

WATERLOO AT 100

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Foreword

The University of Waterloo defied tradition when it was founded in 1957. We boldly advanced an educational experience that integrates academic and research excellence with work experience. In our changing world, we must continue to be bold and unconventional as we help shape a better future for humanity and the planet.

Throughout 2022, the University set out to develop a vision that would steer our long-term evolution and help us answer: What do we as an institution aspire to be known for by our 100th anniversary in 2057?

Thousands in the Waterloo community participated in consultations and provided invaluable feedback to develop and discuss ideas for the University's future. What struck me in these conversations was the genuine pride in our work and care for our institution evident across our university and wider community. Throughout the discussions, participants paid tribute to our past, honestly assessed what we could improve today, and looked ahead with clear-eyes and optimism.

Drawing on the unconventional spirit of the University's founding, our community put forward ideas to reinvent the culture of our institution as we build a better future. In the consultations, I heard broad acknowledgement that the world around us is rapidly changing and that within the higher education sector, other institutions are gaining ground where we have historically led. Considering this, we discussed how we can draw on our unique strengths to not only navigate uncertainty in the future, but to help shape that future for the betterment of society.

In the 1950s, we disrupted post-secondary education in Canada with what was then an unconventional model of education. Now is the time to reinvent what makes us unconventional: to nurture the skills, expertise, and spirit within us to be known as the problem-solvers and leaders in 2057.

A few years after founding this University, Gerald Hagey, reflected on the progress of the institution and where it might be headed. He said:

"I cannot perceive a time when the universities will not be challenged by new requirements from our society. Equally, I cannot foresee a time when the University of Waterloo will be so hidebound by tradition that it cannot adjust itself to providing education to meet these needs."

Those words from 65 years ago remain so true today. I hope they, and the vision outlined in this document, continue to inspire us and push us forward for the next 35 and beyond.

I am deeply grateful to all who participated and shared their feedback and ideas. It is an honour to work with you as together we take the path ahead into bold new futures.

Vivek Goel
President and Vice-Chancellor

1. A picture for the future

At the University of Waterloo, we pride ourselves on identifying and solving big, complex challenges facing humanity and our planet. What would the future look like if we solved them all?

We opened our consultation sessions by asking our community for their vision of the future. We know we cannot predict the future, but we are confident about our ability to help shape it for future generations. This is what you shared with us:

Societies are just and fair. Governments and institutions uphold their duties and have rebuilt trust with the public. Humans live healthier, longer lives. Natural resources are protected and equitably distributed, and the threat of climate change is a distant memory. Technology evolves responsibly as it continues to enable advancements for humanity. There is enough economic prosperity for all, and everyone has equal access to opportunity to reach their full potential.

In short, humanity is thriving and so is our planet.

Given today's state of the world this vision may appear a distant hope. But together we can strive towards it. We can harness the unique strengths of our institution to prepare the leaders of tomorrow and equip them with the skills and experiences necessary for a rapidly changing world.

Call us dreamers, but at the University of Waterloo, we've been known as doers for more than 65 years. We can help make these dreams a reality.

2. A vision for Waterloo at 100

This is our vision for Waterloo at 100.

WHO WE ARE

We are a leading global research-intensive university, renowned for entrepreneurship and innovation, and providing co-op and work-integrated learning at scale with impact.

WHAT WE ENVISION

A community of collaborative, innovative and entrepreneurial problem-solvers and leaders who seek to understand and identify equitable and sustainable solutions for the future of humanity and our planet.

To realize this vision, we will follow these guiding principles:

REDISCOVER UNCONVENTIONAL

Universities tend to look the same. Rather than chase convention, Waterloo must resist isomorphism. We are more valuable to the world when we add uniquely Waterloo strengths. We can do this when we align our work to shape Global Futures, based on our strengths in co-op and work-integrated learning, innovation and entrepreneurship, fundamental and applied research that is connected, and strong relationships to our surrounding communities.

LEAD GLOBALLY, ACT LOCALLY

As we continue to address global challenges and make impacts around the world, we will also continue to strengthen and shape our local surroundings through collaborative relationships. As we go out into the world with innovative solutions to challenges we should ensure we have also addressed them in our communities. Change starts at home. As global leaders, we live our values and apply our knowledge on and off our campuses locally.

