Microsoft Canada

Economic and Social Impact Report

May 2022

Disclaimer

Ernst & Young LLP (“EY”) was engaged by Microsoft Canada Inc. (“Microsoft”) to conduct a social and economic impact study. In preparing this document (“Report”), EY relied upon unaudited data and information from third party sources, Microsoft, associations, academic and research institutions, and the public sector (collectively, the “Supporting Information”). EY reserves the right to revise any analyses, observations or comments referred to in this Report if additional Supporting Information becomes available to us subsequent to the release of this Report. EY has assumed the Supporting Information to be accurate, complete and appropriate for the purposes of the Report. EY did not audit or independently verify the accuracy or completeness of the Supporting Information. Accordingly, EY expresses no opinion or other forms of assurance in respect of the Supporting Information and does not accept any responsibility for errors or omissions, or any loss or damage as a result of any persons relying on this Report for any purpose other than that for which it has been prepared.

Foreword by Kevin Peesker, President of Microsoft Canada

Canadians have experienced a tremendous amount of uncertainty over the past couple of years. The pandemic created a catalyst for real change, and we saw years' worth of digital transformation happen in mere months - from remote teamwork and learning to sales and customer service, to critical cloud infrastructure and security. Now as we enter the post-pandemic world, one thing is for certain - we must ensure that we move forward with speed and with purpose to drive economic success for our country.

Microsoft has been deeply rooted in Canada since 1985, and our commitment to help grow Canada's innovation economy has never been stronger. Together with our best-in-class network of over 15,000 Canadian partners, we are working alongside customers across every industry and sector to help them adapt and transform to remain competitive in our new hybrid world of work.

Throughout this report you will learn about the key commitments Microsoft is working towards to foster partnerships and solutions that will have a lasting impact in Canada across four interconnected areas, including:

- **Building inclusive economic opportunity** – for every person, business and community. This starts with access to tech and digital skills, including for the 1 billion plus people on the planet with a disability.
- **Support fundamental rights**, from defending democracy, to addressing racial injustice & inequity, to protecting human rights.
- **Address climate change for a sustainable future**. We've outlined ambitious goals and detailed plans to achieve them, and we help our customers and partners use tech to achieve their own climate goals, and
- We're committed to earning **trust every day** – spanning privacy, security, digital safety, responsible AI, and transparency. Without it, progress is not possible.

Consistent with these commitments, Microsoft continues to make significant investments in the expansion of our Canadian footprint and in the delivery of cloud infrastructure to support Canada's digital economy. In addition to our two Datacentre regions in Toronto and Quebec City, we have announced Azure Availability Zones that bring an even wider set of capabilities for our customers to create resilient, highly available applications for mission-critical workloads using regions within Canada. We have opened our new Canadian headquarters and the first-of-a-kind Data Innovation Centre of Excellence (DICE) in Toronto. In Western Canada, we established the Microsoft Canada Excellence Centre (MCEC) now known as Microsoft Vancouver, and the only Cascadia Innovation Corridor to boost innovation and economic potential through increased connectedness and linkages to our global headquarters in Seattle. In Quebec, our Microsoft Research Montréal lab (MSR) is one of only nine MSR labs internationally and continues to be a leader in responsible AI research. We have also made deep investments into sustainable energy projects in alignment to our commitment to a sustainable future and as well as significant investments to skill Canadians to compete on the global stage.

These investments, among many more across Canada, show the unique geographic and distinctive position Microsoft Canada holds in our global ecosystem. I am very proud of the impact they have made in Canada's innovation economy and the social impact in its communities. More importantly, I am excited about what is to come as we continue to support Canada's recovery, inclusive growth, and digital future.

Executive Summary

Ernst & Young LLP (EY) was engaged by Microsoft Canada Inc. (Microsoft, or Microsoft Canada) to conduct a social and economic impact study of Microsoft's operations and activities in Canada.

As part of the engagement, EY:

- Assessed Microsoft Canada's contributions to the innovation ecosystem, including economic contributions associated with the partner networks and cloud products.
- Estimated total contributions to the Canadian gross domestic product (GDP) and full-time equivalent (FTE) employment.
- Quantified the productivity benefits gained by Canadian businesses that use Microsoft Teams.
- Evaluated Microsoft's broader socioeconomic contributions, including:
  - Contributions to the start-up ecosystem
  - Investment in skilling initiatives
  - Digital transformation in education and healthcare
  - Advancing cybersecurity
  - Community initiatives
  - Sustainability programs and partnerships

Microsoft's mission is *"To empower every person and every organization on the planet to achieve more".*

Microsoft is among the key players in the Canadian technology and innovation ecosystem that significantly contributes to the Canadian economy and society through its partner network, the cloud ecosystem, and more generally, its support in providing digital solutions to all sectors. Microsoft's products and solutions enable innovation in all sectors, including education and healthcare, and its programs, contributions, and initiatives support the broader community.

