

BY TSERING ASHA, KENDALL BISTRETZAN, XIMENA GONZÁLEZ, DANYAEL HALPRIN, SARAH HARROWER, MICHELLE MCIVOR AND MICHAELA REAM

ILLUSTRATIONS BY GUST OF WIND STUDIO PORTRAITS BY CHANTAL BENNETT

# INNOVATION

## IN FOCUS



**Innovation is the fuel that keeps our city moving forward.**

**Whether it's coming up with new ways to grow things, heal ourselves**

**or interact with each other, here are just some of the ways**

**Calgarians are innovating, each and every day.**



ince the recession of 2015, Calgary has scrambled to redefine itself as something more than Canada's oil and gas capital. But it took three years before the first strategic attempts to change course were conceived and, by then, many young Calgarians had left the city for places better suited to their lifestyle and aspirations. Designed for the preferences of an older generation, downtown Calgary is not the bustling hub of activity twenty-somethings yearn for. But a new initiative hopes to change that.

After the Platform Innovation Centre launched last year, a group of leaders from multiple organizations across the public and private sectors — including Calgary Economic Development, the City of Calgary and Platform Calgary — came together to envision the creation of an innovation district in the heart of our city. Unlike traditional business clusters, where technology-focused businesses are isolated in suburban campuses, the modern innovation district is an agent of urban vibrancy. Restricted to a spatially compact area, innovation districts offer a holistic mix of residential, office, shopping and entertainment spaces in a walkable, transit-accessible environment.

Terry Rock, the president and CEO of Platform Calgary, who holds a PhD in management from Texas Tech University with a focus on strategic management, entrepreneurship and innovation, describes an innovation district as “a place where an innovator is surrounded by their peers, programming, and supports in an environment that's going to help them get their work done.” The most important benefit of such districts is efficiency, he adds, as ventures and people can find each other and connect swiftly when resources are in close proximity. “The real power [of an innovation district], where it really amps up, is that you shrink the community,” Rock says.

Based on principles of accessibility, inclusiveness, collaboration, connection and sustainability, an innovation district would catalyze the city-building strategies outlined in the Greater Downtown Plan and propel Calgary and its economy forward. “We really want this to be an inclusive project that has to belong to all Calgarians,” says Jason Cameron, program lead of resilience and infrastructure at the City of Calgary. “There's a real opportunity there, especially as we start to really need to attract international talent and investment.”

Over the last decade, cities around the world have been competing to attract one of the most coveted assets of our time: talent, and innovation districts have proven effective in attracting



# TALKING ABOUT

**The city-building phenomenon that might hold the key to growing a diverse economy in Calgary.**

BY XIMENA GONZÁLEZ



**“THE CITIES THAT ARE SERIOUS ABOUT IT ARE FINDING WAYS TO MAKE SURE THAT THE TALENT CONVERSATION IS A TOP PRIORITY.”**

**TERRY ROCK, PLATFORM CALGARY**

it. U.S. cities such as Detroit and St. Louis have successfully revitalized their downtowns by creating the unique spaces and places sought by the innovation economy.

“Being purposeful about creating an innovation district means that the ingredients are there for innovators to connect and create collisions that might not otherwise happen,” says Lisa Sierra, manager in collaboration, analytics and innovation at the City of Calgary. “I think downtowns are great for those street collisions, [with] restaurants and businesses [where] people can connect and be introduced to the people they need to meet.”

Indeed, today the built environment is more important than ever for any city’s economy. As young professionals increasingly become “digital nomads,” public amenities and programming take centre stage as a magnet for talent and capital. But our car-oriented, empty-after-6 p.m. downtown won’t cut it. To retain and attract young professionals, downtown Calgary must become a walkable, vibrant, complete community, packed with entertainment and cultural activities 24-7. A place where Calgarians can live, work, learn and play.

