

Calgary in the New Economy: Progress Report

Calgary Economic Development is a conduit, connector, catalyst and storyteller that collaborates with stakeholders to advance economic growth and diversification.

18 MAY 2021 PROGRESS REPORT TO PRIORITIES AND FINANCE COMMITTEE

Executive Summary

Calgary in the New Economy's vision is for Calgary to be the city of choice in Canada for the world's best entrepreneurs who are embracing advanced technology to solve the world's greatest challenges: cleaner energy, safe and secure food, efficient movement of goods and people, and better health solutions. *Calgary in the New Economy* is primarily focused on the digital transformation and emerging trends across seven sectors identified as having the greatest potential to sustain economic growth and job creation in Calgary and region: energy, agribusiness, transportation & logistics, tourism, creative industries, life sciences and financial services.

Calgary is at an inflection point. The impact of COVID-19 and structural changes to the oil and gas sector as it transitions to a lower-carbon future created "twin economic challenges" for our city and Canada's energy industry. The pandemic also changed the way workforces worldwide interacted with where they live and the importance they placed on location. Despite the challenges in 2020 and 2021, the city and the province experienced positive signs of a changing economy.

It is exciting to showcase results of work done under *Calgary in the New Economy*:

- Calgary attracted \$353 million in venture capital investment in local companies in 2020 led by the technology sector with over 33 deals¹, double the amount in 2019.
- Infosys, a global technology services company from India, announced plans to expand in Calgary that will create 500 jobs from 2021–2023.
- mCloud, a clean technology firm from Vancouver focused on ESG reporting using artificial intelligence, moved its headquarters to Calgary.
- Lovingly Made Ingredients, a United Kingdom (U.K.)-based company, established its Canadian headquarters in Calgary.
- Exro Technologies, an e-vehicle company from Vancouver, moved its headquarters to Calgary.
- National Capital Angel Organization (NACO) announced plans to set up a Western Canadian headquarters in Calgary.
- Endeavor, a global scaling accelerator, established its Canadian headquarters in Calgary.
- LodgeLink located the headquarters for its expanded company in Calgary, expecting to create 600 jobs, most in technology.
- The Southern Alberta Institute of Technology (SAIT) announced a \$30 million investment into a School for Advanced Digital Transformation (SADT). Opportunity Calgary Investment Fund (OCIF) invested \$8.2 million of \$19.8 million to create a downtown Digital Transformation (DX) Tech Hub to enable building foundational competencies for digital transformation in traditional industries.
- Startup Calgary moved to Platform Calgary to better serve local entrepreneurs.
- The Greater Downtown Plan, along with a Notice of Motion to incentivize office-to-residential conversions, was developed with strategic actions and investments to create a vibrant neighbourhood and the cultural and economic heart of the city.
- Calgary was identified as a national leader in 5G technology readiness, compared with peer cities in Canada, in a study conducted for Calgary Economic Development.
- Calgary post-secondary institutions saw 3,900 Science, Technology, Engineering, and Mathematics (STEM) student completions in 2020.

¹ Venture Capital Association of Alberta. March 24, 2021. Alberta posts a record year for venture capital investment, where 2020 saw C\$455 million invested across 51 deals. Retrieved from: <https://www.vcaa.ca/news/2020-alberta-record-year-of-investment>.

- The *Live Tech. Love Life.* campaign, showcasing Calgary's tech and innovation ecosystem, won several international awards. It helped increase perceptions of Calgary in target markets (Seattle, San Francisco, Toronto, and Vancouver) and 85 per cent of leaders (up five per cent year over year) and 73 per cent of workers (up eight per cent) have positive impressions of Calgary.

The highlights of accomplishments are aligned with the four pillars of *Calgary in the New Economy* - Talent, Innovation, People, and Business Environment. Each pillar supports and enables the others and this interaction is where the most significant impact occurs. As an example, a revitalized, vibrant greater downtown attracts people to its amenities and services; and becomes advantageous to support talent and company attraction and retention in the area.

2021 will likely be another defining year in Calgary with unprecedented change from the momentum that began late in 2020 continuing to build for years. *Calgary in the New Economy* has been the guiding strategy and OCIF has been a key tool to enable the momentum that will pay dividends for decades.

HOW CALGARY RESPONDED TO COVID-19

It is also critical to highlight work done in response to COVID-19. The vision and direction established by *Calgary in the New Economy* has positioned Calgary to be resilient through disruptions and shocks such as COVID-19.

- Calgary Film Centre reopened after weeks of closure on June 12 for safe film and television production, one of the first jurisdictions in North America.²
- Creation of Connecting YYC³ and YYC Business Marketplace, a job board for Calgarians displaced by COVID-19 and a platform to support local businesses, respectively, by Calgary Economic Development to ensure Calgary's local businesses survive through this disruption.
- An Economic Resilience Task Force, to identify strategies and opportunities to support economic recovery, and Business Sector Task Force, to hear from and support local businesses, were created to support businesses through initiatives like the digital main street program ShopHERE, to help businesses create online storefronts. The City also waved or froze business and development permit fees saving businesses \$2.2 million.
- The City of Calgary installed adaptive roadways on Memorial and Elbow Drives, 11th Street SE in Inglewood, and in Crescent Heights to provide more space for pedestrians and cyclists. The roadways were reinstated for 2021 and those in Inglewood and Crescent Heights are now permanent.
- The City allowed restaurants and bars to create temporary patios on public land. These initiatives proved successful and were continued in 2021.
- Commitment to maintaining Calgary's arts and culture was evident through proposed funding of the Arts Commons Transformation and Glenbow Museum Renovation.
- Mount Royal University launched BounceBack YYC engaging 80 bright minds and future civic leaders in a virtual hackathon to help accelerate the restart, recovery, and return of the Calgary experience economy.
- The Alberta Innovation Corridor advocated for local start-ups and gig workers to receive the emergency wage subsidy to retain critical talent.

² Retrieved from: <https://www.calgaryfilmcentre.com/resources>

³ Retrieved from: <https://www.connectingyyc.com/>

Highlights from 2020

TALENT

- Two cohorts of EDGE-UP, a reskilling program aimed at displaced energy worker and funded by Future Skills Canada, helped over 100 workers develop skills to make mid-career transitions into Calgary's tech sector.
- SAIT's School of Advanced Digital Technology launched the Digital Transformation Talent Hub downtown (supported by \$8.2 million from OCIF).
- Calgary Economic Development launched Connecting YYC, an online platform to help Calgarians find jobs with local companies and help post-secondary students get work experience with local companies affected by COVID-19.
- AltaML launched the Applied Artificial Intelligence/Machine Learning Lab (supported by \$3.2 million from OCIF) to provide experiential learning opportunities tackling real-world problems. The program has drawn participants from global tech hot spots.
- The *Live Tech. Love Life* Campaign was deployed in key North American cities with a positive impact on perceptions, particularly in markets such as Seattle, San Francisco, and Vancouver where significant gains were made on perceptions of Calgary as a growing technology sector destination.
- Calgary Economic Development's talent attraction events, live and virtual, engaged with over 5,500 people. We worked with over 50 local companies to raise awareness about Calgary and employment opportunities in the technology and innovation ecosystem.

INNOVATION

- 452 core tech companies now call Calgary home, demonstrating community support and progress towards achieving the north star goal of 1,000 core tech and 2,300 startup companies.
- Canadian Venture Capital Association reported record deal volume in Alberta in 2020 with \$455 million in 51 deals, double the 2019 record high. Calgary captured over 64 per cent of the deals and more than three quarters of the dollars invested, \$353 million in 33 deals.
- Two Calgary-based technology companies, Neo Financial and Symend, completed the largest Series A (\$50 million) and Series B (\$73 million) funding rounds, respectively, in recent Alberta history. Neo Financial was created at Harvest Builders, which received support from OCIF in 2020.
- Calgary saw its fourth unicorn valuation in two years: Benevity surpassed \$1 billion valuation as U.K.-based private equity investor Hg Capital bought majority control.
- International Data Corporation (IDC) Canada forecast Calgary companies will lead the \$20 billion that will be spent on digitalization across Alberta industries by 2024.
- Local investment is being generated by successful repeat technology company founders creating a healthy investment flywheel for new start-ups.
- The Life Sciences Innovation Hub at the University of Calgary, which received support from OCIF, has seen great demand, with 29 companies leasing lab and/or office space for 90 and 95 per cent occupancy rates in lab and office space, respectively. From April 2020 to March 2021, 12 new start-ups were incorporated.

PLACE

- The Downtown Ambassador Program, part of the 9 Block Program, had approximately 1,300 interactions with community members, referred 200 people to social services supports, and conducted 350 wellness checks with members from Calgary’s vulnerable population from September to December 2020.
- Greater Downtown Plan was developed to transform the greater downtown into a vibrant economic and cultural heart of Calgary integrating more residential, parks and modes of transportation, along with key infrastructure investments such as the BMO Centre Expansion, Glenbow Museum Renovation, Arts Commons Transformation Project, New Event Centre⁴, Platform Calgary Innovation Centre and Parkade.
- Chinook Blast Winter Festival was planned and successfully held in February 2021, an achievement in adapting during COVID-19.
- The City of Calgary approved the Green Line LRT, Calgary’s largest infrastructure project in history, and continues to work with the Government of Alberta to begin construction.
- Notice of Motion 2020-1439 Providing Incentive to Residential Development in the Downtown Core was passed.
- Tourism Calgary deferred and rescheduled 45 events, including securing the Curling Canada 2021 bubble, and pivoted its business support and marketing efforts to showcase Calgary amenities to local Calgarians.
- Adaptive roadways were instituted on Memorial Drive, Elbow Drive, 11 Street, and Crescent Heights to encourage activity in the outdoors; 11 Street and Crescent Heights have been made permanent, while all will continue in 2021.
- City of Calgary established its Anti-Racism Action Committee in 2020.

BUSINESS ENVIRONMENT

- \$2.2 million saved in business costs from the City of Calgary COVID-19 Relief Package which included waived and deferred Planning & Development fees, property tax relief, Business Improvement Area tax relief, and deferral of waste, water, and recycling charges.
- Calgary was identified as a national leader in 5G readiness and preparedness, especially for the most municipally owned fibre in Canada and working with wireless service providers and other organizations to create a digital zone downtown to test and pilot new technologies.
- YYC Calgary International Airport saw an 11 per cent increase in air cargo landings from 2019 to 2020. YYC Calgary International Airport was one of only four airports open during COVID-19 and continued to lead the country in connecting flights (43 per cent of passengers are connecting, most are domestic).
- Use of the City of Calgary’s online permitting services increased 43 per cent from 2019, reducing time and effort required to apply and receive required permits to start a business.
- Government of Alberta revised the Alberta film and television tax credit to be more competitive and capitalize on an increased demand for film production and attract more major productions to the region.
- City of Calgary set up a “film friendly” team to expedite film permitting process.
- Calgary is the first city in North America able to mass test unmanned aerial vehicle flight beyond line of sight, attracting collaborations such as SkySensus, led by Peraton Canada, bringing together Alberta-based small businesses: Canadian UAVs, AERIUM Analytics, and Foremost UAS Range.

⁴ While there is long term commitment to build the Event Centre, it is currently paused to resolve budget and program requirement challenges.

Alignment and Engagement in 2020

Calgary in the New Economy is a beacon for citizens and businesses in Calgary and all orders of government as the vision for our future. From the outset, Calgary Economic Development worked closely with The City of Calgary, civic partners, and community stakeholders to ensure the economic strategy aligned with other initiatives of The City of Calgary and other stakeholders. Initiatives, committees, and roundtables launched since the last update aligned with *Calgary in the New Economy* include:

- Real Estate Sector Advisory Committee
- Notice of Motion working group for office to residential conversion incentives
- Greater Downtown Plan
- Guidebook for Great Communities
- Business Environment pillar focus group
- Economic Resilience Task Force
- Business Sector Task Force
- Place pillar focus group
- Downtown Strategy Leadership Team and Working Group
- Innovation Agenda Team
- Tech Talent roundtables
- The Alberta Innovation Corridor
- Calgary Brand Committee
- LearningCITY

Impact of COVID-19

Early in 2020, the world experienced the largest “Black Swan” economic event in recent history. Spreading rapidly worldwide, COVID-19 infected over 139 million people and led to more than 3 million deaths in a little more than a year. After our update to Council in Fall 2020, many students across Alberta returned to school and many businesses remained open. After a significant increase in cases in December, the Government of Alberta reinstated stricter measures including prohibiting indoor and outdoor gathering, shutting down in-person retail and food and beverage businesses, recreational and cultural activities and facilities, among other restrictions. Before 2020 came to an end, vaccine rollouts began in many countries, including Canada.

As 2021 began, it was evident COVID-19 had an unequal impact on sectors across Canada and had changed the relationship employers and employees have with office space, downtowns, and remote talent. COVID-19 began spreading in Canada at the same time as Saudi Arabia and Russia began a costly oil price war early in 2020.⁵ The price war exacerbated falling prices due to drastic demand reduction brought on by COVID-19 globally.

For Canada’s oil and gas industry it triggered a downturn that resulted in significant company consolidations including: the merger of Husky Energy and Cenovus, merger of Seven Generations and Arc Resources, acquisition of Painted Pony by Canadian Natural Resources, and Whitecap

⁵ Blas, J., Wardany, S., Smith, G. Saudi Arabia and Russia end their oil-price war with output cut agreement. April 9, 2020. Retrieved from: <https://www.worldoil.com/news/2020/4/9/saudi-arabia-and-russia-end-their-oil-price-war-with-output-cut-agreement>

Resources purchase of NAL Resources. Calgary had one of Canada's highest unemployment rate and 2020 saw energy companies lay off thousands of workers. While unemployment was above 15 per cent by June 2020 in Calgary, it dropped to 10.0 per cent in March 2021.

The energy industry continues to face pressure from governments, investors, and the public on multiple fronts including moving towards net zero greenhouse gas (GHG) emissions, decreasing long-term demand for petroleum products for internal combustion engines and liabilities for reclamation of shut-in or abandoned wells. The agribusiness industry is coping with food security issues and increasing demand for staple foodstuffs due to the pandemic, requiring flexibility and adaptability in the transportation and logistics sector.

Tourism, hospitality and airline industries have been hit hard with travel within and outside Canada severely impacted by restrictions on non-essential travel and increasing quarantine requirements. Arts and cultural festivals and events have been cancelled, while arts organizations struggle to maintain audiences and programming.

The shutdown also slowed Foreign Direct Investment (FDI). In its 2020 Investment Trends Monitor Report, the United Nation's Conference on Trade and Development stated global FDI inflows fell 42 per cent in 2020, from \$1.5 trillion US in 2019 to \$859 billion US. This is the lowest level since the 1990s and 30 per cent below the 2008-2009 financial crisis.

FDI decline in Canada was lower than most developed countries, largely due to a decrease of FDI from U.S. multi-national corporations, typically a significant source of Canada's FDI inflows. Return to post-pandemic FDI levels is likely contingent upon vaccine roll outs and the ability for investors and economic development agencies to return to out-of-market activities. With Canada's initial vaccine rollouts lagging other developed countries, it will be important to monitor how the speed of vaccine roll outs in 2021 impact FDI levels and broader economic recovery.

The Canadian Federation of Independent Businesses (CFIB) estimates the number of Canadian businesses at risk of closing due to COVID-19 is between 71,000 and 222,000 (between 7 per cent and 21 per cent of all businesses). The CFIB noted the percentage of businesses at risk for closure in Alberta would average 22 per cent with the hospitality sector at 57 per cent and arts and recreation organizations estimating 44 per cent of businesses could shut down.