Economic and social impacts

Economic opportunity

Technology is one of the leading economic drivers of our time. Economic growth leads to higher living standards and equality of opportunity.

- The Microsoft ecosystem contributes to economic prosperity through job creation, revenue generation, and contributions to the Canadian GDP.
- Microsoft services and products enable Canadian organizations to digitally transform and transition to more efficient ways of working, while also allowing them to access new market opportunities.
- Microsoft skilling initiatives allow Canadians from all backgrounds to acquire highly marketable digital skills required for today's digital economy.

Fundamental rights

Access to affordable technology and purpose-built solutions allows organizations achieve greater impact and drive equity and inclusiveness.

- Microsoft is committed to working across sectors with other businesses, governments, NGOs, and change-makers to foster partnerships and solutions that will have lasting impact in solving societies' greatest challenges.
- Microsoft provides contributions in cash, cloud services solutions, and technology services to the Canadian non-profit sector to promote inclusive digital transformation.

Sustainability

Climate change is a defining issue of our generation, and addressing it requires swift, collective action and technological innovation.

- To minimize the environmental impacts of its operations and maximize the positive impacts of its technologies, Microsoft has made significant contributions to sustainable projects in Canada.
- Microsoft's global sustainability commitments include reaching carbon negative, water positive, and zero waste status by 2030.

Trust

Cybersecurity is a priority in Canadian organizations' rapid digital transformation.

- Microsoft is at the forefront of helping governments and businesses defend cyberattacks.
- To counter disinformation in the context of the COVID-19 pandemic, Microsoft Start has created COVID-19 information hubs.

Microsoft in Canada: Impact At-a-Glance

Up to $20 billion
annual productivity benefits gained by Canadian businesses using Microsoft Teams[1]

30 projects valued at $190 million
supported by Microsoft as part of the Digital Technology Supercluster[2]

Over 1 million Canadians
received digital skills training through the Microsoft Global Skills Initiative since the beginning of the COVID-19 pandemic[3]

$125+ million
contributions in cash, software, cloud and technology services to Canadian non-profits in 2021[4]

Nearly 3,500
start-ups have enrolled in various Microsoft's programs since 2011[5]

Microsoft

Nearly 5,000
Microsoft employees across Canada, doubling the workforce since 2019[6]

Partner ecosystem

15,000+
Microsoft partners in Canada[7]

$24-29 billion
in revenue generated annually[8]

Cloud ecosystem

$19 billion
in cloud-related revenue generated annually by Microsoft cloud customers[9]

Economic contributions

$37 billion in GDP
generated or sustained by the Microsoft ecosystem annually[10]

290,000 FTE jobs
supported by the Microsoft ecosystem in Canada[11]

93% more energy-efficient and 98% lower carbon emission
Microsoft cloud compared to traditional enterprise data centres[12]

30+
post-secondary institutions across Canada participate in the Microsoft Canada Skills program[13]

125,000
educators were trained in 2021 to use digital tools in classrooms[14]

30,000
organizations in Canada participate in Microsoft for Non-profits programs[15]

Note: Figures are presented in Canadian dollars. Jobs are expressed as FTE employment. Note that the estimated partner revenues are attributed to all Microsoft's software products and services; whereas the estimated cloud ecosystem revenues are attributed to the implementation of cloud solutions only. Methodology is provided in the Appendix.

Sources: [1] Forrester Research, Statistics Canada, and EY Analysis; [2,3,4,5,6,7] Microsoft; [8,9] IDC and EY Analysis; [10,11] IDC, Statistics Canada, and EY analysis; [12] Microsoft and WSP; [13,14,15] Microsoft.

Microsoft's Footprint in Canada Reaches Coast-to-Coast

In 38 years of operation in Canada, Microsoft has played a pivotal role in fueling the prosperity of Canada's digital economy.

Nearly 5,000 Microsoft employees
across Canada, doubling the workforce since 2019

$570 million
invested in the last three years, including opening its new headquarters in Toronto and the expansion of Canadian operations from coast-to-coast

15 offices and 2 Azure Datacentre Regions
across Canada

With the recent opening of its Canadian headquarters in Toronto, Microsoft's 15 offices are dedicated to empowering people and organizations through technology.