“When you’re talking about people with a decent education, an in-demand skillset, they are not generally people who are being wooed to low-tax jurisdictions,” says James Stauch, director of research, scholarship and community engagement at Mount Royal University’s Institute for Community Prosperity. “They’re being wooed to quality of life.” According to Rock, the global competition for talent is relentless. “The cities that are serious about it are finding ways to make sure that the talent conversation is a top priority,” he says.

As vibrant communities become a magnet for talent, the creation of an innovation district in downtown Calgary has the potential to catalyze our city’s commitment to an economic transition, meet the lifestyle sought by young professionals, and foster the breeding grounds for innovation.

“Innovation happens through catalytic events or collisions,” says Brad Parry, president and CEO of Calgary Economic Development, noting the importance of

**MY INNOVATION**

**(DISTRICT)**

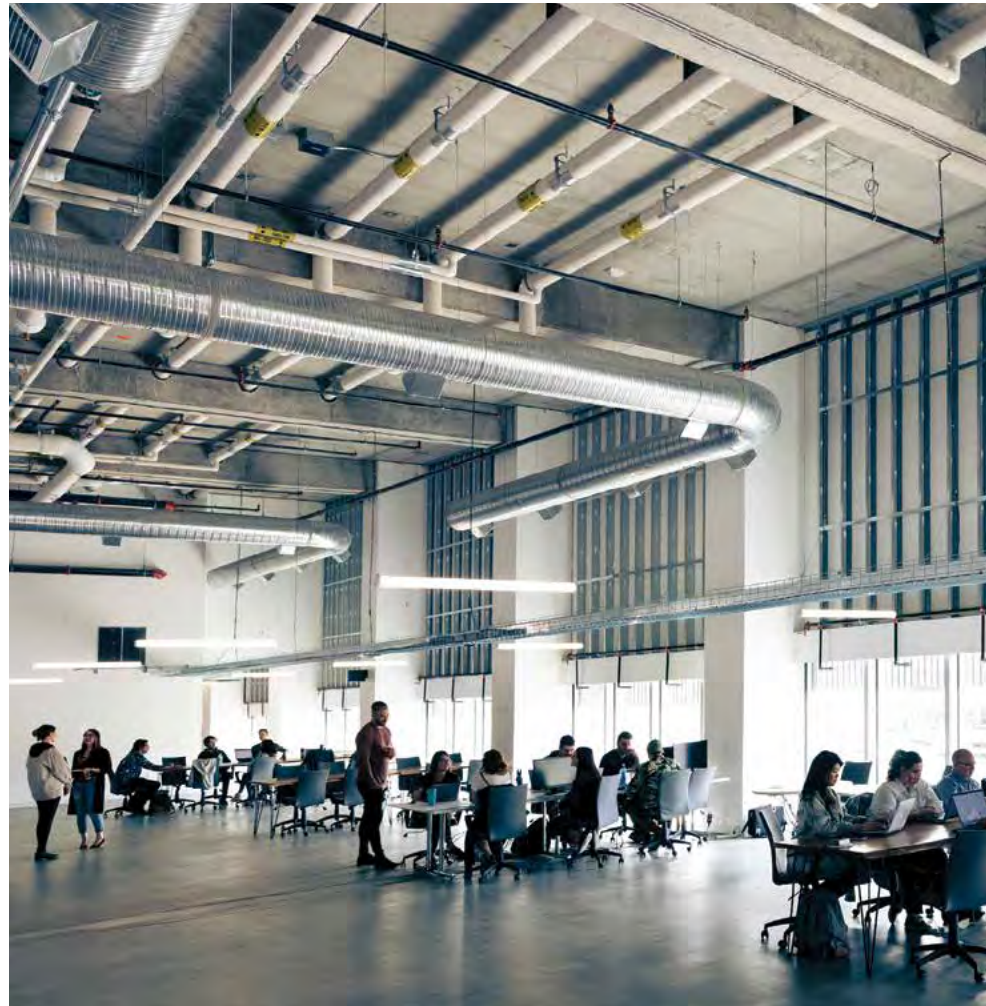
creating the physical spaces where people can congregate, share ideas and make innovation happen. “Having an innovation district is going to help push collaboration.”