It is critical to highlight women were significantly impacted by the pandemic. The Government of Canada estimates 100,000 women left the workforce because of COVID-19. Lockdowns and health restrictions, and COVID-19, meant women-dominant industries including travel and hospitality, food and retail services, healthcare and caregiving, cleaning, and education were disrupted disproportionately.⁶

Eighty per cent of single parent households in Canada are led by single mothers, and as school's shutdown it meant women were often forced to stay home and exit the workforce. In Calgary, women bore the brunt of the 6,300 jobs lost between December 2019 and December 2020 (loss of 6,800 jobs), while employment for men increased (gain of 500 jobs).

One evident trend is the rapid shift to digital and remote working and flexible work-from-home arrangements for employees. The extent to which COVID-19 has changed the relationship between businesses and physical office space is still unknown, but a McKinsey Institute survey of 800 global senior executives found 15 per cent of executives would allow 10 per cent of their workforce to continue a one to two-day work-

⁶ Canadian Women's Foundation. (March 24, 2020). The Difficult Economic Side-Effects of COVID-19 on Women. Retrieved from: <https://canadianwomen.org/blog/the-difficult-economic-side-effects-of-covid-19-for-women/>

from-home flexible arrangement. Sixty-seven⁷ per cent of those executives said their companies have accelerated automation and artificial intelligence, with 85 per cent accelerating the use of technology to collaborate and interact.⁸

COVID-19 has also revealed Calgary’s downtown needs to be reimagined to better enable how our citizens interact with their city and its amenities. 2020 saw collaboration between the City of Calgary, the private sector, and organizations like the University of Calgary’s School of Architecture, Planning, and Landscape to create a new vision for Calgary’s downtown through the Greater Downtown Plan.

With office vacancy in the fourth quarter in 2020 at 29.5 per cent and 32.3 per cent in Q1 2021⁹, the City of Calgary is working to create a resilient, vibrant downtown as the heart of the economic centre of the city through the Greater Downtown Plan and approval of the Notice of Motion to convert office space to residential opportunities. In 2020 the City of Calgary also formed the Economic Resilience Task Force and Business Sector Support Task Force to respond to the needs of local small and medium-sized businesses in Calgary. These task forces were a conduit for businesses to better understand the supports available to them during this difficult time, and for partners organizations and multiple layers of government to come together to identify opportunities to support economic recovery both in the short and long term.

2021 Strategy Refinement

Given the fundamental changes in 2020-21, some of the data points previously part of the Annual Progress Report on *Calgary in the New Economy* may no longer be as relevant and have been updated to reflect programs and initiatives undertaken by Calgary organizations and businesses to address the impacts of COVID-19 on their operations. Throughout this report, new data points will be denoted as such.

Calgary Economic Development’s 2021 Business Plan includes prioritizing and capitalizing on the momentum in the last several years with *Calgary in the New Economy*. In late 2020, work began on scoping a minor refinement and pressure testing of the strategy. The refinement will include refining each pillars’ key outcomes and key performance indicators (KPIs) through engagement with diverse stakeholders from across our community including youth, emerging leaders, and our Indigenous community; and highlighting the interconnections between the pillars to demonstrate the criticality of system-level interactions between talent, business environment, innovation, and place. In future reports there will be greater clarity on the macro-impact of each pillar within the strategy. The minor refinement will also test the resilience of the strategy against global trends such as those accelerated and highlighted during COVID-19 (e.g., climate action, equity, diversity, and inclusion, future of work and workplace, food and energy security).

This Progress Report incorporates work underway with an updated format for reporting on each pillar to better showcase key outcomes, key activities to achieve the outcomes, and KPIs to measure progress. The next iteration of this Report will better showcase the system-level view of economic development across all pillars. The information in this Progress Report reflects tactical and strategic progress made across each of the pillars: Talent, Innovation, Place, and Business Environment.

⁷ McKinsey Global Institute. September 23, 2020. Retrieved from: <https://www.mckinsey.com/featured-insights/future-of-work/what-800-executives-envision-for-the-postpandemic-workforce>

⁸ Ibid.

⁹ CBRE, Calgary Downtown Office Q1 2021, Marketview. Retrieved from:

http://cbre.vo.llnwd.net/grgservices/secure/Calgary_Downtown_Office_MarketView_Q1_2021_mrEq.pdf?e=1620695255&h=12812d2e1c8d822ce0a90eebf0fcc3ff

Governance and Management

Calgary in the New Economy is stewarded by Calgary Economic Development. Our role includes ensuring the strategy is resilient and relevant, now and in the future, reporting on progress toward the vision of the strategy and playing leadership roles in two of the pillars, Talent and Innovation. Calgary Economic Development is also represented on the Business Environment and Place pillars, which are primarily led by the City of Calgary and other civic partners including Calgary Municipal Land Corp., Tourism Calgary and Calgary Arts Development.

Each pillar is managed in a common way with pillar-specific differences, where appropriate. All work within a pillar includes community leaders and diverse stakeholders with representation from different groups in their ecosystem. Stakeholders are brought together to provide thought leadership, collaborate and activate the strategy.

TALENT

Calgary in the New Economy sets the vision of **Calgary being Canada’s destination for talent**. The ability to develop, attract, and retain talent of all experience levels and, especially, in specific high-demand skills is imperative for long-term prosperity. This pillar focuses on traditional methods of talent development, attraction, and retention as well as innovative new ways to mobilize organizations and businesses such as the Calgary Public Library, Calgary Board of Education, education-focused start-ups, reskilling programs, post-secondary institutions, and individual businesses to create a city in which learning is innate and curiosity is expected.

The concept of talent took on new dimensions and urgency as disruptive forces converged in 2020. The transition to a digital and lower-carbon future continued to create near-term uncertainty in the sectors that traditionally provide a foundation of quality employment in Calgary.

2020 Talent Outcome Progress

OUTCOME 1: NURTURE A THRIVING, ADAPTIVE, AND COORDINATED SKILLS-DEVELOPMENT ECOSYSTEM THAT ENABLES ALL CALGARIANS TO PURSUE UNIQUE AND PRODUCTIVE INDIVIDUAL LIFE-LONG LEARNING JOURNEYS

COVID-19 exposed systemic inequalities in Calgary’s work force and labour markets with the emergence of persistent and potentially structural unemployment. It demands consideration for the inclusivity of Calgary’s labour markets and how to help all Calgarians participate in the economy to their maximum potential. 2020 disrupted conventional thinking about Calgary’s talent landscape and priorities and will establish key baselines for how resilient and equitable Calgary’s future economy will be.

The relevancy of job-specific skills is increasingly short-lived. The half-life of many of technical skills is now years and make the traditional educational models of linear single path learning outcomes less compatible with the flexibility and adaptability needed by individuals and industries. The evolution of skills-development ecosystems to provide meaningful learning opportunities that complement formal educational systems is critical to enabling Calgarians to pursue unique lifelong learning journeys.

SAIT’s DX Talent Hub was launched in September 2020. In support of the school’s aim to be a champion of digital growth and opportunities for everyone including systemically excluded and underserved learners, OCIF contributed \$8.2 million to establish the Talent Hub. It serves a critical role in building foundational digital literacy at a community-scale and widen Calgary’s digital talent development pipeline.

Calgary Economic Development’s Energy to Digital Growth Education and Upskilling Project (EDGE-UP), funded by Future Skills Canada, helped 98 displaced energy industry workers develop digital skills for mid-career transitions to tech. More than 1,300 applications were received for the first two cohorts. An expanded EDGE UP 2.0 was announced in April 2021 and will help nearly 350 Calgarians from a variety of professional backgrounds.

Calgary’s post-secondary technology training ecosystem saw the addition of 38 new programs introduced in 2020. This enabled Calgarians to complete over 1,300 skills development experiences specifically designed to grow digital capabilities in Calgary’s talent pool were part of the pilot in 2020 and an expanded iteration of the Project was approved to launch in 2021.

Energy companies, recognizing the value of embodied skills and experiences of employees who may face displacement from digitalization and energy transition, are providing reskilling and redeployment opportunities to these people to help companies retain institutional and industry knowledge while building new digital capabilities.

Progress and performance measurement

KPI #1: Secondary education completion rates

Core educational systems provide Calgarians with strong learning “backbones” to support continued development of skills through their lives. Alberta’s K-12 education system performs well globally according to Program for International Student Assessment results. Calgarians with solid foundations of enabling skills that empower adaptability and lifelong learning form the primary building blocks of Calgary’s talent pipeline.

Program	Enrollments
All (public and other)	Over 211,000 enrollments across all Calgary schools
Calgary Board of Education	125,300 in Calgary Board of Education

KPI #2: Post-secondary enrollments and completion rates

Post-secondary education institutions (PSIs) play important roles in enhancing Calgary’s workforce and talent landscapes. PSIs currently provide Calgarians with opportunities to develop advanced technical skills and domain competencies. Important research and innovation activities at Calgary’s PSIs contribute to local skills development and the city’s attractiveness to global talent. The scale of Calgary’s local talent pipeline is reflective of the accessibility of post-secondary education and volume of learners completing programs.

Program	Enrollments	Completions
All	<ul style="list-style-type: none"> 65,489 full-load equivalents (1.5 per cent increase from 2019) Over 10,000 international students enrolled 	<ul style="list-style-type: none"> 18,150 (5.5 per cent decrease from 2019) 2,510 international student completions (21 per cent increase from 2019)
STEM	See Innovation pillar section for data	3,900 (3.2 per cent increase from 2019)

2021 actions planned

Formal launch of the LearningCITY ecosystem is targeted for the end of 2021. A community-based learning ecosystem was conceived from the High-Impact Talent Roundtable in 2019 with a series of reports developed in 2020 to outline principles and key infrastructure needed to support effective collaboration between stakeholders.

One component of foundational infrastructure for the LearningCITY ecosystem is a competency model to enable different stakeholders to understand and communicate about skills. This model will be integrated into two initiatives to be completed through 2021 - an audit of city-

wide skills development supply capacity and a community-based prototyping of tools to improve employment outcomes of systemically excluded Calgarians. City Council approved funding from the Council Innovation Fund for Calgary Economic Development and Mount Royal University to conduct the prototype.

Activation of partners across the LearningCITY ecosystem will enable the tracking of two additional proposed KPIs indicative of the scale and vibrancy of Calgary's skills-development capacities.

OUTCOME 2: FOSTER RESPONSIVE AND RECIPROCAL RELATIONSHIPS BETWEEN EMPLOYERS, CITIZENS, AND SKILLS PROVIDERS THAT FACILITATE GLOBALLY ATTRACTIVE LEARNING, CREATIVE, AND ENTREPRENEURIAL OPPORTUNITIES

Relevancy is a powerful driver of decisions with respect to skills development and opportunities. As careers become less linear and more integrated with lifelong-learning, the lines between prioritizing material outcomes and skills-development are increasingly blurred. Ensuring Calgary's employers and skills providers are collaboratively offering relevant opportunities will help develop and attract top talent.

2020 key activities

AltaML launched the Advanced AI/ML Lab in July 2020 with \$3.25 million support from OCIF. The Lab will provide up to 240 internships over three years where participants will gain experience solving real-world industry problems. Of the first 1,000 applications received, more than one-third of participants to date are from Black, Indigenous, People of Colour (BIPOC) communities. In 2021, this unique program continues to provide Calgary's talent community with a critical mass of data science and AI/ML skills. These experiential learning opportunities were in addition to the nearly 50 per cent of programs in Calgary's tech training ecosystem providing all participants with work-integrated learning (WIL) experiences.

Alberta IoT's Entrepreneur Fast Track Program was launched in November 2020 with \$150,000 of support from OCIF. In 2021, the program will connect 90 Industrial Internet of Things (IIoT) companies with 15 high-potential entrepreneurs to help them scale, increase revenues, access new markets, and increase sectoral collaboration. The capacity building investment and growth of this sector is expected to create 300 jobs in Calgary.

Calgary Economic Development launched Connecting YYC to help Calgarians help each other through the COVID-19 pandemic. By connecting Calgarians whose jobs were disrupted by COVID with local businesses and organizations that needed extra help in response to the pandemic, the job board enabled Calgarians to do what they are famous for in the face of unprecedented challenges to our communities. This platform will continue to be accessible throughout 2021.

Progress and performance measurement

KPI #1: Employment rate

Globally desirable talent develops and is attracted to opportunity-rich environments. The proportion of Calgarians employed is reflective of the city's talent development capacity. The inclusive participation of all citizens in the city's job market is indicative of the equality and resiliency of Calgary's economic and social fabrics.

Characteristic	Employment Rate
Status	<ul style="list-style-type: none"> • Full time – 52.0 per cent (7 per cent decrease from 2019) • Part time – 10.9 per cent (12 per cent decrease from 2019)
Gender	<ul style="list-style-type: none"> • Male – 66.8 per cent • Female – 58.9 per cent

KPI #2: Enrollment of participants (local and non-local) in skills-development offerings with ecosystem partners

Enrollment in learning activities across Calgary’s skill-development ecosystem is indicative of the desirability of the offerings available. As increasingly mobile talent is able pursue opportunities around the world, the choice of talent to participate in Calgary-based learning opportunities demonstrates the global competitiveness and attractiveness of Calgary’s talent development capacities.

Programs	Enrollments	Completions
Tech Training Ecosystem	7,400 (16 per cent increase from 2019)	1,300 (22 per cent increase from 2019)
PSI International Students	10,400 (14 per cent increase from 2019)	Data not currently available

2021 actions planned

Calgary’s PSIs acknowledge the importance of WIL and committed to the ambitious goal of providing 100 per cent of students with meaningful WIL opportunities before 2030. A consortium of seven Calgary PSIs is collaborating with Calgary Economic Development to launch a single portal for WIL in Calgary to reduce barriers for employers and learners. The launch of the WIL portal / Secretariat and LearningCITY ecosystem will enable more comprehensive tracking of KPIs that related to WIL participation and global attractiveness of Calgary’s skills-development offerings.

OUTCOME 3: EARN AND MAINTAIN GLOBALLY RECOGNIZED REPUTATION AS A GLOBALLY ATTRACTIVE HOME FOR ENTREPRENEURS AND PEOPLE WITH VALUABLE SKILLS

Calgary’s civic and community identity and brand are powerful drivers of whether skilled Calgarians decide to develop their entrepreneurial ideas at home and if global talent sees Calgary as their home. The stories Calgarians tell each other and share with the world reflect the collective values and aspirations of our city and its citizens. The alignment and resonance of these narratives with the desires and interests of global talent, paired with objective qualifiers of Calgary’s competitiveness as a global city, reinforce Calgary’s status as one of the world’s top destinations for skilled and entrepreneurial people.

2020 key activities

Despite the challenges of COVID-19, Calgary Economic Development attended and coordinated local tech company participation in six signature talent attraction activations (in national and local markets) that engaged 50 local Calgary companies and 5,500 prospective employees from Calgary and around the world.

The *Live Tech. Love Life.* and social media campaigns amplified the stories of 30 influencers and companies in Calgary’s tech community. Through over 99 million impressions in 2020, perceptions of Calgary improved in four international markets targeted, including an increase of 22 per cent in Seattle in belief Calgary has a diverse economy. There was an 11 per cent increase in San Francisco perceptions of Calgary having a growing tech sector.

Companies continue to see Calgary as a home-base for growth. The rapid scaling of LodgeLink in Calgary was announced in December, with an OCIF investment of \$3 million. LodgeLink will hire 600 positions, of which 300 will be technology-related jobs. Unity, the world’s largest gaming company, will grow in Calgary after acquiring OCIF-support recipient Finger Food Advanced Technology Group in May. Finger Food was an OCIF recipient, receiving \$3.5 million in September 2019.

In 2020 Calgary Economic Development focused on taking advantage of the impending expiration of United States H1B work visas. Calgary Economic Development identified Fortune 100 companies most at risk of losing highly skilled workers due to visa expirations, reiterating the opportunity for these companies to have Canadian satellite offices to retain these highly valuable employees.

Calgary Economic Development worked with Mobsquad, an OCIF supported company that helps firms retain H1B employees by streamlining the visa process through relocation to Canada, and several new business opportunities arose. It was identified Alberta is at a disadvantage with respect to the federal Global Entry program as the province with the highest minimum threshold salary. This makes it more challenging to attract international talent and companies. Calgary Economic Development continues to work with all orders of government to adjust the program.