COORDINATE AND COLLABORATE

To unlock the full potential of our university, we will create a culture of coordination and collaboration. Models that served us well in early days of rapid growth have resulted in work that is siloed. Today, we operate in a complex environment that requires teams to work together across many units, boundaries and communities both globally and locally. We need to find ways to coordinate, collaborate and cocreate to build an empowered organizational culture with an emphasis on accountability and nimbleness. This cultural shift also includes instilling collaboration as a mindset and skill in our students and valuing collaborative connections with community and global partners.

3. Building on our unconventional foundation

WE NEED TO BET ON OUR STRENGTHS TO ACHIEVE SOMETHING GREAT IN THE FUTURE.

To position ourselves for success in the future, we can draw lessons from our past. Our formative years were marked by bold approaches to education that challenged conventions in university education.

Our founders sought to build an institution that would serve the needs of the community and power the local and broader economy. They built a strong bond between academia, government and business that continues today.

When our differentiating strengths overlap and work together, drawing on our unconventional spirit, we achieve things that no other university can.

CO-OP AND WORK-INTEGRATED LEARNING

Co-operative education was a new concept and guiding value in the founding of the University. Waterloo today stands as a global leader in co-operative education and work-integrated learning. No other research university in the world does co-op at the same scale and impact as Waterloo.

FUNDAMENTAL AND APPLIED RESEARCH THAT'S CONNECTED

Theoretical and fundamental research excellence infused with creative problem solving has distinguished Waterloo scholarship. Our research is uniquely energized by co-op and entrepreneurship and is connected to both immediate challenges and long-term possibilities for the good of our communities and to shape a better world.

INNOVATION AND ENTREPRENEURSHIP

Ideas thrive at Waterloo. Innovation and entrepreneurship have been part of Waterloo's story since our inception. Collaborating with industry, we have helped build an entrepreneurial ecosystem that has achieved global recognition. Today, we lead in providing our students and researchers access to the technologies, tools, supports and connections they need to develop and grow their ideas.

CONNECTED TO A THRIVING REGION

Our deep connection and commitment to our local region and community traces back to our founding and enriches each of our other differentiators. Local connections initially powered Waterloo's co-operative education program and today continue to employ thousands of students at any given time. Our region has evolved with our institution and now includes many globally recognized institutions and businesses. Connections to our surroundings help shape and sustain our entrepreneurial drive. We need to constantly connect with our community and discover how our researchers, students and entrepreneurs can support and propel Waterloo Region forward.

4. A changing PSE landscape

As we look towards humanity's futures, global transformational forces are changing the post-secondary education (PSE) landscape.

Digital and technological progress has allowed more flexibility in teaching and learning, with the pandemic accelerating applications in remote and hybrid education. At the same time, the pandemic has underscored the urgency of improving mental health and wellness supports for students and employees.

Institutions are grappling with more urgent responsibilities to maintain or grow public trust in the face of widespread misinformation and disinformation. New entrants to the sector, such as online, private and other non-traditional institutions present new competition in PSE.

The sector has a responsibility to reckon with our country's colonial past and its lingering harms and recognize that our students are shaped by different lived experiences and backgrounds. Many face barriers from systemic discrimination. Our campuses are microcosms of society—they must be decolonized and become more accessible, equitable and anti-oppressive.

Change in the sector means institutions have embraced so much of what once made Waterloo unique. Work integrated learning, entrepreneurship, research with industry were once things few besides Waterloo could claim. Today, many of our competitors are making serious commitments in these areas, blending us in with the crowd.

We face a generational opportunity to address these big challenges and to bring fresh relevance to post-secondary education. To fulfil our ambition and regain our distinctiveness, now is the time to reimagine a continued unconventional role for the University of Waterloo in this rapidly changing landscape.

5. Global Futures

OUR WORLD IS CHANGING, AND WE MUST EVOLVE WITH IT.

The world continues to face multiple, compounding major crises that cut across society, health, the environment, technology and the economy such as:

- The COVID-19 pandemic that has exacerbated social and economic inequities and exposed the fragility of our healthcare and education systems.
- The breakdown of the rules-based international order that has led to geopolitical tension and ongoing armed conflict in many parts the world.
- Demographic transitions that will result in many countries, including our own, having a much older population, while other regions, such as Africa, grow significantly.
- Technology that is dramatically disrupting the way we work, live and connect.
- We are facing up to the lingering harms of colonialism, the need for reconciliation with Indigenous peoples, and action to address hate-motivated injustice and violence.
- Our biggest threat remains climate catastrophe placing into unparalleled urgency the very survival of our planet.