- Microsoft was the first hyperscale cloud provider to open two **Azure Datacentre Regions** in Canada (Toronto and Quebec City)
- **Microsoft Vancouver** is Microsoft's newest development centre, focusing on the creation of innovative products, training and software development.
- Established in 2017, the **Microsoft Research Lab** in Montréal is one of only nine Microsoft Research labs globally. The lab brings together experts in various machine learning domains.
- The **Microsoft Reactor** at MaRS is a dedicated space bringing together founders, developers and business leaders for high-quality technical, business and community events.
- The **Government Innovation Centre** in Ottawa bridges public sector customers and partners with Microsoft expertise.
- The new Canadian HQ is also home to a first-of-its-kind **Data Innovation Centre of Excellence (DICE)**, a hub for customers to co-innovate on cutting edge data, AI and mixed reality solutions.
- Microsoft is a strong proponent of the **Cascadia Innovation Corridor**, a partnership connecting the technology ecosystems in Vancouver (British Columbia), Seattle, and Portland to boost innovation.

Microsoft offices: Toronto (Canadian headquarters), Vancouver (5), Kelowna, Montréal (3), Calgary, Edmonton, Winnipeg, Quebec City, and Ottawa

Azure Datacentre Regions:
Toronto and Quebec City

Data Innovation Centre of Excellence:
Toronto

Microsoft Research Lab:
Montréal

Government Innovation Centre:
Ottawa

Microsoft Reactor:
Toronto

Microsoft locations in Canada

*Microsoft Vancouver consists of 5 individual offices; **Microsoft Montréal consists of 3 individual offices.

Note: Figures are presented in Canadian dollars.

Source: Microsoft.

Supporting Economic Opportunity

The Microsoft partner ecosystem has been, and continues to be, at the centre of how Microsoft delivers technology, services and cloud-to-edge solutions that enable business transformation for customers across Canada.

A 2021 survey by the Bank of Canada found that cloud computing is the most common technology adopted by Canadian firms pursuing digital transformation.[1] Using cloud technologies for data and applications allows firms to promote growth in their services and solutions and ensure security and reliability.

For Canadian businesses to capitalize on the benefits of cloud adoption and digital transformation, they require a cloud provider. For decades, Microsoft has been the cloud provider of choice for Canadians, including the majority of Fortune 500 companies.

Microsoft partners, including Canadian entrepreneurs, start-ups, app builders, software development firms, and technology companies, build tech intensity with innovative solutions for Canadian businesses and digitally transform workplaces to enable organizations to achieve more from coast to coast.

Partner ecosystem

15,000+

Microsoft partners from coast to coast[2]

$24-29 billion

generated in revenue annually[3]

Cloud ecosystem

$19 billion

in cloud-related revenue generated annually by Microsoft cloud customers[4]

Economic contributions

290,000 FTE

jobs supported by the Microsoft ecosystem[5]

$37 billion in GDP

generated or sustained by the Microsoft ecosystem annually[6]

Notes: Figures are presented in Canadian dollars. Note that the estimated partner revenues are attributed to all Microsoft's software products and services; whereas the estimated cloud ecosystem revenues are attributed to the implementation of cloud solutions only. Economic contribution results include a total of direct, indirect, and induced contributions. Methodology is provided in the Appendix.

Sources: [1] Bank of Canada; [2] Microsoft; [3,4] IDC and EY analysis; [5,6] IDC, Statistics Canada, and EY analysis; [7] Microsoft.

95%

of Fortune 500 companies use Microsoft cloud[7]

These include:

TD Bank

Manulife

Empowering Canada's energy sector

EY Canada collaborated with Microsoft Canada to provide energy sector companies with customized solutions using diverse Azure cloud services and Power BI

Empowering the Hybrid Workforce Across Canada

Microsoft is empowering and supporting Canadian businesses in transitioning to the hybrid work model.

The COVID-19 pandemic accelerated the digital transformation and the adoption of remote work. From April 2020 to June 2021, close to 70% of Canadians in the professional services sectors worked from home.[1]

Digital communication technologies enabled remote work, allowing Canadian businesses to not only mitigate revenue losses, but support flexible and now hybrid work environments for employees.

For example, Microsoft 365 and Teams help Canadian businesses work more productively by breaking down the barriers of multiple applications so people can find information, collaborate, and stay in the flow of work. Microsoft Viva further supports employee experience by bringing together communications, knowledge, learning, and resources. Using these applications, organizations are enabled to ensure their employees are more productive, empowered, and included.

Up to $20 billion

Annual productivity benefits gained by Canadian businesses using Microsoft Teams[2]

Time savings

- Collaboration
- More efficient and effective meetings
- Reduced application switching time

Productivity gains

- Optimized work environment
- Increased time for learning
- Increased creativity

"Employee expectations are changing, and we will need to define productivity much more broadly — inclusive of collaboration, learning, and wellbeing to drive career advancement for every worker, including frontline and knowledge workers, as well as for new graduates and those who are in the workforce today."

Satya Nadella, Chairman and CEO of Microsoft

Notes: Productivity benefit estimate is presented in Canadian dollars. Methodology is provided in the Appendix.