Progress and performance measurement

KPI #1: Population change from migration

Disruptive relocations are big decisions indicative of the belief the destination offers worthwhile opportunity. Calgary’s ability to draw people from across Canada and around the world is reflective of the city’s reputation of offering desirable lives and livelihoods. While pandemic-related international travel restrictions have impacted the volume and pace of physical migration of individuals, Calgary’s net population continued to grow. As much of the world gained an appreciation of digital workplaces and vital logistics / supply chains in our lives, Calgary continues to be an important global hub for people and goods.

Migration	Change
Net population change	29,254 (4 per cent decrease from 2019)
Intra-provincial	2,176 (14 per cent decrease from 2019)

Inter-provincial	1,931 (1,757 per cent increase from 2019)
International	15,792 (13 per cent decrease from 2019)

KPI #2: Educational attainment of migrants (international)

The education and skills that people bring to Calgary are reflective of their potential to contribute to the city’s economic and innovation systems. Higher levels of education also typically correlate with an individual’s global mobility. The educational attainment of people moving to Calgary is indicative of the potential being added to the city’s workforce and the attractiveness of the city as a global destination.

Entry Category	Secondary or less (per cent)	Post-secondary (per cent)	Post-graduate (per cent)	Level not stated (per cent)
Economic (55 per cent)	10	20	4	66
Sponsored Family (32 per cent)	39	48	12	2
Resettled Refugee and Protected Persons (12 per cent)	68	25	4	2
Other (2 per cent)	47	42	3	8

2021 actions planned

Calgary Economic Development will participate in talent engagement activations in Canadian markets targeting the attraction of strategic high-demand skills and experience profiles. Stakeholder participation in activations in U.S. and other global markets will depend on the pandemic lockdowns. The *Live Tech. Love Life.* campaign will continue to evolve based on stakeholder feedback and strategic opportunities that may arise.

Two immigration streams were launched to facilitate the attraction of global entrepreneurs. The [Foreign Graduate Startup Visa \(FGSVS\)](#) and [Start-Up Visa \(SUV\)](#) programs streamline the immigration process for newcomers who have the plans and abilities to start businesses in Alberta. Platform Calgary will be delivering both programs that aim to bring new innovators to Alberta.

INNOVATION

As we embrace advanced technology and innovative thinking to create solutions to some of the world's greatest challenges in energy, food, transportation, and health, Calgary's innovation ecosystem and its growth will play a critical role. The Innovation Pillar of *Calgary in the New Economy* sets out a vision for Calgary **to be the leading business-to-business (B2B) innovation ecosystem in Canada**. Having the greatest Canadian share of per-capita headquarters and global decision makers, in addition to being home to major industrial sectors, Calgary has a unique advantage in the B2B market. As a city of innovators with a long history of serving large industrial sectors, Calgary is perfectly positioned to take advantage of the job creation and economic opportunities arising from the growing community of entrepreneurs and innovators.

Governance and Management

The Innovation pillar is guided by the Innovation Agenda Team, co-chaired by the CEO of Platform Calgary and the Director of Strategy from Calgary Economic Development. This committee was formed using the Rise of the Rest Ecosystem Playbook and the Seven Spokes model which identifies seven areas of focus to strengthen start-up ecosystems: local government, post-secondary institutes, investors, start-up support organizations (incubators, accelerators, etc.), corporations, local media, and start-up/tent pole companies. This group of community leaders, assembled to be representative of the Seven Spokes framework, ensures a broad coverage of the innovation ecosystem with diversity of perspective. The Innovation Agenda Team provides thought leadership to validate, prioritize and advance initiatives to grow Calgary's ecosystem in achievement of the vision.

2020 Innovation Outcomes Progress

OUTCOME 1: INCREASE THE NUMBER OF EARLY STAGE AND GROWTH START-UPS

Growing the number of innovative companies in Calgary depends on the creation and growth of new start-ups. These companies require many inputs at the various stages of growth including programming, office/lab space, mentorship, research and development (R&D) capacity, industry connections, talent, market access, and more that are provided by support organizations. Calgary's entrepreneurial ecosystem is known for having a strong network of highly connected support organizations with a growing number of global connections.

The Regional Innovation Network (RIN) in Calgary, the Calgary Innovation Coalition (CIC) have grown to over 45 member organizations that support the ecosystem of start-ups. In 2020 the ecosystem became mobilized around a community-developed goal of achieving 1,000 core tech companies by 2031. Reaching this goal requires a high performing ecosystem focused on the quality and velocity of companies, in addition to having many very early-stage start-ups.

2020 key activities

In 2020 it was evident Calgary was drawing repeat technology company founders. Repeat tech company founders and serial entrepreneurs are selecting Calgary to continue their entrepreneurial careers, allowing experienced founders to reinvest their profits, talent, and expertise back into the ecosystem. This creates a compounding effect in the ecosystem, generating new companies faster, and shortening time to scaling those ventures (e.g., Harvest Builders, Neo Financial, Symend). All of this contributes to Calgary's growing number of core technology companies.

Critical to the growth of core tech companies in Calgary are the city’s PSIs. In 2020, Mount Royal University reported 19 alumni since 2015 through its LaunchPad program, while in June, SAIT Applied Research and Innovation Services and Platform Calgary renewed their Regional Innovation Network funding together for future terms.

In a year that highlighted the criticality of home-grown healthcare and biomanufacturing capabilities, Calgary’s Life Sciences Innovation Hub (LSIH) as part of Innovate Calgary at the University of Calgary has been incredibly successful. An OCIF recipient in 2019, the LSIH currently has 29 companies leasing lab and office space, resulting in 90 per cent and 95 per cent occupancy, respectively. From April 2020 to March 2021, 12 new start-ups were incorporated, and four patents filed into those start-ups.

Throughout 2020 new and existing ecosystem support organizations expanded opportunities available to improve the velocity of companies through various programming commitments, including CDL Rockies adding the Agriculture Stream supporting at the seed-stage; Zone Start-ups Calgary, an accelerator for pilot-ready tech start-ups, partnered with United Farmers of Alberta Co-operative to support early-stage AgTech companies; and the Founder Institute launched the sixth Canadian chapter in Calgary.

Mount Royal University saw 90 applicants for 25 spots in its three programs: LaunchPad (start-ups), Growth Catalyst (scaleups), and Innovation Accelerator (scaleups) which resulted in 23 graduates. The A100 launched its associated membership which provides direct access to A100 Charter Members for 1:1 mentorship and network connections and the opportunity to participate in select A100 events such as Masterclasses, Advising Roundtables, and Socials.

Progress and performance measurement

KPI #1: Number of technology companies in Calgary

In January 2021 Calgary tracked 721 tech companies via the butterfly collection data gathering by Zinc Ventures, A100 and Platform Calgary and is a Zinc Ventures prototype. Of these, 452 were categorized as “core tech companies” qualified as having five or more employees, and 269 were classified as start-ups with one-to-four employees. The one-to-four-person company category or “start-ups” signifies a growing ecosystem as a certain level of failure is to be expected. Thus, a larger pool of start-ups is needed to sustain year over year growth. These 721 identified companies account for approximately 19,000 jobs.

Foreign attraction of established companies and adding new early-stage companies to the ecosystem is another source of growing the number of tech companies in the local market. Both Calgary Economic Development’s FDI efforts and programs such as Startup Visa contribute to the overall increase.

Indicators	2020	2019¹⁰
Total number of tech companies	721	686
1-4 employee companies	269	251
5+ employee companies	452	435

¹⁰ 2019 data was reported in the summer of 2020. These values are over-stated due to not having regular data collection intervals (i.e. new structure and COVID-19).

Calgary Economic Development company attraction (not including film/TV)	17	37
Startup Visa companies	6	37

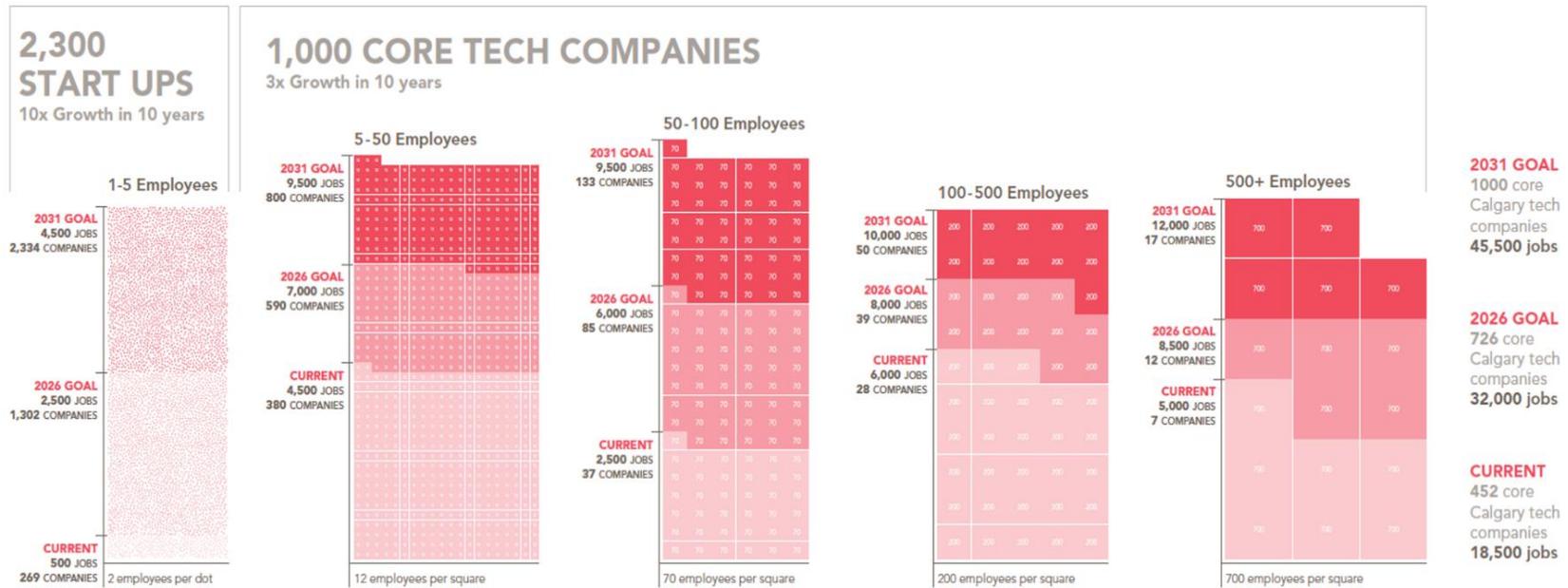


Figure 1. Butterfly Collection. This data was collected by Zinc Ventures, A100 and Platform Calgary and is a Zinc Ventures prototype.

KPI #2: Velocity of companies - Performance of accelerators and programs

Velocity of companies, or the rate at which they progress through the phases of development, is largely supported by programming offered to companies at each stage. The performance of those programs is largely measured by qualitative data, such as the number of applicants, competitiveness of accessing and completing the program, anticipated outcomes for graduates, access to funding through the program, and quality of mentorship within the program. The demand for these programs in Calgary continues to rise and new capacity is becoming available to meet the need.

Indicators	2020	2019
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Incubators & Accelerators Ecosystem Support Organizations	9 19	12 active ¹¹
Mentors: Platform Advisors VMSA	7 41 mentors and 25 entrepreneurs	9 29 mentors and 19 entrepreneurs

KPI #3: Quality of companies

In 2020 Calgary was ranked 34th of 50 for its tech talent in its first year on a CBRE North American ranking of top markets for tech talent. As an emerging innovation ecosystem in North America this ranking demonstrates growing accessibility for quality talent locally. It signifies a growing ability to compete and sustain future growth as the number of new companies and scale-ups increase. While customer and market development are more difficult to track and measure, one indicator of improving competitiveness, and thereby quality, is the ability for a company to acquire global customers.

Calgary Economic Development’s Trade Accelerator Program (TAP) provides knowledge, tools, and connections to help businesses, including start-ups in Calgary’s innovation ecosystem, expand into new international markets. TAP’s 54 graduates in 2020, 18 of which were start-ups, also demonstrates the increasing quality of companies, as local companies look to export products and services internationally. One example of success is [Righteous Gelato](#). It joined Calgary Economic Development’s Seattle trade mission for food producers. In June it began exporting locally made gelato to Whole Foods across the U.S. Pacific Northwest. Calgary Economic Development is working with Righteous Gelato on future expansion.

KPI #4: PSI impact on company creation and growth

PSIs are an essential contributor to an innovation ecosystem. They contribute to the development of talent through various programs and courses, with STEM programs being a leading indicator of tech talent. PSIs are increasingly focused on developing pathways to start-up formation and commercialization of technologies. Traditionally an advantage of research universities developing intellectual property (IP) for commercialization, now all types of PSIs make strategic corporate partnerships or have entrepreneur development courses/programming to serve students.

Growing a technology company or creating innovations requires a unique way of thinking and problem solving, often referred to as an entrepreneurial mindset. PSIs are a primary support in fostering an entrepreneurial mindset in the student population.

PSI Indicators¹²	
STEM Program Graduates:	
<ul style="list-style-type: none"> University of Calgary: 	

¹¹ This data was tracked differently in 2019 and is not directly comparable to 2020 data.

¹² PSI’s report on school year timing of September 2019 to September 2020.

<ul style="list-style-type: none"> MRU: 	5.1 per cent growth rate (2020 graduates over 2019 graduates) 237 graduates
Local IP:¹³ <ul style="list-style-type: none"> Number of patents issued with an investor or assignee address in the Greater Calgary Metropolitan area for calendar year 2020 Number of patents with an assignee that is a corporation for calendar year 2020 	782 651
Commercialization:¹⁴ <ul style="list-style-type: none"> Unique inventors listed on invention disclosure forms disclosed to Innovate Calgary and University of Calgary Research Services Office in calendar year 2020 	228

Entrepreneur Development Courses	Programs/Courses	Students Participating
Platform Calgary	11	968
University of Calgary	44	3,163 (2,119 unique)
MRU	15	1,758
SAIT¹⁵	2019/2020 was another year of growth for ARIS, with an estimated total revenue of close to \$10 million.	ARIS team averaged 164 students per year. In 2018/19, ARIS met its target to increase student engagement to over 200 students. In 2019/2020 SAIT aimed to maintain this engagement level and engaged 162 students prior to the closures in March (due to COVID-19).
Bow Valley College	# of Programs:	# of Participants:
	150 start-ups program	995 students in 26 skill-building sessions
	Lancing page competition	25 students competed
	Lean startup challenges	14 challenges
	Innovation Rodeo 2020 (virtual) recorded 220 per cent more people engaging in the Startup Bootcamp, 90 per cent more people completing mentor training, 580 per cent more student registrations	256 students registered for Innovation Rodeo
Launched MVP Mondays and Tech Sales Tuesdays programming	Saw a global audience; over 350 participants in MVP Mondays.	

¹³ University of Calgary data only.

¹⁴ University of Calgary data only.

¹⁵ SAIT's Applied Research and Innovation Services department supports start-ups, entrepreneurs and multinational corporations with technology problem solving and development. ARIS helps businesses large and small develop and test their ideas.

2021 actions planned

In 2021 there is growing momentum toward reaching 1,000 core tech companies by 2031. OCIF cited this goal in the funding announcements for the two Request for Proposals (RFPs) for \$27.5 million for an early-stage fund manager and new accelerator programs. The \$25 million [RFP from Alberta Innovates for scaleup and growth accelerators](#) will also support the generation and growth of innovative companies. Together the three RFPs demonstrate a commitment from both the City of Calgary and province of Alberta to increase the quality and quantity of new innovative companies.