These collisions are facilitated by the clustering of activities, which is the rationale behind any business district; what sets an innovation district apart, however, is that innovation thrives in a heterogenous environment, where innovators, artists and creatives can collaborate to devise solutions for problems in myriad industries. “Solutions for clean energy could apply to agriculture, could apply to life sciences,” Parry says. “There’s such great synergies that happen and great solutions that can come from these other types of solutions coming together.”

According to Rock, an innovation district is a type of “shorthand” to finding the ideas, resources, and funding necessary to make things happen as efficiently as possible. “All the pieces are there,” he says. For example, the proximity between the Platform Innovation Centre, the Central Library and the National Music Centre at Studio Bell has facilitated the development of partnerships that bolster our city’s innovation ecosystem. “We built a music tech accelerator program with the National Music Centre,” Rock says. “The Calgary Public Library now has an entrepreneur-in-residence in partnership with us to provide frontline advice and channel people to the right [resources].”

Other “pieces,” Rock notes, include InceptionU, the non-profit tech-training program based out of the Central Library, the University of Calgary’s School of Architecture, Planning and Landscape, Bow Valley College, SAIT’s School for Advanced Digital Technology and Arts Commons in the Downtown Core — all in close proximity to the offices of tech companies like Benevity and Helcim.

Tech startups also tend to form in clusters. “It’s no accident that two of our most successful buildings downtown are the tech hubs of Aspen properties,” Cameron says, referring to The Edison and The Ampersand, two recently upgraded buildings in Calgary’s core. “Because people are looking for that strategic serendipity, those elevator conversations, those places that are happening.”



PHOTOS BY JARED SYCH



The creation of an innovation district is thus an opportunity to rebrand Calgary as “a destination for people who want to solve global challenges,” Parry says, and attract the talent sought by the industry’s key players. “When we get bright minds with game-changing ideas [coming] to our marketplace and setting up shop here, you start to see more and more people want to be part of that,” he says. “Whether it’s venture capital or other companies.”

Not everyone agrees, however, that an innovation district can nudge young Calgarians to stay, or attract talent from other provinces. Young people “provide intellectual and cultural energy, and they have a lot of disposable income that they spend in the public realm,” says Stauch. But they tend to prefer cities that have a wide array of cultural offerings and diverse demographics, such as Toronto, Montreal, or even Winnipeg. “There’s nothing wrong with knowledge districts,” Stauch says. “But most cities have a version of this, [and] it might actually become a minimum spec, like a convention centre used to be for hitting the big leagues — but it’s not enough, it’s not going to make us stand out.”

For an innovation district to succeed, a key challenge lies in identifying the unique attributes of a city and branding them in a compelling way. “We [an ad-hoc team comprised of representatives from Platform, the City, CED, the SAIT School of Advanced Digital Technology and a youth member] did some research on what’s happening in the world around innovation districts, and how there are different models that have worked for different cities,” says Sierra. “And one of the things that came through was that they all had unique, homegrown ingredients. They made it their own.”

For this reason, the steering group has engaged in conversations with community members, universities and industry leaders to determine the direction of this initiative from the

get-go. Over a series of workshops last year, participants identified the values that will guide the development of this district: the aforementioned accessibility and inclusiveness, collaboration and connection, and sustainability. “Having these as the priority, versus attracting individualistic gains, is where Calgary can set itself apart and have a competitive advantage,” Cameron says. Likewise, Rock believes the sense of community already existing in our city is hard to match. “You have a generous culture where founders are encouraging each other and sharing knowledge — this is a real advantage that we have.”

But part of Calgary’s competitive advantage and uniqueness also lies in its past success as an energy hub. “With the energy transition, there’s no better

place in the world than Calgary,” Parry says. “We have the investment, we have the knowledge, we have the data, we have the decision-makers here that can help companies achieve those solutions.”