Sources: [1] Statistics Canada; [2] Forrester Research, Statistics Canada, and EY Analysis.

fraserhealth

Hospital network with almost 40,000 staff, serving 1.9 million people in BC use Microsoft Teams as a hub for patient communications, scheduling, data exchange, and physician collaboration.

LifeWorks

Addressing the need to provide Canadians with accessible mental health and wellbeing resources, LifeWorks developed one of Canada's fastest-growing apps on Microsoft Teams, with integration in Microsoft Viva to provide a fully realized digital employee experience.

CANADIAN TIRE

Iconic Canadian retailer used Microsoft Teams to create a reimagined curbside delivery capability.

Spirit of Math. Releasing the Genius.

Spirit of Math provides after-school classes for students seeking to excel in mathematics. When the COVID-19 pandemic started, Spirit of Math quickly adopted online teaching with Microsoft Teams, ensuring learning opportunities for its 11,000 students.

EY

Innovation and Technology

From providing productivity software, AI and public cloud solutions, to supporting the start-up ecosystem and accelerating Canadian innovation, Microsoft plays an integral role in Canada's digital economy.

Leveraging the power of cloud

Microsoft's cloud services (Azure) empower tens of thousands of organizations of all sizes in Canada to drive cost savings, reduce carbon footprint, and accelerate innovation.

Azure customers in Canada include:

PCL, WESTJET, TD Bank, SUNCOR ENERGY, ROGERS, UHN Patient Education, HOOPP Healthcare of Ontario Pension Plan, Nunavut, CANADIAN TIRE, PEMBINA, TRANS LINK

Accelerating Canadian innovation

Established in 2018, the **Digital Technology Supercluster** is part of the Government of Canada's $950-million Innovation Supercluster Initiative. **70%** of the organizations supported by the initiative are **small and medium enterprises** (SMEs).[1]

Microsoft is a founding member, financial contributor, and active partner in the Digital Technology Supercluster. It plays an integral role in developing innovative technologies by bringing together Canada's technology talent and home-grown innovation, and empowering SMEs and start-ups to access new market opportunities.

30 projects valued at $190 million

have been supported by Microsoft as part of the Digital Supercluster Initiative

Supporting Canadian start-ups

Microsoft is an active contributor to Canada's start-up ecosystem. Partnering with two of Toronto's top innovation hubs, MaRS Discovery District and OneEleven, Microsoft fosters the growth of the start-up and venture capital ecosystems.

More importantly, Microsoft employees work directly with start-ups, accelerators, think tanks, and people in the ecosystem. The hands-on approach differentiates Microsoft and helps founders grow and scale their businesses more effectively.

Microsoft also offers three unique programs in Canada to various stages and scope of start-ups and businesses.

Nearly 3,500

Canadian start-ups have been supported by Microsoft's programs

DIGITAL TECHNOLOGY SUPERCLUSTER

Notes: Figures are presented in Canadian dollars. *STEM refers to science, technology, engineering, and mathematics.

Sources: [1] Canada's Digital Technology Supercluster; Microsoft and EY analysis.

Digital Technology Supercluster projects supported by Microsoft include:

- **Fresh Water Data Commons**: a platform (FlowH2O) for harnessing real-time water monitoring and biomonitoring data to better understand the health of the ecosystem and improve regional water management.
- **Earth X-ray for Low-Impact Mining**: a platform that will help mining exploration companies to precision-target deposits in a way that changes the economics of discovery and increases the sustainable production of critical mineral resources.

Empowering Canada's AI ecosystem

Microsoft makes significant investments and forms partnerships across industry and academia to bring together world-renowned researchers with leading technology and expertise to unlock new opportunities in AI.

Mila

Microsoft has been a partner of Mila (Montréal Institute of Learning Algorithms) since its inception, forging strong collaborations to advance state-of-the-art deep learning research.

WATERLOO.AI

In 2019, Microsoft established a partnership with Waterloo.AI to provide research grants to improve emotion discovery for autistic individuals, climate change projections, fall detection for the elderly, and wildfire management and disaster response.

amii

Microsoft and the Alberta Machine Intelligence Institute (Amii) have teamed up to put forward scholarships for Albertans whose employment has been adversely impacted by the COVID-19 pandemic or those who come from communities that are underrepresented in STEM*.

EY

Skills for Jobs

Building up a talent pipeline equipped with digital skills while continuously upskilling the workforce is key to strengthening Canada's economic competitiveness. Microsoft invests in the future of Canadians by leading and expanding numerous skilling initiatives.

Strengthen Canada's innovation economy

Canada's economy needs digital talent for innovation. According to a study conducted by Information and Communications Technology Council (ICTC), Canada requires more than a-quarter million digitally skilled workers by 2025.