In 2021, SAIT's ARIS is working with the University of Calgary to deliver a Natural Sciences and Engineering Research Council Collaborative Research and Development Grant Program with Canada's Oil Sands Innovation Alliance and Suncor Energy to study erosion and corrosion in Once Through Steam Generators. This work demonstrates the willingness of organizations to partner in support of innovative solutions built locally.

The Platform Innovation Centre is scheduled to open in Fall 2021. The 50,000 square foot facility will be a hub that provides a single point of access to resources, supports, programming and events to help start-ups successfully launch and grow their business. It will serve as a physical asset to the community where collisions of innovators will happen and navigating the ecosystem will be simplified.

Demand for space at the Life Sciences Innovation Hub is strong and growing. The Hub is preparing to add six more labs and will likely need another building to meet demand over the next five years. The Hub is gaining national and international recognition and intends to leverage this model to other accelerators and hubs and expand its focus to North America and globally to recruit high-potential early-stage life science opportunities to Calgary.

OUTCOME 2: INCREASE ACCESS TO FUNDING IN THE ECOSYSTEM

Access to capital continues to play a critical role in developing and nurturing a robust innovation ecosystem. The funding spectrum for innovation is broad and investment is essential at various stages of development. Funding from a variety of sources (including founders, friends and family; angel investors and family offices; government/corporate grants; crowd funding; debt/financing; venture capital; private equity; and IPOs) can support an innovation ecosystem and provide necessary capital.

Active investors with an equity position in a company play an important role through critical feedback, rigorous due diligence, and ensuring high accountability from applicant companies. For the small percentage successful in getting funded from venture capitalists and angel investors, they typically offer guidance and mentorship.

2020 key activities

Consulting firm Hockeystick reported 34 deals in Calgary during 2020, representing \$307 million invested into Calgary companies. In 2019, Hockeystick reported \$163.1 million invested over 27 deals. Hockeystick noted a healthy distribution of funding across deal sizes in 2020, with an increasing opportunity for funding of very early-stage companies (funding at less than \$250,000). Hockeystick reported 62 investors in 2020, reflecting an increase of 195 per cent over 2019.

The Canadian Venture Capital Association (CVCA) reported record venture capital deal volume in Alberta for 2020 with \$455 million in 51 deals, surpassing the 2019 record high by 100 per cent. Calgary captured over 64 per cent of all Alberta deals representing more than three quarters of the dollars invested, with \$353 million across 33 deals.

Examples of Calgary-based company seed and/or angel successes include Neo Financial and Symend, who completed the largest Series A (\$50 million) and Series B (\$73 million) funding rounds, respectively, in recent Alberta history. LaunchPad companies secured \$70,000 in seed stage capital across six deals. 2020 also saw Calgary’s fourth unicorn valuation in two years. Benevity surpassed the \$1 billion valuation mark as private equity investor Hg bought majority control. The deal closed in January 2021.

Progress and performance measurement

KPI #1: Private capital invested into Calgary companies

Private investors that take an equity position in a company, primarily angel investors, venture capitalists, and private equity firms, take on a shared risk with the companies. These investments are a strong indicator of the health of the funding landscape as they represent the opportunity value to risk tolerance relationship. The frequency of funding and total funds contributed quantifies the amount of value or opportunity investors can obtain. As deal volume increases in Calgary, we will see capital deployed for market development, talent/hiring, operations all of which contribute to improving the company and by association the local ecosystem.

The longer-term value comes from a liquidity event when the company achieves their “exit” and the value is paid out to the participating investors, including the founders. An exit can offer the founding team a literal exit from the company, and with a payout in hand they are often well positioned to restart their entrepreneurial journey in a new venture or reinvest their money as angel investors with founder experience. Unicorn status the highest rank of exit available to a founder or company, occurring when the company valuation exceeds a billion dollars.

Investment deals with Calgary companies	2020		2019	
	Number of deals	Dollars (millions)	Number of deals	Dollars (millions)
Hockeystick	34	\$307	27	\$163.1
CVCA	33 (#4 in Canada)	\$353	19 (#4 in Canada)	\$136

KPI #2: Public funding invested into the innovation ecosystem

Public funding can be a great tool to catalyze private investment and spur innovation. Funding into the innovation ecosystem in the form of government funding typically comes with a much lower risk tolerance, low accountability, and a lack of critical feedback. Successful public funding mechanisms are often ones that utilize the expertise and engagement of the private sector to co-fund and create a multiplicative effect on investment. Other effective public investments are those made into infrastructure and facilities that can generate new companies, technologies, and talent (e.g. labs). Funding of activities in the ecosystem is another beneficial use of public dollars, as they can invest into grants and initiatives that support innovators and start-ups in ways that private investors will not, for a lack of high returns.

Public Funding:	2020	2019
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Opportunity Calgary Investment Fund¹⁶	\$18.55 million across: <ul style="list-style-type: none"> • \$8.2 million into SAIT Digital School • \$4.0 million in Harvest Builders • \$3.25 million AltaML • \$3.0 million LodgeLink • \$100,000 Alberta IoT 	\$23.5 million
Alberta Innovates: <ul style="list-style-type: none"> • Regional Innovation Network Funding¹⁷ • Research and innovation activities¹⁸ • Emissions Reduction Alberta 	<ul style="list-style-type: none"> • \$3.16 million (for a total of \$13.7 million invested over three years, since 2019). • \$57 million into research and innovation activities (health care, the resource sector, start-up companies, the entrepreneurial ecosystem and post-secondary institutions) providing funding and support to researchers, entrepreneurs and innovative companies helps to ensure the work they're engaged in will continue. • \$58 million announced for natural gas innovations worth \$155 million. ERA supports 20 projects that create jobs, attract investment, and reduce emissions.¹⁹ • \$150 million announced for shovel-ready projects that cut costs and emissions in Alberta. Federal and provincial joint funding opportunity targets projects that can rapidly create jobs and stimulate economic opportunities in the province.²⁰ 	N/A
University of Calgary	University of Calgary launched UCEED, a pre-seed and seed funding program for ventures in child health and general health.	-
Federal Strategic Innovation Fund	<ul style="list-style-type: none"> • Attabotics received \$34 million.²¹ 	N/A

¹⁶ The Opportunity Calgary Investment Fund Ltd. is a City of Calgary wholly owned subsidiary established to manage the Opportunity Calgary Investment Fund Reserve to create an environment in Calgary that encourages economic recovery and growth, help reduce the impact of the economic downtown, and capital on new opportunities.

¹⁷ Alberta Innovates. (May 25, 2020). Support for small and medium-sized businesses in Alberta's research & innovation ecosystem. Retrieved from: <https://albertainnovates.ca/impact/newsroom/support-for-small-and-medium-sized-businesses-in-albertas-research-innovation-ecosystem/>

¹⁸ <https://albertainnovates.ca/impact/newsroom/57-million-to-alberta-researchers-and-innovators/>

¹⁹ <https://www.globenewswire.com/en/news-release/2020/07/21/2065101/0/en/58-million-announced-for-natural-gas-innovations-worth-155-million.html>

²⁰ <https://www.globenewswire.com/en/news-release/2020/11/02/2118850/0/en/150-million-announced-for-shovel-ready-projects-that-cut-costs-and-emissions-in-Alberta.html>

²¹ Innovation, Science and Economic Development Canada. (December 15, 2020). Government of Canada announces contribution to next-generation robotic warehouse solution. Retrieved from: <https://www.canada.ca/en/innovation-science-economic-development/news/2020/12/government-of-canada-announces-contribution-to-next-generation-robotic-warehouse-solution.html>

	<ul style="list-style-type: none"> • Clean Resource Innovation Network (CRIN) received \$100 million over four years.²² 	
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2021 actions planned

Calgary has seen significant local activity support the funding landscape as OCIF announced three investments in 2021. Two will be delivered via RFP to support early-stage companies, including a fund manager for early-stage investments into Calgary companies, and funding for new accelerator programs to be launched in Calgary. The third investment supported was [Endeavor](#), as it announced Calgary will be the location for its Canadian office for its global scaling accelerator.

The RFP from Alberta Innovates to support scale-up and growth accelerators in the province is another strong indicator of funding potential. The RFPs from OCIF and Alberta Innovates represent investment of more than \$50 million into growing the quality of companies in the region ensuring they can raise capital when needed. It is expected the Government of Canada will also align its funding making the pool of funding as much as \$60 million between all three orders of government. Similarly, for earlier stages, the CIC is deploying RIN funding for improving coaching capacity, early-stage program delivery collaborations among members, as well as programming for companies in scale-up and growth stages.

As Calgary continues to grow in the long term, these support measures show promise for future investments across the funding spectrum. The supports at very early stages indicate a continued focus on the capital needs for very early-stage start-ups. Lift Accelerator, backed by strategic venture capital partner Tribune Capital, saw this opportunity, and launched its six-phase program in Calgary. Additionally, NACO announced its Western Canadian office managing director and location within the Platform Innovation Centre, and plans to establish an Alberta Advisory Council to amplify Angel activity.²³

The Clean Resources Innovation Network (CRIN), a national network of organizations and companies focused on the sustainable development of Canada’s energy resources, announced \$80 million in project funding will be deployed over three competitions:

- Digital Oil and Gas Technology Competition (\$5 million)
- Reducing Environmental Footprint Technology Competition (\$50 million)
- Low Emission Fuels and Products Technology Competition (\$25 million)

In 2021, we expect to see a new iteration of the Start Alberta platform, focused on increasing access to quality deal flow, international exposure, and high-quality data for investors while also creating transparency on programming and resources for start-ups and entrepreneurs in the province. The Alberta Enterprise Corporation Alberta Tech Deal Flow Study was released in April 2021, showcasing the growth of Alberta’s

²² Innovation, Science and Economic Development Canada. (October 22, 2020). Government of Canada invests in clean technology ecosystems. Retrieved from: <https://www.canada.ca/en/innovation-science-economic-development/news/2020/10/government-of-canada-invests-in-clean-technology-ecosystems.html>

²³ Kirkwood, I. (March 15, 2021). Naco launches programming in alberta as part of latest push into province. Betakit. Retrieved from: <https://betakit.com/naco-launches-programming-in-alberta-as-part-of-latest-push-into-province/>

technology and innovation sector.²⁴ The study found Alberta has over 3,000 technology companies; an increase of 233 per cent since 2012. Fifty-eight per cent of these companies are in Calgary. Almost 40 per cent of Alberta technology companies have revenues over \$1 million, a 66 per cent increase since 2018. With gender diversity, 30 per cent of Alberta’s technology companies have female founders or co-founders, higher than the global average.

In April 2021, the Government of Canada released the 2021 Budget which included several key funding supports. A \$450 million Venture Capital Catalyst Initiative is intended to provide venture capital to entrepreneurs, accelerating and de-risking Canada’s technology and innovation ecosystems. \$50 million of the \$450 million is to be allocated to life sciences technologies.

An additional \$7.2 billion will be allocated to the Strategic Innovation Fund (SIF) to support companies in the life sciences, automotive, aerospace, and agriculture sectors, with \$5 billion of the \$7.2 billion specifically going to the Net Zero Accelerator. Calgary has an opportunity to take advantage of the newly allocated SIF given Calgary’s burgeoning life sciences sector, supported by LSIH and other significant infrastructure investments, our city’s history and strength in agriculture and agtech, and, of course, our competitive advantage in energy.

All indicators of the funding growth seen in 2019 and 2020 point to another significant year for funding opportunities and investment in Calgary, including the February 2021 Series B extension of \$54 million raised by Symend.²⁵ With 2021 first quarter results reporting Canadian venture funding hitting a record \$3.14 billion we can expect to see an impressive year of investment activity.²⁶

OUTCOME 3: INCREASE THE ADOPTION OF LOCAL TECHNOLOGIES AND ACCELERATE THE ADOPTION OF DIGITAL TECHNOLOGIES BY LARGE ENTERPRISE

Large enterprises are creators, adopters and customers of technology and innovation making their participation and leadership a critical component to a thriving ecosystem. Established corporations play a major role in furthering innovation ecosystems when they are engaged as meaningful and collaborative partners. These relationships can offer the corporations access to the ecosystem and further their understanding and adoption of innovation and startup culture, while in return they provide access to mentorship (with industry expertise), capital (alignment to their investment strategy), pilot and commercial opportunities (make them your customer), and M&A opportunities (get acquired).

Large enterprises build strong innovative capacities internally by encouraging their employees to create solutions to their business problems at all levels. Calgary has significant opportunities to deliver local technology and innovation solutions to large enterprises across the globe including those headquartered locally. In conjunction with this, our existing industries must continue to adopt digital technologies to remain competitive and globally recognized. Ideally this becomes a symbiotic relationship where the start-up ecosystem and corporate enterprise are partners and co-create innovation in the community.

2020 key activities

²⁴ <https://www.newswire.ca/news-releases/2021-study-shows-momentum-in-alberta-s-technology-sector-growth-and-job-creation-801295218.html>

²⁵ <https://betakit.com/symend-eyes-global-markets-with-54-million-cad-series-b-extension-led-by-inovia/>

²⁶ <https://betakit.com/report-canadian-vc-funding-reached-new-record-in-q1-2021/>

In 2020, Calgary Economic Development worked with IDC Canada to re-forecast Alberta, and Calgary's, digital transformation spend forecast across all industries from 2021–2024.

We are seeing many examples of Calgary companies using digital technologies to disrupt traditional industries, and stories of locally built technology solutions being deployed by own local enterprises are increasingly prevalent. Highlighting a select number of these companies provides a snapshot of the acceleration and prevalence of digital technologies in Calgary.

Validere is a Calgary data-intelligence platform for oil and gas product quality. More than 50 of North America's leading energy companies rely on Validere's insights to reduce waste and emissions and enhance operational and trading margins.

Another success story is StellarAlgo, a company with a software as a service data platform, leveraging machine learning to help customers organize, analyze, and leverage fan data. Its clients include the Vancouver Canucks, Los Angeles Kings, Los Angeles Galaxy, Las Vegas Golden Knights, Portland Trail Blazers and Calgary Sports and Entertainment Corp.

LodgeLink's digital B2B workplace travel platform facilitates workforce logistics management, provides better visibility and cost control, and creates digital efficiencies for accounts payable technologies, and more. By the end of 2020, LodgeLink was already serving more than 500 companies in Canada and the United States.

Calgary-based robotics supply chain company Attabotics, a local technology company that was an OCIF recipient in 2018, is transforming traditional industries. Its 3D automated storage and retrieval system is the world's first supply chain solution for modern commerce, reducing warehouse needs by 85 per cent. The company currently has six live installations in North America spanning customers across retail, B2B, food and beverage, and one of the largest luxury retailers in the United States, Nordstrom.²⁷

Progress and performance measurement

KPI #1: Ecosystem nurturing activities by large enterprises in Calgary

In the early stages of developing an innovation ecosystem, large enterprises view the start-up ecosystem as a source of good ideas. However, as prospective customers, large enterprises prefer to wait until solutions are proven and ready for commercialization. With co-creation of new innovations as the long-term goal, it is important to look to realistic and measurable indicators of large corporations engaging with the innovation community, such as the UFA partnership with ZoneStart-ups in Calgary to support the agriculture sector and its start-ups.

This type of ecosystem nurturing activity provides good outcomes to both partners. ZoneStart-ups provides their client companies with access to industry problems and customer opportunities, and UFA can de-risk collaborating on industry challenges and working with early-stage innovators to solve them.

Engaging the corporate community in the innovation ecosystem has always been difficult. Increasingly we see large enterprises finding a trusted partner with expertise in the start-up ecosystem as a conduit for innovation. In 2020, Platform hosted nine 'Corporate Innovator Roundtables' with 16 corporates, and the 'YYC Trailblazers in AI/ML' sub-committee of the Innovation Pillar, hosted four sessions gathering 50-plus

²⁷ <https://www.businesswire.com/news/home/20200818005266/en/Attabotics-Raises-50M-USD-to-Bring-Efficiency-and-Scale-to-Supply-Chains>

participants for peer-to-peer learning, led by Suncor, Nutrien, Canada’s Oil Sands Innovation Alliance (COSIA), and supported by AltaML, Alberta Machine Intelligence Institute, Platform Calgary, and Calgary Economic Development.