The work to officially designate an innovation district in Calgary — including its physical boundaries, governance and financing — is still in its early stages, and the steering group is set to complete a business case that will be brought to admin, council and potential partners this fall. However, when it comes to attracting talent and investment to Calgary, the ball is already rolling. “We’re already seeing companies that are growing fast and hiring,” Rock says.

Parry agrees. “People are realizing that Calgary is more than what it used to be.”

Calgary’s quality of life, competitive tax rates, and incentives such as the Opportunity Calgary Investment Fund, have been attracting the tech companies and entrepreneurs that play a key role in the innovation economy. “We have companies actively looking to relocate from other major centres into our market because they see the opportunities that are coming,” Parry says. “When you look at Infosys, and RBC, and AWS (Amazon Web Services) placing bets on Calgary, they’re setting up a footprint for long-term success.”

“Once you have these anchors coming in, you start to see other companies want to be part of that growth [and] come here because you’re close to the big players.”

Today, there are nearly 1,000 verified tech startups based in Calgary, and 42 venture capital investors, in an ecosystem valued at \$2.7 billion, which includes four “unicorn” companies whose individual values surpass \$1 billion. Moreover, in 2021, Calgary’s talent pool ranked second among other small tech-talent markets, as tech jobs already represent more than seven per cent of all jobs.

Rock is beyond hopeful about these developments: “I think this notion that Calgary should have an innovation district that becomes a part of our identity as a city, a core part of our economic strategy, is no longer about ‘will we do it?’” he says. “It’s just a matter of, ‘How bold is it going to be?’”



BY KENDALL BISTRETZAN

# HEAD OFFICE HEAD COUNT

**W**hen it comes to the number of company headquarters in a Canadian city, Calgary is second only to Toronto. However, this number has long been bolstered by the oil and gas industry, which, in recent years, saw setbacks that closed offices and spiked commercial vacancy rates in the downtown core. Calgary Economic Development and other city stakeholders have since started pushing Calgary as a sound bet for technology and innovation companies to set up head offices or regional headquarters. Here are some of the companies that have moved here, or announced plans to open an office, in the last two years.

## INFOSYS

### Moved In March 2021

This multinational information-technology company that provides business consulting and outsourcing services has said it will bring 500 jobs to Calgary by 2023.  
5100, 150 6 Ave. S.W., 403-538-2110  
infosys.com

## TEST DRIVEN SOLUTIONS

### Moved In June 2021

The global software technology consultancy based in Newcastle, England chose Calgary for its first North American headquarters.  
3810, 888 3 St. S.W.  
testdrivensolutions.co.uk

## RBC INNOVATION HUB

### Moved In September 2021

This innovation hub is introducing jobs in AI, data engineering, full stack agile software delivery, site reliability, machine learning, data analytics and more across the RBC platform. RBC plans on welcoming 300 tech



employees to the Hub by 2024.  
339 8 Ave. S.W., 403-292-3311  
rbcroyalbank.com

## UNITY TECHNOLOGIES

### Moved In March 2022

While Unity's claim to fame may be *Pokémon Go*, its online platform is being used to develop toys, solve business and environmental problems, and more. Calgary's office currently has 60 employees and will grow to 150 within the year.  
225 6 Ave. S.W., unity.com

## ON THE HORIZON

## MICLOUD TECHNOLOGIES CORP.

### Moved-in Date Mid-Late 2022

The cleantech company that uses AI and analytics to maximize the capacity of ESG (environmental, social and governance) plans to open a Calgary headquarters this year, occupying two floors of Stephen Avenue Place.  
mcloudcorp.com

## MPHASIS

### Move-in Date 2023

In June 2021, this Bangalore-based cloud and cognitive service provider, in partnership with the U of C, announced it will create a quantum computing learning space and experiential learning programs for students. Calgary will be Mphasis's first Canadian headquarters, which is expected to bring in between 500 and 1,000 jobs.  
mphasis.com

## AMAZON WEB SERVICES

### Move-in Date Late 2023-Early 2024

In November 2021, Amazon Web Services announced the launch of a Calgary-based hub to provide cloud-computing platforms and services to customers, and more than 950 full-time jobs across Canada, an expected \$4 billion in investment over time.  
aws.amazon.com

## ACQUISITIONS & EXPANSIONS

Notes from Calgary's technology and innovation business community over the past two years.