To bridge the digital skills gap among the workforce, Microsoft has made significant investments in partnerships and programs to:

- Help **existing ICT talent** to continue developing their skills
- Promote an environment of continued life-long learning with **customers and partners**
- Ensure the **future generations of educators and learners** have access to technology and skills training
- Support and connect **learners** to jobs

Promote inclusivity

People need access to technology and digital skills to pursue the in-demand roles of today and tomorrow. Microsoft works to increase equal access to broadband, technology, skills, and data to deliver more opportunities for **all communities** to thrive in an increasingly digital world.

Digital skills are highly in-demand

70%+
Jobs require basic digital skills in today's labour market[1]

250,000+
Digitally skilled workers are projected to be needed in the Canadian economy by 2025[2]

10%
Canadian businesses reported difficulty hiring digital talent[3]

Microsoft empowers the Canadian workforce

1 million+
Canadians have received digital skills training through the Microsoft Global Skills Initiative since 2020[4]

125,000
Educators in Canada were trained in 2021 to use digital tools in classrooms[5]

30+
Post-secondary institutions across Canada participate in the Microsoft Canada Skills program[6]

90,000
Customers and partners have been equipped with the skills needed to succeed in the digital economy in 2021[7]

3,800+
Jobseekers were helped in finding employment and improve their livelihoods[8]

30,000+
Students in the Microsoft Canada Skills Program were trained in 2021[9]

Sources: [1] Statistics Canada; [2] ICTC; [3] Statistics Canada; [4,5,6,7,8,9] Microsoft; [10] Business Development Bank of Canada.

Support post-pandemic recovery

The pandemic exacerbated the labour shortages in many industries that had already faced difficulties hiring. A recent study conducted by Business Development Bank of Canada in 2021 found that **more than half** of Canadian businesses **struggled to hire workers**. **Nearly 44%** of businesses identified the **skill shortages** as the main cause for hiring difficulty.[10] Digital upskilling, therefore, becomes vital for **business recovery** and for ensuring all Canadians have the opportunity to pursue in-demand jobs in a post-pandemic world.

In response to the widening skills gap and the urgent need for digital skills, Microsoft Canada is expanding the **Canada Skills Program** and is investing in skilling initiatives to build a sustained pipeline of talent equipped with cloud, data, and AI skills.

Through Canada's Digital Technology Supercluster, Microsoft has partnered with NPower Canada and Blueprint to support Canada's economic recovery by launching the **Canadian Tech Talent Accelerator** project - a 15-week skills training and job placement program that will equip **2,500** Canadians for in-demand digital careers.

Enabling Healthcare Transformation

The pandemic has put immense pressure on Canada's healthcare system to adopt new ways of delivering care. Microsoft and its partners have empowered healthcare providers to deliver positive impact and improve patient outcomes.

Transforming healthcare with digital technology

While the COVID-19 pandemic continues to cause challenges for many Canadians, it has been a catalyst for an unprecedented digital transformation that drove massive technological shifts, especially in the Canadian healthcare industry.

Healthcare organizations across Canada have looked to Microsoft's ecosystem of partners to meet their digital needs, including providing scalable and secure solutions and enabling telework. Microsoft's solutions helped make patient care faster and more reliable and provided organizations with efficiency gains and better patient outcomes.

Microsoft's healthcare partners across Canada include:

Ontario

Lakeridge Health, Niagara Health, Canadian Mental Health Association (CMHA), Nutrasource, University Health Network (UHN)

Quebec

CAE Healthcare, Jewish General Hospital

British Columbia

BC Cancer

Manitoba

Shared Health, St. Boniface Hospital

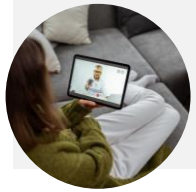
Saskatchewan

Saskatchewan Surgical Initiative

Alberta

Alberta Health Services

Lakeridge Health adapted multiple Microsoft 365 and Microsoft Power Platform solutions to create a new electronic medical record (EMR) platform which led to an 800% increase in virtual care, limiting patient and staff exposure to the COVID-19 virus.



Lakeridge Health

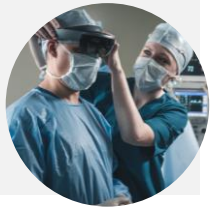
PointClickCare is empowering care teams with LTC eConnect. Leveraging the power of Azure, the cloud-based program creates a streamlined, single source of patient information for care providers using robotic process automation and augmented intelligence. Patients benefit from improved complex care while care teams can access relevant information at their fingertips.

PointClickCare

Niagara Health used Azure to bring AI and voice enablement to create innovative solutions that enhance patient care. The virtual assistance provides reminders, helps enhance workflow, and gather data.

niagarahealth

Nutrasource, a nutraceutical and pharmaceutical contract research firm uses the power of Microsoft Azure AI and Power BI to turn real-world information into actionable insights for pharmaceutical and nutraceutical customers.



nutrasource
Pharmaceutical and Nutraceutical Services

CAE Healthcare is an industry-leading training company supplying healthcare professionals with educational tools that help them provide high-quality patient care with minimal risk. Using Microsoft Azure IoT technology, CAE developed CAE Maestro Evolve, digitizing its training offering and making it more accessible to train healthcare professionals quickly and remotely, simulating clinical experiences with a digital patient.