As mentioned above, in 2020, [AltaML announced](#) the launch of its applied data science internship program, the AltaML Applied AI Lab, and its final two industry partners, Suncor and TransAlta Corporation, joining ATB Financial and Spartan Controls. The program is a uniquely positioned industry partnership aimed at providing real-world industry problems to the program as well as enabling controlled access to secure data.

The City of Calgary can also act as a large enterprise and support the ecosystem. One way the City supports the innovation ecosystem in Calgary is through it’s Open Calgary initiative, providing pen access, free data sets. Free, accessible data enables start-ups and other growing companies to test and pilot applications without spending significant capital on purchasing data and reduces barriers to entry that come with data collection and analysis.

KPI #2: Digital transformation (DX) spend

“Digital transformation is the integration of digital technology into all areas of a business, fundamentally changing how you operate and deliver value to customers. It is also a cultural change that requires organizations to continually challenge the status quo, experiment, and get comfortable with failure”.²⁸ These can be internal teams focused on transforming their operations, products, or services through the application digital technologies.

As reference above, the International Data Corporation (IDC) Canada forecast \$20 billion would be spent on digitalization and innovation across Alberta industries by 2024. Calgary Economic Development launched an interactive [Digital Transformation Dashboard](#) to share this important story.

Large Enterprise by Industry	Alberta DX Spend	Recent Calgary Example
Life Sciences & Health	\$1.3 Billion (\$428 million in Calgary by 2024)	Circle Cardiovascular Imaging is investing \$4.0 million in 2021 alone in AI to revolutionize modern healthcare and life sciences.
Transportation & Logistics	\$1.6 Billion (\$790 million in Calgary by 2024)	Hexagon’s Autonomy & Positioning division has been investing in high-tech development in Calgary for over 25 years. In that time, the company has invested hundreds of millions of dollars into development of high precision GPS digital equipment and autonomous vehicle. Over the next four years, the company is projecting to invest approximately \$225 million in R&D with the compound annual growth rate of 14 per cent to design the next generation of off-road autonomy vehicles in Calgary.
<ul style="list-style-type: none"> Aerospace & Defense 	Of the Calgary total, \$38 million is in Aerospace & Defense	
Agribusiness	\$684 million (\$246 million in Calgary by 2024)	UFA & Zone Start-ups (Example listed above)
Financial Services	\$1.5 Billion (\$609 million in Calgary by 2024)	ATB Financial is building, investing and partnering to build on the strengths of Alberta’s growing reputation as a global leader in

²⁸ <https://enterpriseproject.com/what-is-digital-transformation#:~:text=Digital%20transformation%20is%20the%20integration,and%20get%20comfortable%20with%20failure.>

		technology and innovation. From advancements in artificial intelligence, data and our extensive suite of digital products and services to leadership in digital identity and trust—ATB is committed to helping to keep Alberta and ATB at the forefront of the digital economy.
Energy & Environment <ul style="list-style-type: none"> Oil & Gas 	\$5.8 Billion (\$2.3 billion in Calgary by 2024) Of the Alberta total, \$2.5 billion is in O&G	Suncor Energy invested \$830 million in technology development, including DX in 2019. Another \$1.4 billion in low-carbon power cogeneration is being invested at its Oil Sands Base Plant.

2021 actions planned

There is a growing momentum in 2021 toward collaboration between large enterprise and the technology and innovation ecosystem in Calgary.

Infosys, a major global IT company, announced it would be expanding to Calgary and bringing 500 jobs over three year. This expansion includes a plan to establish Calgary as one of its “tech and innovation hubs”, highlighting their commitment to develop the technology talent pool, nurture the innovation ecosystem and collaborate with local PSIs.

In April 2021 mCloud, a now Calgary-headquartered AI company focused on ESG monitoring and reporting, announced it had oversubscribed its \$14.49 million public offering, lead by ATB Capital Markets. There is a growing trend of digitalization in the energy sector as companies use digital technologies such as AI to reduce costs and meet emission reduction targets. In 2021 TransAlta is working with AltaML through the Applied AI Lab to integrate AI into its operations. For TransAlta, it creates an opportunity for an established industry leader to reinvent the way it does business as the world, and the company, undergoes a digital transformation.²⁹

OUTCOME 4: ENHANCE AWARENESS OF CALGARY’S ECOSYSTEM AT HOME AND ACROSS NORTH AMERICA

The innovation ecosystem requires a broader awareness and acknowledgement from the region in which it operates to thrive. Locally, this heightened awareness provides new opportunities and creates openings for new participants to enter and support the multitude of activities happening. Abroad and across North America, when Calgary is more well-known, awareness means easier attraction of top talent, companies, and new innovators to our city. Enhancing the overall awareness of Calgary’s innovation ecosystem starts locally to ensure all Calgarians have an understanding that Calgary has a thriving tech ecosystem.

2020 key activities

To build awareness of Calgary’s burgeoning innovation ecosystem, Calgary Economic Development launched its *Live Tech. Love Life.* campaign in Canada, the United Kingdom, and the United States, running from October through December 2020. In 2020 the campaign delivered over 73 million impressions in the global marketplace. It supported improved perceptions of Calgary’s innovation ecosystem abroad. In a 2020

²⁹ <https://calgaryeconomicdevelopment.com/newsroom/ocif-funded-altaml-makes-a-crucial-difference-for-calgary-companies/>

survey, 85 per cent of business leader respondents in Seattle, 90 per cent of leaders in San Francisco, and 83 per cent of leaders in London, U.K. indicated an increased perception of Calgary as an innovative city where new ideas, businesses, and people thrive. Calgary’s growing and established technology ecosystem is also gaining international traction, with double digit growth in perceptions of our ecosystem in Seattle and San Francisco business leaders from 2019 to 2020.

In aggregate, Calgary Economic Development’s marketing and communications delivered over \$64.1 million in ad equivalency, a metric demonstrating the cost to buy the total press coverage received, leading to 1.4 billion impressions across online news, blogs, and television mediums.

Also in 2020, to support start-ups in marketing their companies and successes, Startup Calgary and Platform initiated a Patreon partnership with Betakit, a technology publication, to advise start-ups on pitching to media and getting their company stories highlighted.

Calgary companies gained national and international recognition throughout 2020, enhancing the awareness of our city’s innovation ecosystem. For example, while the news broke in January 2021, in 2020 Calgary-based Providence Therapeutics began developing their own mRNA COVID-19 vaccine.³⁰ Next Generation Manufacturing Canada, the industry-led organization behind Canada’s Advanced Manufacturing Supercluster, announced it would grant \$5 million to Providence and Northern RNA to build out manufacturing capacity for the vaccine.

Venture For Canada (VFC) supported 341 externships in Alberta in 2020. This was the first year VFC operated in Alberta and accounted for roughly one third of VFC's overall placement of interns. In 2020, Alberta had the highest concentration of VFC interns of anywhere in Canada.

Progress and performance measurement

KPI #1: Stories in the media on Calgary technology and innovation

An engaged and knowledgeable media community amplifies stories of success and shifts local, national and international perceptions. Calgary and Alberta media outlets need to be connected and made aware of engaging innovation stories to increase the frequency of tech stories being published and therefore change the perception of Calgary’s tech and innovation ecosystems.

Media Stories	2020	2019
Calgary-tagged Betakit stories	39³¹	43 ³²
All local and national publications with Calgary tech stories	442	488

KPI #2: Growing the audience for Calgary innovation

³⁰ Stephenson, A. (January 26, 2021). Made-in-Canada COVID vaccine to be manufactured in Calgary; clinical trials have now begun. Calgary Herald. Retrieved from: <https://calgaryherald.com/business/local-business/made-in-canada-covid-vaccine-to-be-manufactured-in-calgary-clinical-trials-have-now-begun>.

³¹ Startup Calgary and Platform initiated Patreon partnership with Betakit to advise start-ups on pitching to media and getting their company stories highlighted.

³² Three Betakit writers hosted during Launch Party and Innovation Week in 2019.

Growing the audience of people aware of and engaged in the progression of Calgary’s innovation ecosystem means broadening the reach of campaigns, social media outreach, and other groups and community organizations to bigger markets. It means highlighting the success stories of Calgary companies and those who receive international and national awards and recognition.

Digital Audience Growth	2020	2019
Social Media Engagement Live Tech. Love Life. (LTLL) Campaign <i>Future indicator: LinkedIn groups & members</i>	Social Media audience recorded a net growth of 4.9 per cent (15,746) <ul style="list-style-type: none"> Over 23.8 million impressions (60.1 per cent increase) 183,308 engagements (25.1 per cent increase) Over 73 million impressions <ul style="list-style-type: none"> Q4 saw 13 million impressions for LTLL Canadian campaign on digital ad placements, and 4.1 million impressions for the US campaign. 	<i>New indicator, data unavailable</i>
Rainforest scorecard (members/audience) <i>Future indicator: Communities and meetup groups expanding</i>	Score: 686/1000 All components of the scorecard saw their highest scores in Calgary, even amid the challenges of 2020. The average score from female respondents increased by more than 100 points, about 17 per cent higher.	Score: 630/1000

Student internships/placements into start-ups	2020	2019
Venture for Canada Externships	341 in Alberta	Canada total was 540 students, and 61 companies
MRU (co-op and work placements)	53	<i>Data unavailable</i>

2021 actions planned

The momentum in Calgary’s ecosystem is generating awareness both locally and abroad. Facilities supporting the innovation ecosystem in the Calgary area are a growing source of recognition as they drive innovative outcomes in industry. The international media attention around Carbon XPRIZE highlighted the Calgary facility, the Alberta Carbon Conversion Technology Centre. Two Calgary companies were finalists and awarded

the X-Factor awards, Carbon Upcycling-NLT and Carbon Corp.³³ Similarly, TELUS Agriculture was named Olds College 2021 Partner of the Year highlighting the Olds College Smart Farm, a “Living Lab for Agri-Food Development”, where TELUS Agriculture has been testing innovations like security solutions, weather stations, field sensors, and more.³⁴

Locally, the VFC externship pilot program launched in Alberta for undergraduate students to gain career clarity by taking on a real-world challenge a business is facing with a volunteer team of like-minded peers. Participating students will get crucial experience in a short time frame without a huge investment of their time. This exposure to local innovative companies will be invaluable for local perceptions of a thriving innovation ecosystem in Calgary our youth are excited to join.

The growing international media attention Calgary garnered in 2020 continues to be amplified in 2021. The Start Alberta platform will be the first jurisdiction in North America to utilize the Dealroom Platform. The Dealroom partnership represents the second iteration of the Start Alberta portal and will unlock a growing international audience of investors and major industry leaders that can evaluate the Calgary ecosystem. The launch in June 2021 is expected to receive significant media attention.

Another organization of note that showcases Calgary-based innovation on a global stage is the CRIN. The activities of CRIN, including the competitions announced in 2021 represent \$85 million in funding to accelerate technology development.³⁵ These initiatives, among many others, are generating awareness for Calgary’s innovation ecosystem.

³³ <https://www.businesswire.com/news/home/20210419005330/en/XPRIZE-Announces-the-Two-Winners-of-20m-NRG-COSIA-Carbon-XPRIZE-With-Each-Team-Creating-Valuable-Products-out-of-CO2-Emissions>

³⁴ Olds College. (March 31, 2021). TELUS Agriculture Named Olds College 2021 Partner of the Year. Retrieved from: <https://www.oldscollege.ca/about/news/2021/telus-ag-named-olds-college-2021-partner-of-the-year/index.html>.

³⁵ <https://cleanresourceinnovation.com/competitions>

PLACE

The Place pillar sets an ambitious vision to be **Canada’s most livable city**; building on ImagineCALGARY’s 100-year vision for Calgary to be “A great place to make a living, a great place to make a life.” While Calgary has consistently ranked as Canada’s most livable city by the Economist Intelligence Unit, there is still much to do to achieve our 100-year vision. This means focusing on key aspects of livability as defined by organizations such as the International Standards Organization (ISO), Economist Intelligence Unit, the United Nations, and Arcadis’ Sustainable Cities Index. These aspects include resiliency, clean energy, environmental quality, affordability, transportation, safety, outdoor and public spaces, and attractions and amenities.

2020 Place Outcomes Progress

OUTCOME 1: BUILD A RESILIENT CITY POWERED BY CLEAN ENERGY SOURCES

There are innumerable organizations in our community working to build a resilient city powered by clean energy sources. The City of Calgary approved the Climate Resilience Strategy in June 2018. The Strategy outlines the City’s strategies and actions to mitigate and adapt to climate change impacts. Mitigation refers to efforts to reduce greenhouse gas emissions, whereas adaptation speaks to actions taken to reduce the impacts of climate change on infrastructure and services when they do occur. The Climate Resilience Strategy also sets the city’s GHG emissions reduction target at 80 per cent reduction by 2050 from a 2005 baseline.

To provide strategic advice and support to facilitate the implementation of actions from the Climate Resilience Strategy, the City created the Calgary Climate Panel, a collaboration between industry, community, and the City. As well, the 2020 Municipal Development Plan (MDP) and Calgary Transportation Plan (CTP) both integrate sustainability principles and climate change mitigation and adaptation strategies, thus supporting and enabling the Climate Resilience Strategy. Specifically, the 2020 MDP and CTP includes a commitment to 100 per cent zero-emissions community vehicle fleet by 2050.

2020 key activities

In 2020, to support building a resilient city powered by clean energy sources, including greener transportation, the City of Calgary currently has over 175 electric vehicle charging stations, including 46 in City of Calgary parkades. The 2020 update to the MDP and CTP now focuses on 14 core indicators as part of the 60-year vision, including three captured below relevant to building a resilient city: district energy, impervious surfaces, and tree canopy coverage. It should be noted as part of the Next20 initiative, the district energy and impervious surface KPIs were identified as needing review for effectiveness. Increasing the tree canopy cover is a top priority for the City of Calgary.

Progress and performance measurement

KPI #1: Tonnes of CO2 equivalent (CO2e) emitted per capita³⁶

³⁶ This data is from the 2019 Climate Resilience Strategy Progress Report and is the most recent data available.

Reducing GHG emissions is the goal of climate change mitigation efforts. Understanding a city’s GHG emissions per capita is a measure of efficiency: How efficient are our city’s operations, buildings, transportation, industrial practices, per person living in Calgary. While Calgary’s GHG emissions have grown 18 per cent between 2005 and 2019, the per capita GHG emissions decreased, demonstrating increased efficiency.

2019	2005
14.47 tonnes of CO2e/capita	16.53 tonnes of CO2e/capita

KPI #2: Climate change mitigation and adaptation efforts

Tracking progress on key climate mitigation and adaptation initiatives ensures Calgary continues to build a resilient city for its citizens. Solar power capacity at City of Calgary facilities demonstrates commitment to powering Calgary with cleaner energy sources, reducing the City’s impact on climate change. Adaptation efforts are often characterized by actions related to improving biodiversity, creating green spaces, and watershed health to reduce the impacts of natural disasters when they do occur. The MDP and Climate Resilience Strategy work together to attain, or surpass, these targets.

Indicators	Data	60-year targets
kW of solar power online at City of Calgary facilities	3,083³⁷ Note: Sarcee Operations Work Centre powers 56.2kW of solar power and is included in this calculation.	Not applicable
kW of total solar power installed in Calgary	11,181³⁸	Not applicable
Percentage of land area with densities supportive of district energy systems³⁹	2.6 per cent	1.7 per cent
Percentage of city area covered by impervious surfaces⁴⁰	44 per cent	10 per cent – 20 per cent
Percentage of city area covered by tree canopy⁴¹	8.25 per cent	14 per cent – 20 per cent

2021 actions planned

³⁷ This data is calculated from the City of Calgary Solar Edge Dashboard, accessed on March 22, 2021.
³⁸ This data is sourced from the 2019 Update Climate Resilience Strategy, with 2018 as the most recent data available.
³⁹ This indicator is aligned to the 14 core indicators in the 2020 Municipal Development Plan and Calgary Transportation Plan.
⁴⁰ See footnote 39.
⁴¹ See footnote 39.