## ACQUISITIONS

### Groundswell Group

In April 2021, the Calgary-based AI and data integration firm was acquired by Deloitte Canada.  
200, 214 11 Ave. S.W., 403-262-2041  
deloitte.com

### TaxCycle

In January 2022, this Calgary-based tax-preparation software company for accountants and bookkeepers was acquired by Xero, a cloud-based software company for small businesses.  
800, 1333 8 St. S.W., taxcycle.com

### CAMP Festival

In January 2022, FITC, a global leader in design and technology-focused events, acquired this Calgary-based community event for designers and developers.  
1729 12 St. S.W., 403-478-1357, fitc.ca

## EXPANSIONS

### Neo Financial

In January 2022, Calgary-founded banking business Neo Financial expanded into downtown Calgary, leasing 50,000 square feet of space across three floors of the Edison office tower and 62,000 square feet of a formerly empty converted retail floor in the Hudson's Bay Building.  
neofinancial.com

### Symend

In May 2020, this Calgary startup that provides companies with solutions for delinquent accounts received a \$54 million series B funding extension, and in 2021, added to its office presence in Calgary and Denver by opening an office in Australia.  
symend.com

BY SARAH HARROWER

# LIFTING PEOPLE UP

**How a locally manufactured device is helping those with mobility challenges connect to their communities.**

**G**raham Smith, president and CEO of Adaptive Engineering Inc., comes from a family of engineers. His father, the late David Smith, had always wanted to design things that would help people and create more accessible communities. Now, Smith is bringing his father's vision to life with Lift2Go — a wheelchair lift that's easily transported and installed wherever needed.

Smith started Lift2Go with business partner and key engineer John Person and engineer Caitlin Lopez, who helped Smith and Person create and develop the prototypes. The goal with Lift2Go was to create a portable mobility solution that was easy to transport and operate. "For me, it was really important to work on something like this; knowing that I was making a difference for those that needed it most," Lopez says.

The Calgary-based company has helped create accessible lifts for the airline industry, as well as Via Rail. "We saw a need to create something to help transport people with special needs. There were places that didn't have easy access, or had one or two steps, like an older building or historical sites," Smith says.

Lift2Go riders are first secured to the lift, then the rider or attendant uses a mechanical crank to raise or lower it. The lifts are fabricated and assembled here in Calgary. "We're very proud of that fact, to build, design and create it here," Smith says.

Originally, the lifts were only available to rent for a set period of time. However, in the early days of the pandemic, Smith and the team realized that the need for Lift2Go products was increasing as many clients were wanting to move out of hospitals to avoid contracting COVID and to free up



**"We saw a need to create something to help transport people with special needs."**

**GRAHAM SMITH, ADAPTIVE ENGINEERING**

bed space for incoming COVID patients.

Their response was to offer the service on a pay-what-you-can basis during peak periods of the pandemic. "The team's idea to pivot was to make this service and the equipment available for those who needed it ... regardless of [whether] they could cover the fee or not," Smith says. "We were going to be there whether they needed the lift for an hour or for a day." While the pay-what-you-can service has been discontinued now that pandemic restrictions have eased, Lift2Go continues to help its users connect to their communities by getting them where they need to go.

# VERTICALLY INCLINED

**Why stackable crops are gaining ground in Calgary.**



When it comes to agricultural production, Alberta is a Canadian frontrunner, second only to Saskatchewan in terms of total field crop area and ranking a respectable fourth in greenhouse capacity. However, due to harsh prairie winters, fresh produce is imported to Alberta year-round, as only 60 per cent of Alberta

greenhouses operate seasonally, and the remaining 40 per cent that are open all year cannot keep up with demand.

With Canada's population growth expected to be the highest in Alberta over the next 25 years, the farming industry is looking for innovative ways to maximize crop output in a way that isn't reliant on uncontrollable variables like the weather. Enter: Vertical farming.