CAE

University Health Network (UHN) leverages Microsoft Azure and AI to bridge cancer research and treatments. UHN harnesses the power of AI and cloud computing to analyze large panels of cancer cells to determine the genomic aberrations predictive of drug responses.

UHN

EY

Source: Microsoft.

Empowering Communities

Microsoft is committed to working across sectors with other businesses, governments, NGOs, and change-makers to foster partnerships and solutions that will have lasting impact in solving society's greatest challenges.

Promoting diversity and inclusion

More than 6 million individuals in Canada aged 15 and over identify as having a disability.[1] Empowering everyone to participate fully in society without barriers is key to enabling equitable socioeconomic opportunities. Microsoft is committed to diversity and inclusion through developing and enabling products for people of all abilities and creating employment opportunities for all.

- Launched **Soundscape**, an app that helps empower people who are blind or partially sighted to independently navigate the world around them through a 3D audio experience.
- **Softlanding** used Microsoft Dynamics and Azure to create an inclusive and accessible platform that provides evidence-based resources to Canada's autism community.
- Partnered with **Lime Connect** to connect Microsoft to a vast pool of talent with disabilities.

Empowering social good

In a 2021 survey, over 50% of Canadian charities anticipated challenges to continue their work without improving digital capabilities.[2] Microsoft's technology empowered charities by helping digitally transform their operations during the COVID-19 pandemic.

Microsoft Azure was used to overhaul the web platform of Second Harvest – a food rescue charity in 2020. The new platform allowed the charity's food distribution program to expand nationwide.

The amount of rescued food **doubled** in the first three months following the optimization to provide **1.5 million pounds of food** to Canadians in need, which helped avert the release of **6 million pounds** of greenhouse gases by keeping the food from landfill. Second Harvest was also able to increase its donor locations by **869** and non-profit locations by **1,272**.

Preserving languages and culture

Indigenous languages are a fundamental and valued element of Canadian culture and society, and there is an urgency to preserve them.

Inuktitut and Inuinnaqtun are dialects of the Inuktut language that are spoken by ~40,000 Inuit. In close collaboration with the Government of Nunavut, Microsoft added Inuktitut and Inuinnaqtun to Microsoft Translator that will allow users to translate any of the **70+ languages** to or from Inuktitut and Inuinnaqtun. The project is part of an ongoing effort to ensure the vitality of the Inuktut language and improve accessibility for residents of Nunavut.

Providing access to trusted technology

Access to secure, reliable and connected devices is critical for promoting equal economic opportunities across all communities.

The COVID-19 pandemic has highlighted the importance of having access to trusted technology in many communities. Microsoft initiated the **CEO Pledge** in a joint effort with Computers for Success Canada to help fuel a more inclusive post-pandemic recovery by providing digital devices to communities across Canada. **50** organizations from across Canada have joined Microsoft in the CEO Pledge in 2021, donating **over 5,000** devices.

2021

3,400

total volunteering hours by Microsoft employees[3]

30,000

organizations in Canada participate in Microsoft for Non-profits programs[4]

$125 million

contributions in cash, software, cloud and technology services to Canadian non-profits[5]

Note: Figures are presented in Canadian dollars unless noted otherwise.

Sources: [1] Statistics Canada; [2] CanadaHelps; [3,4,5,6] Microsoft.

Committing to a Sustainable Future

Climate change is a defining issue of our generation, and addressing it requires swift, collective action and technological innovation. To minimize the environmental impacts of its operations and maximize the positive impacts of its technologies, Microsoft has made significant contributions to sustainable projects in Canada and around the world.

Microsoft's global commitment to a sustainable future

Carbon negative

Reduce and remove carbon emissions, and use renewable energy to reach carbon negative by 2030.

Water positive

Replenish more water than what Microsoft uses by 2030.

Zero waste

Across Microsoft's direct business by 2030.

Planetary Computer

Build a global environmental network tool to monitor, model, and manage the world's ecosystems and protect more land than Microsoft uses.

"Climate action can't wait. Since 2015, Canada has been a committed partner in the fight against climate change, and as we move to a net-zero future, we will continue to do our part to cut pollution and build a cleaner future for everyone. Together, we will beat this crisis while creating a green economy and new middle-class jobs for Canadians."

Justin Trudeau, Prime Minister of Canada

Benefits of Microsoft cloud[1]

Relative to traditional data centres.