In 2021 the City will continue to track progress against 2020 MDP core indicators and review the effectiveness of the district energy systems and impervious surfaces KPIs as part of the 2020 MDP and its 60-year targets. Per the Next20 initiative, the City is prioritizing tree canopy cover as a core indicator of a resilient, healthy city. Improving green spaces is also a strategic move in The Greater Downtown Plan.

OUTCOME 2: CREATE A CITY WHERE ALL CALGARIANS ARE WELCOME, SAFE, AND ABLE TO BUILD A MEANINGFUL LIFE

Creation of a welcoming and safe city where all citizens can build a meaningful life is not overseen and managed by one single organization. The Downtown Strategy Leadership Team and Working Group contribute to this outcome through the Downtown Strategy focus areas: play, live, work, and connect. The safety of Calgary’s downtown is a priority for the City of Calgary while organizations like Vibrant Community Calgary, Enough for All, and Momentum work to make Calgary a welcoming, inclusive city for all people.

2020 key activities

2020 was a difficult year for many Calgarians, and Calgary organizations worked hard to support as many citizens as possible. Many in-person services could not be provided to low-income Calgarians, but Momentum responded by hosting their Money Management workshop online in 2020, with the workshop being accessed over 500 times. Momentum also launched an online savings app with a Canadian financial technology company, QUBER, to support low-income Calgarians manage and save money.⁴²

Finally, Momentum released a report demonstrating its contribution to reforming Alberta’s high-cost credit industry, reducing interest rates from \$23 for each \$100 borrowed to \$15, which is the lowest in Canada (i.e., short-term loans). Launched in September 2020 as part of the 9 Block Program, the Downtown Ambassador Program focuses on outreach, safety, cleanliness within the nine blocks surrounding the Calgary Municipal Building and Stephen Avenue downtown. The program has seen hundreds of support interactions with the community since its launch and is one way the City of Calgary is working to improve perceptions of safety downtown.

Progress and performance measurement

KPI #1: Market Based Measure (MBM) incidence of low-income in Calgary

Tracking low-income incidence in Calgary is critical to understanding our citizens’ abilities to build a meaningful life in our city. Market Basket Measure (MBM) is Canada’s official poverty line. It measures the cost of a ‘basket’ of goods and services that represent a modest, basic standard of living and determines low-income based on this amount. In 2019, the MBM was \$24,731 for a single person and \$49,462 for a couple with two children.

In 2019, the most recent year for which data is available, 5.7 per cent of Calgarians (or 89,000) were low-income, a decrease from 12.3 per cent in 2018. The Enough for All target for Calgary is a 30 per cent reduction in incidence of low-income from 2015 figures.

Indicator	2019⁴³
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⁴² Retrieved from: <https://momentum.org/programs-services/manage-your-money/savings-app/>

⁴³ MBM data is sourced from Statistics Canada Table 11-10-0136-01 Low income statistics by economic family type.

MBM incidence of low-income in Calgary	5.7 per cent
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KPI #2: Living wage⁴⁴

Living wage demonstrates affordability and is determined by calculating average expenses, taxes, and government transfers using local costs. It is not minimum wage; instead, considering the basic needs of two working parents with two children, including additional costs incurred to participate, thrive, and build human and financial assets. In 2020 the living wage increased 27 per cent from 2018 and is 39 per cent above Alberta’s minimum wage of \$15 per hour.

2020	2018 ⁴⁵
\$20.69 per hour	\$16.45 per hour

KPI #2: Affordable (non-market) housing

Calgary has less supply of non-market housing than the Canadian average of 6 per cent, and it is estimated Calgary will need 15,000 new units of non-market housing to bring Calgary to the national average. It is critical for Calgary to provide the fundamentals for its citizens to live with security, dignity, and opportunity for the future.

Indicators	Data
Percentage of non-market housing in Calgary	3.6 per cent ⁴⁶
Inventory of non-market homes available in Calgary Housing Company’s portfolio	7,108 ⁴⁷

KPI #3: Registered Education Savings Plans (RESPs) opened⁴⁸

The ability to open a RESP demonstrates financial literacy and capacity to provide an opportunity to complete high school education and higher academic programs, influence post-secondary enrollment and completion, and reduces and prevents intergenerational poverty. Aspire Calgary tracks the number of RESPs opened across eight partner organizations on an annual basis as an indicator of poverty prevention and reduction. The organizations running Education Savings programs, contributing to opening RESPs include: BowWest Community Resource Centre,

⁴⁴ The Living Wage data is sourced from Vibrant Community Calgary (VCC) and Enough For All 2020 Living Wage Brief, released on March 17, 2021, and reported on an annual basis.

⁴⁵ Due to COVID-19, the 2020 living wage in Calgary was compared to the 2018 living wage, released in 2019.

⁴⁶ This data is sourced from the 2019 Annual Report of Calgary Housing Company (CHC), released on June 22, 2020, and is the most recent data available.

⁴⁷ See footnote 43. This data is as of 2019.

⁴⁸ This data is sourced from the 2019 Annual Report of Aspire Calgary and is the most recent data available.

Immigrant Education Society, Calgary Immigrant Women’s Association (CIWA), Carya, Centre for Newcomers, Discovery House, Momentum, and Sunrise Community Link Resource Centre.

2019
847

KPI #4: Safety measures from Downtown Ambassador Program

Safety is subjective and not everyone perceives safety in the same way. In 2020, the City of Calgary used proactive, community-based measures to improve the safety of the nine blocks near the Municipal Building downtown. The Downtown Ambassador Program was deployed to create visibility and accessibility to information for those who need it.

Indicators	2020⁴⁹
Interactions with the community	1,302
Referrals to social services supports	200
Wellness checks performed with members from Calgary’s vulnerable population	350

2021 actions planned

In 2021, the successful Downtown Ambassador Program is expected to continue, while Momentum, Enough For All, and Vibrant Communities Calgary continue providing much-needed supports to low-income Calgarians in another tumultuous year.

The Calgary Municipal Housing Corporation understands approximately 81,240 households as of 2016 struggle with housing costs; a number expected to rise to 100,000 by 2026. CHC continues to focus on its strategic priorities to provide housing options for all Calgarians.

OUTCOME 3: BUILD VIBRANT NEIGHBOURHOODS CONNECTED BY DIVERSE AND ACCESSIBLE MOBILITY OPTIONS FOR ALL

Given the scale of this outcome, there are many groups working towards achieving it.

The Downtown Strategy Leadership Team and Working Group implement the Downtown Strategy and the new Greater Downtown Plan, which aims to revitalize Calgary’s downtown. The Downtown Strategy is structured across four focus areas: place, live, work, and connect, each with their own initiatives. The Leadership Team meets monthly to provide direction and oversight on the execution of the Downtown Strategy and the Working Group meets monthly and includes stakeholders from the City of Calgary’s Urban Initiatives, Business and Local Economy, and Recreation departments, as well as representatives from Calgary Economic Development.

⁴⁹ Data from September 2020 to December 2020.

2020 key activities

Vibrant neighbourhoods became critical in 2020 as Calgarians were forced to stay close to home, where often one of the only ways to leave home was to get outside. Recognizing Calgary’s downtown no longer served the city’s needs, in 2020 there was a significant focus on the repurposing and redesign of greater downtown. In 2020 the Greater Downtown Plan was developed with the vision for downtown to be the economic and cultural heart of Calgary. It aims to create a resilient and vibrant place for everyone, with welcoming neighbourhoods, active streets, and well-used public spaces. City Council approved the Plan in April 2021. This Plan highlights bold strategic moves to revitalize Calgary’s greater downtown including:

- Create mixed-use neighbourhoods with gathering places, housing choices and all of the amenities residents need close by.
- Build a green network by connecting parks, natural spaces and river frontage with downtown’s main streets.
- Design streets for walkers and wheelers first, with regional pathways stretching along the riverbanks and underpasses, and bridges and on-street mobility tracks connecting to neighbouring communities.
- Make transit the quickest, safest and most cost-effective way to travel to and through downtown.
- Encourage innovation to accommodate and attract innovative businesses, testing and economic enterprise from the global technology sector.

Alongside the Greater Downtown Plan, the Real Estate Sector Advisory Committee (RESAC) took responsibility for progressing the approved Notice of Motion 2020-1439 *Providing Incentive to Residential Development in the Downtown Core*. This led to an understanding of the North American landscape for office to residential conversion incentives and the investment and potential solutions required to reduce vacancy in Calgary’s Greater Downtown. This work concluded approximately six million square feet of office space needs to be removed by 2031 to reduce vacancy to 14 per cent.

In 2020, work continued on the development of the Guidebook for Great Communities, a toolkit to build future-focused, multi-generational, amenity-rich communities with a diverse selection of housing options.

Also worth noting were key placemaking initiatives that occurred downtown in 2020, namely 20 new murals were created as part of the Beltline Urban Mural Project, High Park and Park Park were created as public and event spaces, and East Village built a cross county ski loop at Fort Calgary to ensure outdoor activities were accessible to downtown residents.

Progress and performance measurement

KPI #1: Investments in public space projects

COVID-19 highlighted the importance of public spaces in a year when public spaces were often the only places individuals could see and meet one another. There were several key public space projects initiated, opened, continued or progressed, or completed in 2020, while major construction projects were announced and initiated.

Project name	Details
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High Park and Park Park	Public City Architecture Inc. worked with the Calgary Parking Authority to bring the multi-faceted, interactive installations to Calgary. HIGH PARK created over 90,000 square feet of public space.
Cycle tracks on 9th Avenue SE	There are new cycle tracks on 9 th Avenue SE between East Village and Macleod Trail, making it easier to get in and out of Inglewood and East Village.
Castell Building canopy and lighting	The University of Calgary’s School of Architecture Planning and Landscape worked with the City of Calgary’s 9 Block Program to enhance security and safety in the area.
Adaptive roadways	Pathways were widened to enable more people to use them during COVID-19 (and beyond) on specific city streets including Memorial Drive, Elbow Drive, 11 Street SE, and Crescent Heights.
Firepits in city parks	The City of Calgary provided free-to-use bookable fire pits during the winter in community and regional parks to enable safe outdoor gatherings.
Temporary patios	The City of Calgary enabled businesses to have temporary patios on public land. This enabled businesses to continue to operate in accordance with provincial health restrictions throughout 2020.

Infrastructure project name	Expected economic impacts
Arts Commons Transformation Project	<ul style="list-style-type: none"> • \$386 million – estimated amount added to Calgary’s gross domestic product (GDP) during construction of both phases of work. • ~3,155 jobs will be created during construction, generating \$239 million in labour income. • ~683 permanent jobs supported upon completion. • \$53 million in annual contribution to Calgary’s GDP.
BMO Centre Expansion	<ul style="list-style-type: none"> • 1,800+ jobs created during construction. • 1,700+ jobs created after opening. • \$223 million – annual economic impact for Alberta.
Event Centre⁵⁰	<ul style="list-style-type: none"> • \$400.3 million projected returns to The City of Calgary over 35 years: <ul style="list-style-type: none"> ○ \$9.5 million community engagement programming ○ \$138.7 million incremental Rivers District property tax ○ \$155.1 million City facility fee ○ \$2.5 million share of naming rights (10-year agreement) ○ \$19.4 million street-facing retail property tax ○ \$75 million community impact through Community Sports Payments

⁵⁰ While there is long term commitment to build the Event Centre, it is currently paused to resolve budget and program requirement challenges.

KPI #2: Connectivity and accessibility of neighbourhoods

The following KPIs demonstrate whether Calgarians live in neighbourhoods connected by transportation options and whether these neighbourhoods are close to activity centres and main streets, or corridors. It should be noted these KPIs are two of the 14 core indicators from the 2020 Municipal Development Plan and Calgary Transportation Plan and will be tracked every four years. Connectivity to primary transit networks is a priority for the City of Calgary and is being accelerated to achieve the 60-year target. Accessibility to daily needs (i.e., population within Major and Community Activity Centres) is on track to achievement of the 60-year target.

Indicators	2018	60-year targets
Percentage of population within 400m of Primary Transit Network⁵¹	37 per cent	45 per cent
Percent of population within Major and Community Activity Centres, and 600m of Urban and Neighbourhood Corridors⁵²	21 per cent	30 per cent

KPI #3: Transportation services⁵³

Diverse transportation and mobility options means Calgarians can access fundamental amenities, their workplaces, and their social circles in an inclusive way. It is important for a healthy and resilient city to provide multiple types of transportation.

The following KPIs are three of the 14 core indicators from the 2020 MDP and CTP and will be tracked every four years. All the transportation KPIs are priorities for the City of Calgary and align to the Future of Transportation strategy and the 2020 CTP for Calgary.

These indicators do not illustrate the impact of COVID-19 on walking, cycling, and public transit trips in 2020. COVID-19 has impacted public transit ridership in unforeseeable ways. In April 2020, ridership was at 10 per cent of 2019 levels, having since increased to 25 percent of 2019 levels.⁵⁴ When surveyed, only half of transit customers expect to resume using transit as frequently as before COVID-19, providing reasons such as discomfort with using public spaces during and post-pandemic and changing needs for using public transit. As routines change and more flexibility is provided with remote work, public transit to and from downtown may be structurally changed.

Indicators	2018	60-year targets
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⁵¹ This data is sourced from the Next20 initiative, a review of the 14 core indicators for Land Use and Mobility, as part of the 2020 update to the Municipal Development Plan and Calgary Transportation Plan.

⁵² See footnote 39.

⁵³ See footnote 39.

⁵⁴ City of Calgary. (July 22, 2020). Calgary Transit Ridership, Revenue and RouteAhead Update. Retrieved from: [https://pub-calgary.escrimemeetings.com/filestream.ashx?DocumentId=135378#:~:text=As%20of%202020%20July%208,Alberta%20\(2020%20March%209\).&text=The%20lowest%20point%20in%20ridership,approximately%2077%2C000%20boardings%20per%20weekday](https://pub-calgary.escrimemeetings.com/filestream.ashx?DocumentId=135378#:~:text=As%20of%202020%20July%208,Alberta%20(2020%20March%209).&text=The%20lowest%20point%20in%20ridership,approximately%2077%2C000%20boardings%20per%20weekday).

Percent of trips using walking and cycling transportation (all purpose trips, 24 hours, city-wide)	18 per cent	25 per cent
Percent of trips using transit transportation (all purpose trips, 24 hours, city-wide)	8 per cent	15 per cent – 20 per cent
Annual transit service hours per capita	2.24	3.7

KPI #4: Downtown transportation modal split⁵⁵

Calgary specifically tracks transportation modes inbound and outbound to downtown to understand how Calgarians travel to and from work in the downtown. This information is critical to inform future infrastructure investments for Calgarians who not only commute into downtown for work, but who live and play downtown and wish to access amenities outside the downtown.

In 2020, this data is not available or relevant given the provincial health restrictions requiring working from home for most of the year, and public perception of public transit being unsafe during the pandemic. As vaccines continue to roll out in Alberta, there is speculation many employers will continue to have flexible work-from-home policies and this will impact the absolute number of Calgarians commuting into downtown; structurally changing the downtown use case.

Indicators	2019	2018
Percent of trips inbound walking (16 hours)	9.6 per cent	9.9 per cent
Percent of trips inbound cycling (16 hours)	2.0 per cent	2.7 per cent
Percent of trips inbound single car driving (16 hours)	55.1 per cent	53.9 per cent
Percent of trips inbound using transit (16 hours)	33.2 per cent	33.5 per cent

⁵⁵ This data is sourced from the Calgary Downtown Cordon Activity Modal Split dataset, with 2019 being the most recent data available. 2020 modal split data is not available as efforts were made to conduct a partial study, but no vehicle occupancy information was retrieved. 2020 data, and potentially 2021 data, will not be used to conduct year over year comparisons.