The challenges are complex, but also present opportunities for the University of Waterloo to lead the way with new ideas and collaborative solutions that breakthrough at the intersections.

ADDRESSING THE WORLD'S MOST PRESSING CHALLENGES

The future we envision for humanity and our planet is at the core of the Global Futures, which will inspire collaborative and interdisciplinary approaches to our activities and outputs as we set out to realize the Waterloo at 100 vision. To make the most impact, we need to focus on the areas where we can leverage our strengths and differentiators.

Five interconnected Futures for humanity, aligned to our academic and research strengths, help us to focus and co-ordinate our work across disciplines and organizational boundaries. Each overlaps with the others, and it's in these intersections where Waterloo's tenacity for identifying new problems, solutions and leading change will shine.

SOCIETAL FUTURES

How do we share and translate knowledge to positively advance society's future and ensure that communities and everyone within them thrive?

Demographic transformations, increased migration, digitization and automation, shifting geopolitical relations, and declining trust in democratic institutions and experts are among the forces transforming society. While there is a deeper understanding of the global legacies of colonialism and social injustices, our social echo chambers contribute to polarization and disinformation, stifling constructive dialogue across different points of view.

Across our academic, research and service activities, we should consider the impacts on society. Across our campuses, which are mirrors of society, we can innovate and apply new models to ensure every member of our community thrives.

HEALTH FUTURES

How will we ensure everyone achieves optimal health and well-being and redesign our health systems through technological advances, virtual care and health data applications to create an equitable landscape of care?

The many physical and social determinants of health contribute to our well-being yet too many individuals and communities do not achieve the best possible health status. Those that are sick or injured navigate complex health systems that are unsustainable, under pressure from escalating costs, and facing shortages of health professionals and an aging population.

Waterloo is poised to take a unique leadership position in this space by focusing on our strengths at the intersections of health, society, technology and entrepreneurship, and engaging partners to co-create community-based solutions.

SUSTAINABLE FUTURES

How will we enact the social, economic and geopolitical changes required to ensure a prosperous future for humanity and the planet?

The sustainability of our quality of life is intricately connected to our social, economic and environmental well-being. While the global climate emergency is the greatest threat to our collective future, we are also challenged in preserving biodiversity, ensuring clean water for all, and producing enough food for a growing planet.

Waterloo is already a leader in sustainability research and education. We can build on this strength to help direct society towards a sustainable future. We can lead across our campuses by implementing innovative solutions to achieve and exceed our targets for sustainability.

TECHNOLOGICAL FUTURES

How will we lead the next technological transformation to ensure a safe and human-centered digital future?

Technology continues to accelerate at an exponential pace, bringing both benefits and new challenges. Emerging technologies are often adopted before the full impact on culture and human behaviour is understood.

As tech advances, we have learned that big data can be harnessed to help governments and organizations make informed decisions and address equity and equality concerns. But this has also led to a loss of privacy and inequitable distribution of wealth. Cybersecurity and gaps in data literacy are ongoing risks. The world is now demanding that innovators develop technology with greater responsibility and accountability.

As Waterloo continues to lead in technology and innovation in critical areas, we have an opportunity to shape technology to serve society, rather than letting technology shape us. Although it is impossible to predict technological advances over the next 35 years, we can help shape future technologies for good. Instead of asking “what?” we will ask “what for?” We will integrate Waterloo’s strengths to advance technology that is responsible, sustainable and socially viable.

ECONOMIC FUTURES

How do we create equitable and resilient local and global economies to lead us into the future?

Technology is transforming the economy and the world of work with the rise of remote and hybrid workers, increased automation and artificial intelligence. New technology can increase efficiency and flexibility, but the workforce must keep up with new systems. Life-long learning will become increasingly important as individuals need to upskill, reskill and reimagine their careers in addition to benefits for personal growth and enlightenment.

At the same time, labour shortages, disruptions to supply chains, and geopolitical and digital threats have shown us the vulnerabilities and risks inherent in our economy. Canada faces serious challenges with productivity growth, and without a significant change in course we will not have the resources necessary for the challenges ahead.

We have the foundation to shape innovative ecosystems and develop talent to help create more equitable, resilient and future-proofed economies. Already a leader in work-integrated learning, we can expand our mandate to support learning-integrated work to help organizations and individuals keep pace with technology and the changing world of work. We can grow our business and entrepreneurial education strengths to include leadership in social entrepreneurship and innovation targeting the public good.

