, staff, and faculty from around the world. Together, through an overt appreciation of our differences, products of our individual backgrounds, world views, and choices we are motivated to find solutions to complex societal problems that can serve as catalysts for improvement and change within our local and global communities. Within this planning cycle, we are confident that we will realize our goals through hard work and the implementation of the commitments articulated herein.

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