KPI #5: Sliding scale transit passes sold

As an indicator of inclusivity, sliding scale transit passes provide the opportunity for all Calgarians to access daily amenities. While the number of sliding scale transit passes sold decreased 32.5 per cent in 2020, this was likely due to COVID-19 restrictions reducing the need for transportation around the city and precautions taken by the public not to use public transportation to move around the city.

2020	2019
270,035	480,915

2021 actions planned

In February 2021, City Council approved the 2020 MDP and CTP, Calgary’s long-range land use and transportation plans that look 60 years into the future. These plans help shape how the communities we live and work in grow, develop, and evolve over time. Monitoring and review of progress occurs every four years, with the most recent review occurring in 2018, meaning the next progress report will be released in 2022.

For the remainder of 2021 and ongoing efforts to develop vibrant neighbourhoods, City Council asked for the Guidebook for Great Communities be further refined by City of Calgary administration. Work to execute on the strategic moves in the Greater Downtown Plan will move ahead as City Council approved the Plan in April 2021. Ongoing and planned infrastructure investments included in the Greater Downtown Plan include:

- New Event Centre
- Arts Commons Transformation Project
- BMO Centre Expansion
- Glenbow Museum Renovations
- Riverfront and Eau Claire Public Realm
- Green Line
- 17 Avenue S.E. Extension
- Platform Innovation Centre and Parkade

Related to this is the work to create ‘Tomorrow’s Chinatown’. This initiative will help support Chinatown’s future as a vibrant, culturally rich place to live, work, and visit; and is expected to be completed by the end of 2021. Finally, work continues to develop policies and incentives for office to residential conversions in the downtown.

OUTCOME 4: ENGAGE CALGARIANS IN ARTS AND CULTURE AND SPORTS AND RECREATION, LEVERAGING OUR TOURISM ASSETS

This key outcome is managed and executed by multiple organizations across Calgary. Calgary Economic Development works with the City of Calgary, Tourism Calgary, Calgary Arts Development Authority (CADA), the Calgary Public Library, and other Civic Partners to provide a city-wide view of progress. These organizations work tirelessly to achieve their organizations’ and city’s objective to enhance tourism, culture, and recreation assets.

2020 key activities

2020 was a difficult year for Calgary's tourism, sports and recreation, and arts and culture organizations and businesses. Events could not be held, artists could not showcase their craft, recreation facilities were closed or seriously impeded for much of the year, and tourism focused on local (or in some cases out of province) Calgarians experiencing Calgary's attractions.

That said, organizations and businesses were innovative, resilient and continued to provide Calgarians with new experiences. Supported by funding from Western Economic Diversification, the Chinook Blast Winter Festival was collaboratively planned by The City and nine key partners and held in February 2021, a remarkable accomplishment given the adaptations and logistics required to manage risks and restrictions from COVID-19. Chinook Blast Winter Festival is meant to bolster tourism in Calgary throughout the year and laid important groundwork to showcase winter as a tourist season in downtown. CADA started Rise Up in partnership with the Calgary Hotels Association and Hotels Live to respond to COVID-19 and initiated Living a Creative Life web series to highlight Calgarians creative works during COVID-19. City Council allocated funding for CADA's COVID Emergency Resiliency Fund to support the recovery and resiliency of arts organizations impacted by COVID-19.

Tourism Calgary focused tourism on raising awareness of local businesses and assets, while also deferring 45 events to future years and securing 64 new events to Calgary. One example was securing Calgary as the host city for Curling Canada's entire 2021 event bubble.

The Calgary Public Library, facing service disruption and location closures, quickly pivoted to program experiences online, launching hundreds of different programs for all ages, backgrounds, and interests. In 2020 professional skills and virtual meeting tools were amongst the most popular online learning and skill development courses for adults.

In sports and recreation, the ActiveCITY Playbook 2030 was drafted as a guidebook to build Canada's most livable region, encompassing all facets of the active economy to ensure Calgary creates a healthy ecosystem of active businesses and citizens to support the economic, human, social, and environmental prosperity of our city and region. A funding request was made to the Government of Canada to create the Canadian Centre for Excellence in Winter Sport in Calgary.

To better understand the impact of COVID-19 on sport in Calgary, Sport Calgary conducted a survey in April 2020.⁵⁶ The survey found sports organizations across Calgary are going through a generational challenge, with 46 per cent of respondents expecting to feel lasting impacts up to six months, and 28 per cent expect the impacts to last up to a year. Given the current circumstances, it is likely the sports community will be managing decreased revenue and participation for years. 91 per cent of multi-sport facilities in Calgary have laid off employees, and 97 per cent of organizations have experienced a decline in revenues from user fees.

Progress and performance measurement

KPI #1: Public arts engagement

⁵⁶ Sport Calgary. (April 27 2020). Retrieved from: <https://www.sportcalgary.ca/news-releases/2020/4/27/impact-of-covid-19-pandemic-on-local-sport>

CADA monitors and tracks contributions made to the arts and culture community in Calgary. Key services and supports CADA provides include public art placement and decision making, funding to support the creative economy and activations downtown, grants for arts organizations, and sponsorship for arts and culture events across the city.

No event-related data is reported for 2020 as all arts and culture performances and large-scale events were cancelled due to COVID-19. Instead, it is a testament to CADA to showcase the support arts and culture organizations received in 2020. In 2020, the dollar amounts provided to arts organizations through CADA’s grant investment programs increased 30 per cent from necessary COVID-19 supports from the COVID-19 Emergency Resiliency Funds from the City of Calgary. These funds were dispersed through 846 grants in 2020.

Key infrastructure projects were also maintained despite COVID-19: Glenbow Museum Renovations and Arts Commons Transformation Project, approved in 2020 and to be initiated in 2021 and 2024, respectively. The Glenbow Museum Renovations will cost \$115 million; the Government of Alberta has committed up to \$40 million, however the Glenbow is still seeking funding for its renovations. Design on the Arts Commons Transformation Project started in 2020. The remaining portion of the funding for the \$240 million Road House (Phase 1) was approved at City Council on April 26, 2021, subject to receipt of the increase to the Canada Community Building Fund; funding for the Resident House (Phase 2) is to be determined.

As Calgary recovers from the impacts of COVID-19, the KPIs below may be updated to showcase public arts and culture events and participation of the community.

Indicators	2020	2019
Investment dollars from Cultural Activation Fund to support the creative economy, downtown strategy, and winter strategies	\$689,525	\$663,000
CADA grant investment programs	\$12,727,315	\$9,789,980
CADA total number of grants	846	452
Number of Indigenous artists and organizations supported across CADA grant programs	65	40 ⁵⁷

KPI #2: Sports and recreation accessibility

A key component of wellbeing is physical activity, and Calgary is touted as one of the most active cities in Canada. In 2020, due to COVID-19, access to City recreation facilities dropped significantly as provincial health restrictions closed facilities for extended periods of time throughout 2020. Similarly, the number of Calgarians approved for the Fair Entry Program declined likely due to the impact of COVID-19 on the opportunity for Calgarians to use indoor recreation facilities, including recreation centres and ice rinks.

Indicators	2020	2019
Number of visits to Calgary recreation facilities	1,299,713	4,199,539

⁵⁷ This number is not directly comparable to 2020 data. In 2019, 40 Indigenous artists or Indigenous-led organizations were funded by the Original People’s Investment Program. In 2020, 65 Indigenous artists and Indigenous-led organizations were supported across all CADA grant programs.

Number of Calgarians approved for the Fair Entry Program	66,000	96,523 ⁵⁸
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KPI #3: Economic impact of Tourism Calgary

The economic impact of tourism and the work done by Tourism Calgary is critical to Calgary’s economic future. Tracking economic impact of events hosted and sponsored by Tourism Calgary and the leadership of Tourism Calgary for the sector demonstrate how Calgary successfully leverages our tourism assets to advance *Calgary in the New Economy*.

The impact of COVID-19 has been severe for the tourism industry in Calgary; however, Tourism Calgary has done incredible work to pivot their efforts to a local focus, reschedule 45 events to future years, and confirm 64 new events to take place in Calgary, ensuring continued economic contributions in years to come. It is a testament to the work of Tourism Calgary that, despite COVID-19’s negative impact on the industry, perceptions of Tourism Calgary increased to 94 per cent in 2020.

Indicators	2020	2019
Economic impact (\$CAD) of Tourism Calgary events⁵⁹	Q1 2020: \$22,428,540 Q2 – Q4 2020: \$61,421,645, not realized⁶⁰	\$153,000,000
Events supported by Tourism Calgary	Q1 2020: 25 Q2 – Q4 2020: 45, rescheduled⁶¹	67
Perception of Tourism Calgary as an effective champion for the industry	94 per cent	93 per cent

KPI #4: Calgary Public Library engagement

The Calgary Public Library system is an integral part of Calgary’s learning ecosystem and its arts and culture. Without a vibrant and utilized library system, a city cannot support life-long learning and growth of all ages. Furthermore, a library system, as demonstrated through the KPIs below, provides more than an equal opportunity to access books. Calgary’s libraries provide online skills and training resources, webinars, tax education and services, computer access and loans, printing services, and free meeting spaces.

Due to COVID-19, many KPIs reported in 2019 and in September 2020 are no longer relevant, such as number of visits to Calgary libraries or library programs. While libraries themselves were closed for much of 2020, circulation only declined 18 per cent from 2019 to 2020. As well, the Calgary Public Library responded to a significant trend of online learning and skill development amongst adults. Courses on professional

⁵⁸ This number is not directly comparable to 2020 data. In 2019, 96,523 people were enrolled and used Recreation’s Fee Assistance Program. In 2020, 66,000 were approved by Fair Entry and indicated they wanted to use the Fee Assistance Program.

⁵⁹ Includes meetings and conventions, and sport, cultural and major events.

⁶⁰ Due to the COVID-19 pandemic, this economic impact has been deferred to future years and was not realized in 2020.

⁶¹ Due to the COVID-19 pandemic, these events were deferred to future years.

skills and virtual meeting tools were amongst the most popular in 2020, with the Library hosting over 150,000 participants through their online courses.

Indicators	2020	2019
Total library circulation	12,249,432	14,938,332
Online course participation through Calgary Public Library	150,523	556,392 ⁶²

2021 actions planned

Unfortunately, the beginning of 2021 continued the uncertainty imposed by COVID-19 on Calgary’s arts and culture, tourism, and sports and recreation organizations and businesses. As of April 7, 2021, arts rehearsals and performances can no longer be conducted in person, recreation facilities are open only for one-on-one training, and the possibility of large in-person events such as concerts, sports games, and festivals is unknown.

That said, planning has already begun for 2022 Chinook Blast winter festival given its success in 2021. CADA continues to support Rise Up and Hotels Live alongside the Calgary Hotels Association. New CADA grants in 2021 include the Organization Structural Change Grant to support organizations with critical changes to create a stronger sector in the future and Artist Microgrants to support artists with professional development needs.

Calgary is currently hosting the 2021 Curling Canada event bubble from February to May 2021, which will generate \$11 million in economic impact, and has successfully deferred 45 events originally scheduled for 2020. In addition, 64 new events have been scheduled for future years including the 2024 International Institute of Municipal Clerks Annual Conference anticipated to generate \$2.6 million in economic impact. Tourism Calgary will continue focusing their marketing efforts on local businesses through the #LoveYYC program to inspire support of local businesses and attraction year-round. Tourism Calgary will evaluate and enhance its partnership program to support industry partners manage post-COVID-19 and continues to monitor sentiment and confidence in meeting and convention markets to inform its sales approach going forward.

⁶² This number is not directly comparable to 2020 data. In 2019, the Calgary Public Library hosted 556,392 participants through its programs mostly in person. In 2020, 150,523 participated in online learning courses and skill development.

BUSINESS ENVIRONMENT

Our economic strategy positions Calgary to become **Canada's most business-friendly city**. The City of Calgary defines business-friendly as: the balancing between the needs of our residents, customers and communities with the needs of our business community. Business environment refers to both the ease of conducting business and the level of business activities in Calgary. While other pillars of the economic strategy are critical to talent and business attraction, retention, and expansion, the ease and cost of doing business is consistently perceived as one of the most important factors driving relocation. This pillar is not only focused on creating a low tax environment. It is also focused on making development and building permit processes, business license applications, and other regulations and requirements easier to navigate. The pillar has also been expanded to encompass connectivity from a physical and digital infrastructure perspective, as a key component of doing business in Calgary. Ensuring the City of Calgary is a partner in innovation through policy and regulations on data sharing, testing facilities and pilot programs, and 5G infrastructure.

Governance and Management

The City of Calgary's Business and Local Economy Team was created to advance and manage the initiatives and programs of the Business Environment pillar. Council's Business Advisory Committee acts as a conduit to address perceived City of Calgary barriers that business stakeholders face in their everyday operations. The Business Advisory Committee's external working group is made up of key business leaders in Calgary who provide feedback and direction on priorities. The Living Labs Team at the City of Calgary works to formalize and simplify the process to make public spaces, transportation corridors and land more accessible for the research and testing of innovative solutions. The City of Calgary's Information Technology (IT) Team is responsible for the city's digital infrastructure, while YYC Calgary International Airport is a critical partner in keeping Calgary globally connected to key trading and business partners.

2020 Business Environment Outcomes Progress

OUTCOME 1: BUILD A GLOBALLY AND DIGITALLY CONNECTED CITY

2020 key activities

From both a physical and digital connectivity perspective, work done in 2020 progressed the achievement of this outcome.

2020 was undeniably difficult for YYC Calgary International Airport. It is important to note Canadian airports did not receive targeted federal support during COVID-19, while airports across the United States did receive funding. This will inevitably create an unequal recovery for airports across North America. Levels of passenger throughput were reduced to those last seen in 1993. However, YYC Calgary International Airport was one of only four Canadian airports open during COVID-19 and continued to have the highest percentage of connecting flights in the country (43 per cent of passengers are connecting), compared to Vancouver's 35 per cent and Toronto's 30 per cent. In 2020, connecting flights were critical to maintaining some level of operations as most connecting flights to and from YYC Calgary International Airport are domestic. Another important trend to note is the growing demand for e-commerce, resulting in a significant increase in cargo capacity requirements. YYC Calgary International Airport has spent \$100 million over the past 15 years in cargo and logistics infrastructure, including 130,000 square feet of cargo-specific assets to ensure cargo receives the same priority as passenger travel, a rarity among international airports worldwide. In 2020, YYC Calgary International Airport saw an 11 per cent increase in cargo landings mostly from personal protective equipment and e-commerce. This

increase is not expected to decline post-COVID-19; therefore, YYC Calgary International Airport is well set up to support future increases in cargo.

To prepare for the recovery and return of air travel in 2020, YYC Calgary International Airport received the Airports Council International (ACI) Health Accreditation and is working on #FlyHealthyYYC to improve perception and confidence in safety measures. As well, YYC Calgary International Airport began identifying terminal innovations for a contactless airport experience, through check-in to self bag drops to tap and go parking.

With respect to digital connectivity infrastructure, a study commissioned by Calgary Economic Development in 2020, and released in 2021, showcased Calgary as a national leader in 5G preparedness and building the necessary components of a digital ecosystem. When compared to other Canadian municipalities including Vancouver, Edmonton, Winnipeg, Toronto, Ottawa, Montreal, and Halifax, Calgary was the only municipality to meet all defined criteria to build an effective digital ecosystem. Perhaps most importantly, Calgary was the only municipality at the time of the study, other than Montreal, currently working with national wireless service providers (WSPs) to build a digital playground downtown for testing and piloting 5G enabled applications. The City of Calgary already has guidelines and processes in place for WSPs and other businesses to build 5G infrastructure.