FUNDAMENTAL RESEARCH AND SCHOLARSHIP

Underpinning our work across these Futures is our relentless commitment to fundamental research and scholarship.

A commitment to excellence in fundamental research and scholarship advances our understanding of ourselves, our planet and the cosmos and enables the ongoing development of technologies, innovations and applications we cannot imagine today.

We must always keep at heart the core mission of the University to advance learning and knowledge through teaching, research, and scholarship, nationally and internationally, in an environment of free expression and inquiry.

6. Our journey to 2057

WHERE ARE WE GOING AND HOW WILL WE GET THERE?

We have bold ambitions for the impact we want to make on the world. To enable these goals, we need to look inward to focus, organize, and forecast into the future how we work and create the right environment for our community to thrive.

FORECASTS

These focus areas will help us rediscover unconventionality. For each focus area, we will develop near and mid-term actions to propel us towards these long-term goals.

CULTURE 2057

Who we are as an institution starts with our culture. We will build on Waterloo's culture through more collaboration and engagement aligned to our values and commitment to bettering humanity and our planet.

- We will be nimble and coordinate across disciplinary and organizational boundaries for the betterment of our university and our students.
- We will value and incentivize our collective success.
- We will embrace decolonization, Indigenization, inclusivity, equity, and anti-racism into our organizational culture.

GRADUATES 2057

Today's Waterloo students will be the leaders and change-makers in 2057. Our goal is to produce uniquely Waterloo graduates who will help drive positive change in the world. While we will embrace new tools and technologies to improve quality and accessibility of teaching and broader educational experiences, we will focus on ensuring that we deliver unique opportunities for engagement that can only be had with a physical presence on our campuses. Our graduates will be:

- Global citizens centred on humanity, the planet and equity, and connected to their local communities.
- Future leaders who leverage a Waterloo education that facilitates integrated knowledge and problem-solving within and at the intersections of our Global Futures.
- Graduates who never stop learning and remain connected to our institution and community.

KNOWLEDGE 2057

Waterloo's excellence in research that is connected coupled with constantly evolving education will remain the foundation for practical applications and transformative innovations.

- We will seek knowledge that improves society, that matters locally and globally. Our research will be excellent and relevant.
- We will value knowledge that counts over being counted. We will incentivize research that makes positive changes in society. We will continuously innovate the way we teach and learn.
- Rather than relying on traditional metrics of scholarship and teaching excellence, we will find new ways to reward faculty members for their innovation, collaboration and collective impact in research and education.

CAMPUS 2057

Where we teach, learn and do our work will reflect our values and culture. While our future campuses are both physical and virtual, we are committed to enabling uniquely personal experiences. Physical spaces will remain important places to gather, find and build community, while technology will enhance and enable our work and connections.

- Our campus is financially and environmentally sustainable, and carbon neutral.
- Our campus is decolonized, inclusive, equitable and accessible physically and economically. Individuals of all abilities, backgrounds and identities should thrive through a deep sense of belonging.
- Our campus promotes physical and mental health and wellbeing.

EVOLVING OUR DIFFERENTIATORS

Remaining true to our core strengths, what do we want the University of Waterloo to be known for on our way to 2057? How will we get there in ways only Waterloo can?

Today we are globally recognized for innovation in STEM and commercialization of ideas. There is often less awareness of our strengths across the humanities, arts, social sciences, environment and health. Leveraging our strengths in integrating disciplines and working at the intersections, we can also be relied upon as innovators for social good.

These forecasts will guide our evolution in what continues to be our differentiators, adding unique value to the postsecondary sector and beyond.

THE FUTURE OF CO-OP AND WORK INTEGRATED LEARNING

Waterloo was a pioneer in experiential learning and we continue to partner with employers to create co-operative education that equips our students to become change-makers and leaders in their chosen field. As students venture out into the world and back, they share experiences and inspiration that transform our curriculum and community.

We will continue to lead and innovate in this space by expanding opportunities for our undergraduate and graduate students and evolving our programming to keep pace with social, technological and economic change.