93%

Microsoft cloud is up to 93% more energy-efficient

98%

This results in up to 98% reduction in carbon emissions

Microsoft initiatives and programs[2]

US$1 billion

Climate Innovation Fund to accelerate development of climate technologies globally

Technology grants

42 technology grants to 29 Canadian organizations working on environmental challenges

Emissions impact dashboard

A dashboard to measure Microsoft cloud-based emissions and carbon-saving potential

Microsoft cloud for Sustainability

A new solution offering comprehensive, integrated, and automated sustainability management for organizations of all stages

Microsoft is collaborating with organizations across Canada to build a more sustainable future[3]

Environmental protection

Through the Digital Technology Supercluster, Microsoft supported the **FreshWater Data Commons,** a network of sensors to collect real-time data on water, climate and precipitation in British Columbia.

In 2020, **Evergreen** worked with Microsoft and Gramener, and leveraged Microsoft Azure AI solutions to help increase visibility of environmental factors related to planned and existing infrastructure projects in Canadian cities to mitigate the effects of climate change.

Financial services

Equitable Bank is the first Schedule I Canadian Bank to quantify and disclose its entire Scope 3 greenhouse gas emissions portfolio, including financed emissions, partially enabled by Microsoft Azure.

Desjardins partnered with Microsoft through its Open Innovation Cooperathon Challenge in 2021 to uncover how technology and AI can be used to support the development of sustainability-focused solutions.

Energy

Ontario Power Generation is using Microsoft AI Azure for data strategy, analytics, and modelling needs to move towards a carbon-neutral future.

Microsoft signed a 15-year renewable energy agreement with **ATCO Group**, where Microsoft will purchase all renewable energy generated by ATCO's Deerfoot solar facility in Calgary, Alberta, helping Microsoft deliver on its renewable energy commitments in Canada.

Note: Figures are presented in Canadian dollars unless noted otherwise.

Sources: [1] Microsoft and WSP; [2] Microsoft; [3] EQ Bank, ATCO, Desjardins, Microsoft, Ontario Power Generation, Evergreen, Canada's Digital Technology Supercluster.

Earning Trust and Advancing Cybersecurity

By using advanced cloud technology, a Zero Trust approach to cybersecurity, and a network of cybersecurity experts, Microsoft is at the forefront of helping businesses and governments defend against cyber threats.

Investing to advance cybersecurity solutions

The world is witnessing a rapid rise in cybercrime activities. Cyberattacks on critical infrastructure, including healthcare, information and communications technology (ICT), financial services, and energy sectors have become increasingly common, disrupting government and business activities. To address increasingly complex cybersecurity threats and to safeguard the interests of organizations and individuals, Microsoft made a global commitment in 2021 to invest **US$20 billion** in cybersecurity over five years to advance its security solutions.

Defending against disinformation

Disinformation has been a steadily evolving method of information warfare. Disinformation in the context of COVID-19, can endanger the population's health, especially if the news that spreads is about false prevention measures or treatments. A survey found nearly **all** Canadians saw COVID-19 misinformation online, and close to **two in five** Canadians reported believing that the information they saw was true, then later realized that it was not.[1]

To counter disinformation, Microsoft Start has created COVID-19 information hubs, with an experienced team editing content related to COVID-19 from trusted news brands and coordinating with government healthcare agencies to share critical updates.

Cybersecurity is a priority in Canadian organizations' rapid digital transformation. An IDC study forecasts that nearly 50% of Canadian organizations will unify security capabilities for enhanced threat detection and incident response by 2023.[2]

Security signals processed by Microsoft globally[3]

- **Over 24 trillion daily security signals**
- **US$20 billion** Investment over five years
- **9.6 billion** Endpoint threats blocked
- **25.6 billion** Identity threats blocked
- **35.7 billion** Email threats blocked
- **8,500+** Microsoft cybersecurity experts

January – December 2021

Providing access to cybersecurity skills

Remote working, growing online activity and evolving threats have increased the demand for cybersecurity professionals. According to one study, Canada's cybersecurity workforce has grown nearly **21%** from 2020 to 2021 (from 102,000 to 124,000).[4] A sustained pipeline of cybersecurity professionals is vital for safeguarding the security of Canadians' most valuable information.

In response to the growing demand, Microsoft has partnered with higher-education institutions across Canada, such as **Ryerson's Cybersecure Catalyst Program**, on cybersecurity curriculum and skills development.

Building public-private partnerships

Working together with industry, academia, civil society, and government, in Canada and internationally, is paramount.

Canada is part of the **Microsoft Government Security Program** (GSP), an international initiative spanning 45 countries and 90 international organizations. Participation enables controlled access to source code, exchange of threat and vulnerability information, and access to five globally distributed Transparency Centers.