Progress and performance measurement

KPI #1: Kilometers of municipally-owned fibre

Municipally-owned fibre demonstrates commitment to, and support for, a city’s digital infrastructure ecosystem. A study commissioned by Calgary Economic Development, and authored by Gregory Taylor, Associate Professor at the University of Calgary’s Department of Communications, Media and Film, demonstrated the importance of municipally-owned fibre for attracting innovative companies and connecting Calgarians in preparation for 5G technology. In 2020, as 5G technology began launching in Calgary, the City of Calgary continued to build municipally-owned fibre infrastructure to support Calgary’s digital ecosystem.

2020	2019
600 km	586 km

KPI #2: Number of Internet Exchange Point (YYCIX) members

YYCIX is the fourth largest internet exchange point (IXP) in Canada and is important physical infrastructure supporting Calgary’s digital ecosystem and readiness for 5G technology. The existence and strength of a city’s IXP means data can transfer between devices faster as the distance travelled is shorter. This leads to lower latency (greater responsiveness of devices) and the ability for more data to be shared. These capabilities are critical for the next generation of digital applications and demonstrate a digitally connected city ready for the new economy.

2020	2019
79	66

KPI #3: YYC Calgary International Airport volumes and flights

YYC Calgary International Airport is a critical component of Calgary’s connectivity to national and international jurisdictions. The ease with which Calgary companies can connect to their trade partners and export destinations is critical for expansion and retention of local companies, while the connectedness of Calgary is also a key factor driving company attraction to the city. Of course, while YYC Calgary International Airport was one of only four Canadian airports open during COVID-19, there were significant declines in passenger volumes and direct non-stop flights from 2019 to 2020. Pre-pandemic, the airport generated \$8 billion in GDP for Calgary and the region, with 50,000 jobs indirectly tied to the airport.

Indicators	2020	2019
Number of passengers at YYC Calgary International Airport	5,700,000	18,000,000
Air cargo landings at YYC Calgary International Airport	~4,780 landings (11 per cent increase)	4,305 landings
Number of direct non-stop flights	42	88

2021 actions planned

In 2021 the City of Calgary intends to launch a Digital Playground in downtown in alignment with exploration of creating an Innovation District in Calgary.

Looking at global connectivity and YYC Calgary International Airport, the airport expects recovery from COVID-19 to occur over the next five years. Key factors YYC Calgary International Airport is tracking and believes are critical to the recovery include: lifting of restrictions in conjunction with continued roll out of vaccinations around the world; the financial health of airlines coming out of the pandemic; and public confidence in travel post-COVID-19. Importantly, the financial health of airlines is dependent upon business travel as a key revenue generator; business travel may never return to pre-COVID-19 levels. There are many uncertainties related to each factor and YYC Calgary International Airport is conducting comprehensive scenario planning to prepare for all possible recovery timelines. The airport is also looking at development of land around YYC to support supply chain view of goods and services movement and target innovative companies to support supply chain. As the home to WestJet, the number two national carrier, the recovery and success of WestJet is top of mind for Calgary. As the sector recovers, it is noteworthy WestJet did not receive federal support unlike Air Canada, who received \$5.9 billion from the federal government.

OUTCOME 2: IDENTIFY AND UNDERSTAND GLOBAL TRENDS TO HELP BUSINESSES GROW, THRIVE AND MAKE DATA DRIVEN DECISIONS

2020 key activities

2020 was an unprecedented year for Calgary businesses impacted by both the prolonged decline of the energy industry and impacts of COVID-19 on business operations. These two crises not only impacted the short-term survival of Calgary’s small and medium-sized businesses, but

also has long-term implications such as office space vacancy in Calgary's downtown. The structural changes occurring in the energy industry such as the transition to cleaner energy, digitization of remote, in-field work and efficiency of production with fewer workers, will inevitably reduce the number of jobs required to sustain the industry. Beginning in late 2020, the RESAC and the Urban Initiatives Department at the City of Calgary worked to better understand the implications, and potential solutions, to Calgary's growing office vacancy through a more vibrant and reimaged Greater Downtown.

The continuation of key infrastructure projects in 2020 also demonstrates commitment to Calgary's future. For example, investment in the BMO Convention Centre Expansion provides Calgary the opportunity to host large conventions, conferences, and other events, generating income for the city. From a provincial and municipal perspective, the Government of Alberta committed \$3 billion to capital maintenance and renewal across the province, while Calgary Municipal Land Corporation (CMLC) continues to work on key development plans for East Village and East Victoria Park to achieve their 20-year vision for Calgary's Culture and Entertainment District. 2020 also saw the completion of key milestones for the Green Line LRT, Calgary's largest ever infrastructure investment.

All three levels of government provided support for businesses impacted by COVID-19. Federally, COVID-19 supports available to businesses included the Canada Emergency Wage Subsidy (CEWS) and Canada Emergency Recovery Benefit (CERB), available to compensate for employee income and business revenues lost due to COVID-19. As of January 16, 2020, 391,690 CEWS claims were approved for Alberta businesses, equalling \$10,671,564,000.⁶³ The Government of Alberta is mobilizing funds to support business re-opening in 2021 (see 2021 Actions Planned section below). The City of Calgary also supported local businesses throughout 2020. The Business and Local Economy Team at the City of Calgary met bi-weekly with business owners through the Business Sector Task Force to help local businesses understand available supports and to better understand key challenges businesses faced throughout the year. From a financial and ease of doing business perspective, the COVID-19 Relief Package resulted in \$2.2 million waived fees for businesses. The ShopHERE pilot program was launched in 2020 to support local businesses create an online presence when in person retail shopping was not allowed due to COVID-19 restrictions. As well, over 16,000 video inspections were conducted virtually to allow Calgary's construction industry to proceed during COVID-19.

Progress and performance measurement

KPI #1: Square feet of downtown office space absorbed

Reducing vacant office space signals a vibrant downtown where businesses grow and thrive. It also provides the City with investment dollars to further support businesses through property taxes – an important positive feedback loop. Negative absorption means more office space is available in the office market, increasing supply and depressing prices of real estate. While Calgary continues to have the highest square feet of available office space in Canada, Calgary also continues to have the highest square feet of office space occupied in Canada. Since 2015, the City has lost \$16 billion in downtown office value and over \$320 million in property tax revenues. In 2020-21 the negative absorption is largely attributed to the massive consolidation in the energy industry that eclipsed the move of technology companies into downtown. Per forecasts from the City of Calgary, if no measures are taken to actively eliminate six million square feet from the downtown, office vacancy will remain high at 23.2 per cent by 2031, and it will remain difficult to convince owners and developers to invest in their assets to improve attractiveness for companies and talent. This is a more severe forecast than in the report brought forward to City Council in February 2017, which indicated a return to \$80 oil by 2020 and mid-teen vacancy rate by 2032.

⁶³ Canada Revenue Agency. Table 2i: Approved Canada Emergency Wage Subsidy (CEWS) Claims by Period and Industry Sector, Alberta. Retrieved from: https://www.canada.ca/content/dam/cra-arc/serv-info/tax/business/topics/cews/statistics/cews_p1-p12_tbl2i_ab_e.pdf

2020	2019
656,295 square feet, negative absorption	109,760 square feet, negative absorption

KPI #2: Construction value generated

Construction value is an outcome-based indicator demonstrating the economic impact construction has on the local economy.

2020
\$3.4 billion, city-wide building permits

KPI #3: Headquarters per capita

Headquarters are a symbol of power and decision making. Cities with headquarters are seen as a center of business where important decisions are made. Given the current economic condition in Calgary, continuing to maintain the highest number of headquarters per capita in Canada is an impressive showcase of Calgary’s resilience and continued reputation as a place for some of Canada’s most prestigious and fast-growing companies, including Canadian Pacific Railway, WestJet, Suncor, Benevity, Symend, Attabotics, and others. The data for this KPI is taken from the F500 list and is not reflective of start-up companies or small and medium-sized businesses headquartered or started in Calgary. In future years, this KPI may need to be updated to reflect a broader definition of company headquarters including scaling technology companies, many becoming large employers.

2020	2019
117	118

KPI #4: Business support and perceptions

The following data points illustrate initiatives and programs available for businesses to grow and thrive, as well as business perceptions of their ability to grow and thrive with the support of the City of Calgary. Where noted, the data is captured from the City Business panel surveys, often conducted quarterly, of businesses in Calgary. In 2020, many of the survey questions were updated to understand business needs because of COVID-19; and some questions were not asked on a quarterly basis due to the disruptions related to COVID-19. Many of the survey questions around business support and perceptions from the Calgary business community were updated for 2020 to better understand COVID-19’s impact on business and trust in the City to manage and find solutions to COVID-19.

Indicators	2020	2019
Dollars distributed as part of the COVID-19 Relief Package	\$2.2 million	Not applicable

#SupportLocalYYC campaign impressions	15,255, 772	Not reported
Number of businesses supported by Digital Mainstreets (ShopHERE initiative)	157⁶⁴	Not applicable
Business trust in the City (percentage of survey respondents)	35 per cent⁶⁵	21 per cent
Business awareness of City efforts to limit the spread of COVID-19 (percentage of survey respondents)	62 per cent⁶⁶	Not applicable
Business confidence the City will work with the private sector to find solutions during COVID-19 (percentage of survey respondents)	40.5 per cent⁶⁷	Not reported ⁶⁸

KPI #5: Available City of Calgary open datasets

To grow and thrive, businesses need data to make data-driven decisions in their best interest. A business-friendly city provides open access data to its community to enable entrepreneurialism and create the conditions necessary for success in a world increasingly driven by data and the ability to analyze and use data for insights and foresight.

2020	2019
340	295

2021 actions planned

In 2021 work will continue on key infrastructure projects described above including Arts Commons Transformation Project, BMO Centre Expansion, and Platform Innovation Centre and Parkade will be complete by Fall 2021.

In terms of key business supports for COVID-19, in 2021, the Government of Alberta will distribute over \$620 million to businesses through the Small and Medium Enterprise Relaunch Grant and Enhanced COVID-19 Business Benefit to offset costs of re-opening and implementing necessary public health measures. Calgary Economic Development also saw ConnectingYYC.ca uptake in early 2021, with 1,502 pageviews in Q1 2021.

⁶⁴ The ShopHERE pilot supported businesses move online to a Shopify site to increase resilience/business access when no in person shopping was allowed due to COVID-19.

⁶⁵ Average across Q1, Q2, and Q3 2020. This question was not asked in Q4 2020 due to COVID-19.

⁶⁶ Asked once during 2020 and replaced 2019 question on 'what's going on in the City'.

⁶⁷ Average across Q2 and Q3 2020. This question was not asked in Q1 2020 and missing one quarter of data due to COVID-19.

⁶⁸ In 2019 the question was asked: "I have confidence in The City to work closely with the private sector to develop investment solutions". Results in 2020 are not comparable.

Many of the municipal supports for businesses created and implemented in 2020 will continue through 2021. The ShopHERE pilot program will continue and has already received 250 applicants for Phase 2 of the program. As well, the fee freezes implemented in 2020 will continue through 2021, with a request for extension of the COVID-19 Relief Package brought to City Council on April 12, 2021. Funding is also available to help Business Improvement Areas support and promote their local areas.

OUTCOME 3: ANTICIPATE AND REDUCE BARRIERS TO DOING BUSINESS

2020 key activities

The Business and Local Economy Team at the City of Calgary worked tirelessly in 2020 to ensure businesses could do business easily and find the information needed to manage their businesses considering COVID-19. This was evident in the 43 per cent increase in online permit services and applications seen from 2019 to 2020. It was also evident in the bi-weekly Business Sector Task Force meetings with local businesses to ensure their voices were heard and needs met.

One of the most popular initiatives implemented by the City of Calgary were temporary patios in the summer of 2020. There were 116 applications approved in 2020 with fees waived for the application. These patios enabled restaurants and bars, breweries, and cafes across the city to remain open and comply with provincial health restrictions.

Progress and performance measurement

KPI #1: Webpage visits to myBusiness hub and COVID-19 support page

The City of Calgary’s Business and Local Economy Team works diligently to support businesses across Calgary start, operate, and sustain in all economic conditions. The myBusiness hub and COVID-19 support webpages were set up to support businesses and make it easier for businesses to find the information they needed to operate. While the number of webpage visits to the myBusiness hub declined in 2020, this could be due to the uptake in webpages visits to the COVID-19 support page.

Indicators	2020	2019
Increase in online applications	43 per cent⁶⁹	Not reported
Webpage visits to myBusiness hub	43,409	50,627
Webpage visits to COVID-19 support page	33,974 (January – December 2020)	Not applicable

KPI #2: City Centre Enterprise Area results

⁶⁹ As of September 30, 2020 online intake of applications has increased by 43 per cent. Customers can apply for permits online from their homes, 24 hours a day, 7 days a week, 365 days a year.

The City Centre Enterprise Area applies to downtown Calgary and Beltline. This area is where change of use, additions, or modifications to a building are exempt from requiring a development permit. Areas like these in Calgary reduce time and costs to businesses and streamline impediments to growing a business.

Indicators	2020	2019
Building permits and tenancy certificates ratio approved without development permits	69 building permits : 73 tenancy certificates	Not reported
Customer time saved	3,209 hours	Not reported
City of Calgary staff time saved	345 days	Not reported
Fees saved	\$36,000⁷⁰	Not reported

KPI #3: Applications for temporary patios on public land

In 2020, gathering outside was often the only option for Calgarians to socialize with friends and family. Temporary patios on public land were a lifeline for the restaurateurs, brewers, and other nightlife in Calgary as they struggled to stay open without indoor dine-in options. More than this, this initiative showcases the City of Calgary’s nimbleness and willingness to try new ways of creating vibrancy and community and making it easier to do business in Calgary.

2020	2019
116	Not reported

2021 actions planned

Many of the initiatives from 2020 will continue into 2021, including the temporary patios on public land. In 2021, 140 applications have already been received for temporary patios. These patios are proving to be a lifeline for restaurants, breweries, and bars as COVID-19 infection rates continue to increase in Calgary and indoor dining and gathering remain restricted.

Importantly, the City of Calgary has already consolidated the content from the myBusiness hub, COVID-19 business support, and all other business support content, into a [single website](#). As well, the City of Calgary will pilot a new Business Experience Representative position for the Restaurants and Breweries sector. This position is intended to be a single point of contact for business needs related to approvals and inspections required for opening a business. The site aims to provide a seamless and accessible user experience for businesses and entrepreneurs looking for information to support their needs.

⁷⁰ The dollars in fees saved would have equalled \$73,000 without the May permit fee waiver, a special support for businesses during COVID-19.

Conclusion

In 2020, Calgary faced a harsh new reality: low oil prices, a plunge in FDI, the biggest decrease in GDP of any province in the country, businesses struggling to survive and our unemployment rate doubling in six months. But 2020 also demonstrated the compassion, resilience, and determination of Calgarians, and that *Calgary in the New Economy* is the right strategy for the city. There was, and continues to be, a growing number of business, government, and community leaders embracing the vision of the economic strategy.

There were transformations across the city in all sectors of the economy. Calgary companies broke venture capital records amid a global pandemic. Calgary saw its fourth unicorn technology company in two years. All levels of government recognized Calgary's undeniable opportunity as a centre for global climate action and clean tech. Multiple life sciences companies were created from the Life Science Innovation Hub. When it comes to talent, Calgary was the only municipality in Canada with a positive influx of people across all age groups and our city continues to have the highest workforce participation rate in the country. This is a testament to our incredible quality of life and the opportunity to not only make a living, but to make a life.

Looking ahead to the remainder of 2021, Alberta is expected to lead the country in GDP growth. Calgary will continue to see significant venture capital investment, spurring the creation of the next generation of high-growth companies. From a vibrant downtown, to a future-ready economy, to a city that places value on shared prosperity, the success of our city will come from working together. This is our time and *Calgary in the New Economy* is the right strategy with the right vision to enable us to achieve our ambitious goals of being the city of choice for smart people to come, embrace technology and solve world challenges.