By 2057, we envision:

- **Our co-op models have evolved with the changing nature of work to be flexible, open and digital, and support employers and industry to evolve accordingly.**
- **We are a global leader in graduate student work-integrated learning that is connected to our research.**
- **Co-op placements for social good — in not for profits, community organizations, global NGOs — are widely available and pursued by our students.**

THE FUTURE OF FUNDAMENTAL AND APPLIED RESEARCH

Rigorous and deep inquiry is a fundamental pillar at Waterloo. We do not shy away from unconventional or emerging disciplines or subjects. We thrive where disciplines intersect. Focusing on where we can make the most impact, we will continue tackling global challenges that will benefit our world for generations. Unified by the Global Futures, we will work collaboratively across disciplines, organizational boundaries and with partners across sectors.

We will expand our research through partnerships that promote Open Science and ensure the knowledge we create is responsibly developed and applied for the greatest impact on humanity and our planet.

By 2057:

- **We are a global leader in impactful interdisciplinary research that addresses global and local challenges at the ever-evolving intersections of the Global Futures.**
- **We contribute excellent fundamental research and scholarship in focused areas of strength.**
- **We are recognized leaders in social and policy engagement.**

THE FUTURE OF INNOVATION AND ENTREPRENEURSHIP

We will continue to be bold innovators and leaders in entrepreneurship, adding pillars in social innovation and policy engagement aligned with the Global Futures. We will apply our innovative and entrepreneurial spirit in our own communities including our campuses, working with local stakeholders on transformational projects for the region and growing global companies that scale. At the same time, we will use our position as a technology leader in to advance ethical and responsible technology.

By 2057:

- **We are the global leader in generating new technology ventures for the good of humanity.**
- **Our ventures scale successfully with global impact while staying rooted in our region.**
- **We are a global leader in social and policy innovation.**

THE FUTURE OF COMMUNITY AND CAMPUS CONNECTIONS

We are proud to be an active member of our surrounding community and of our role in catalyzing and sustaining Waterloo region's growth into the globally recognized innovation hub it is today.

Our concept of community starts on our own campuses. Our physical and virtual spaces should reflect our bold aspirations for society and the planet: environmentally and financially sustainable, decolonized, accessible, equitable, inclusive and centered on our community's well-being.

Our campuses are also places where we can apply our innovations and knowledge to help improve the lives of those within these spaces and our surrounding community. For example, as our surrounding region grows, we will work with partners on innovations to solve local issues such as improving our health systems, ensuring adequate housing and social supports, meeting transportation needs and addressing sustainability challenges.

By 2057:

- **We will help bring global prominence to our thriving region.**
- **We work collaboratively as an institution and with our local partners to ensure that every member of our community has fair access to prosperity and well-being.**
- **Our decolonized, Indigenized, inclusive, accessible and sustainable campuses are integrated into our surrounding communities.**

7. What's next

We have laid out some bold aspirations for the University of Waterloo's future. We have a lot of work ahead over the next 35 years, but every journey starts with one step.

Our immediate goals to get us started:

- **Evolving our values:** To support the change we need to realize this vision of Waterloo at 100, we will start by revisiting our values as an institution to catalyze a culture shift to work more nimbly and collaboratively. This will also include addressing the President's Anti-Racism Taskforce's recommendation to revise our institutional values to apply lenses of anti-racism and anti-oppression.
- **Aligning to our Global Futures:** We will collaborate and organize our activities in education, research, and service more effectively around the areas of impact we seek to make. We will reimagine interdisciplinary research and academic activity, identifying strategies and collaborative energies towards realizing the Futures.
- **A pillar for social and policy engagement:** To create the impacts we desire in our Global Futures we must build up our capacity for social and policy engagement that is more integrated with scientific innovation and technology. The evolution of our differentiators depends on being more socially robust and relevant. A range of efforts will be planned for in education, research, and knowledge mobilization to drive this new emphasis at Waterloo.
- **A place for ideas:** As we evolve our institutional culture with an emphasis on collaboration and coordination, the Waterloo at 100 Incubator will help translate big and small ideas from the community to make this vision reality. Many will respond to directions set out within the Global Futures. Others will relate to organizational effectiveness to evolve how we get things done. Some will create ideas for working with local and global communities in new ways. Waterloo will back the big ideas that project us into our bold future.
- **Our planning and performance:** To keep us on track we will set ourselves short-term priorities against this long-term vision. Waterloo at 100 goals will be integral to measuring our progress towards the vision. Annual integrated planning and rolling multi-year budgeting will enable us to be more agile and collaborative across portfolios. This step towards more transparent and integrated planning will be a key enabler to everything else in Waterloo at 100.

This is just the beginning. We look forward to working with the University community and our partners to achieve our vision for Waterloo at 100.