In addition to global partnerships, Microsoft Canada has had a 15-year relationship with the Communications Security Establishment (CSE) and the Canadian Centre for Cyber Security (CCCS), sharing information on emerging threats and cyber defence techniques through the GSP. It has also recently enrolled the Royal Canadian Mounted Police (RCMP) National Cybercrime Coordination Unit (NC3).

Note: Figures are presented in Canadian dollars unless noted otherwise.

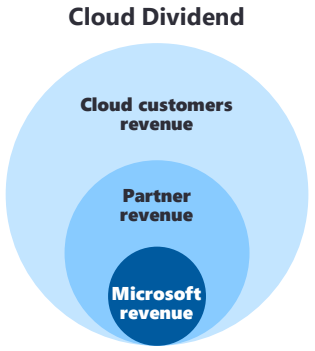
Sources: [1] Statistics Canada; [2] IDC; [3] Microsoft; [4] The International Information System Security Certification Consortium.

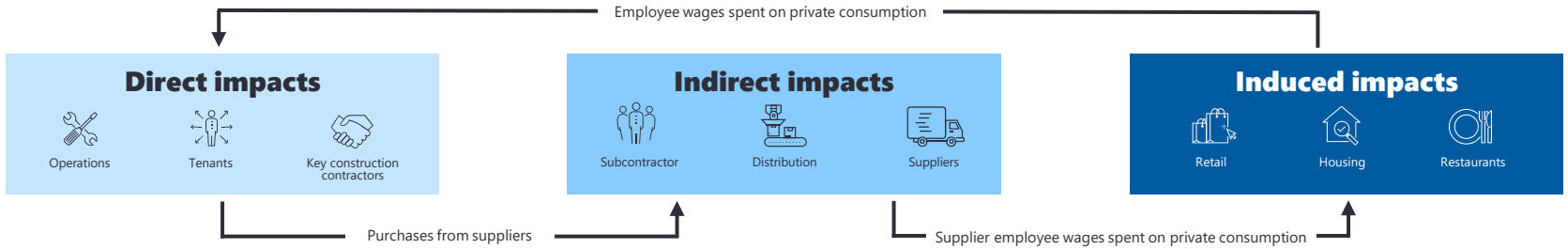
Appendix: Methodology

Annual economic contributions of the Microsoft partner ecosystem and cloud-using customers were estimated based on the approach described in the following steps:

1. Annual Microsoft revenues in Canada were estimated based on the data from IDC Semi-annual Software Tracker and IDC Public Cloud Tracker. These revenues include all digital, software and cloud products provided by Microsoft. Microsoft partner revenues were estimated using the IDC multiplier of partner revenue-to-Microsoft revenue.
2. Cloud-using customer revenues were estimated based on the IDC Cloud Dividend methodology. The Cloud Dividend methodology states that X dollars are generated by the cloud partners, and Y dollars are generated by cloud-using customers for each dollar of Microsoft cloud-related revenue. Partner revenues that form the basis for cloud-using customer revenues estimate are a subset of total Microsoft and partner revenues estimated in step (1).
3. An economic contributions assessment was conducted using inputs from Statistics Canada, revenues estimated in steps (1) and (2) above and EY's proprietary economic modelling tools, which are founded on the principles of the Input-Output (I-O) model.

- Economic contributions associated with Microsoft partner and cloud ecosystem, are captured through three distinct channels: direct, indirect, and induced contributions. More specifically, we define each of these contributions as follows:
  - Direct contributions include the economic contributions supported directly by the revenues of the Microsoft partner and cloud ecosystem;
  - Indirect contributions include the economic contributions from supporting industries supplying goods and services to the Microsoft partner and cloud ecosystem; and,
  - Induced contributions include the economic contributions that occur when benefited employees from the stimulated direct and indirect economic effects spend their additional wages and salaries on consumer goods and services. The induced activities are assumed to be primarily in service or consumer-related industries, such as retail, transportation, accommodation, food and beverage services, and banking and finance.
- Economic contribution indicators reported in this study are:
  - Gross Domestic Product (GDP): a measure of the value of all final goods and services produced in a region; and
  - Full-time-equivalent (FTE) jobs: total number of employee jobs that are converted to full-time equivalence based on the average full-time hours worked.





Microsoft Teams productivity benefit

Annual productivity benefit generated by Canadian businesses using Microsoft Teams was estimated in the following steps:

1. Number of Microsoft Teams users was estimated using Statistics Canada employment data, collaborative application usage research, and Microsoft's competitor market share in the collaborative applications market segment.
2. Average annual time savings generated by the Canadian business users were estimated based on the inputs from Forrester economic impact of Microsoft Study commissioned by Microsoft.
3. Annual productivity gains were estimated based on the value of time saved using Statistics Canada wage data.

Productivity gains refer to benefits when labour productivity increases. In this case, businesses and/or worker may allocate the time saved to other productive activities in the Canadian economy.