Vertical farming is the practice of producing crops on vertically inclined surfaces. Like traditional greenhouses, vertical farming is an example of controlled environment agriculture (CEA); a process where crops are grown in a highly conditioned indoor environment. But, while greenhouses rely on soil and sunlight, vertical farming utilizes LED lights and either hydroponics, aeroponics or aquaponics to grow produce in stackable containers.

Vertical farming was conceptualized more than 30 years ago, and the first commercial operation launched in Singapore in 2012. Ten years later, Canada is only beginning to make inroads. There are a few reasons as to why that is. It's expensive, requiring a lot of initial startup capital due to the high cost of equipment. And, unlike tiny, highly populated island

nations such as Singapore, Canada has a healthy spread of arable land.

According to Ken Fry, an entomologist and professor in the horticulture program in the school of life sciences and business at Olds College, Canada actually has more greenhouse spaces per capita than the U.S. (in Fry's words, we have the potential to "punch above our weight" when it comes to CEA). Since imported and domestic produce must travel much further in Canada, than it does in the more densely populated U.S., transportation is also a bigger cost factor. While the cost of transporting imported crops isn't necessarily higher than the labour and technology costs it would take to operate a vertical farm, there are advantages that go beyond cost, such as the potential to bolster food security in northern regions and allow people in urban centres easier access to farm-to-table fresh produce. "Vertical farming tends to be scalable," says Fry. "It doesn't have to be 'go big or go home,' and that's satisfactory for limited markets."

Although vertical farming has only recently gained footing in Canada, a report by the American business consulting firm Grand View Research estimated global investments in vertical farming to be \$3.1 billion as of 2019, with 32 per cent of this in North America. In Calgary, a \$2.73 million grant from the Alberta government's Investment and Growth Fund is enabling Ontario-based GoodLeaf Farms to open a 74,000-square-foot indoor farm in the industrial southeast. This facility expects to produce 700,000 kilograms of food per year and provide 70 full-time positions.

While this will be the first large-scale vertical farming operation in Canada, other small-but-mighty growers have







been making a name for themselves, as well. In 2016, brothers Ryan and Paul Wright, along with Dan Clayholt, were looking to take their combined 60 years of experience in the energy sector and put it towards something that would promote sustainability in the economy and national food supply. The trio decided to convert a 10,000-square-foot commercial space off Barlow Trail in Calgary's southeast into a year-round farm. It would take several years of developing prototypes and learning the best methods of engineering, but by 2021, NuLeaf, their hydroponic vertical farm, was selling produce to customers.

Today, NuLeaf's production is increasing weekly. On average, one cell comprised of several hundred eight-foot-tall growing towers will produce 40,000 to 50,000 pounds of fresh greens per year, typically culinary herbs with some leafy greens.

With a vertical farm, 40 per cent of capital costs come from lighting. Fruits, grains and staple crops take longer to grow than leafy greens, which means they require more light and, as a result, are more expensive to grow indoors. While traditional grain crops are best grown outdoors where the sun can do the heavy lifting, Ryan Wright says that vertically grown berries and peppers are on the cusp of economic viability, as lighting for these crops would comprise approximately five per cent of capital cost, but that would be the majority of operating costs. Once LED technology improves and lowers in cost, the scales will be tipped in favour of adding berries to the other varieties of produce being grown in the facility's cells.

Despite high capital costs, which Fry estimates can reach tens of millions of dollars, depending on the size of the facility, suppliers of container-style vertical farms



**“Vertical farming is like where cannabis was 10 years ago.**

**It’s the Wild West.”**

**KEN FRY, OLDS COLLEGE**

suggest the payback period could be in the two-to-five year range. Additionally, a vertical farm can produce the equivalent of one acre of greenhouse space (over 43,000 sq. ft.) on 2,000 sq. ft. of floor space.

That said, Fry recommends that potential vertical farmers tread cautiously. “Vertical farming is like where cannabis was 10 years ago. It’s the Wild West,” he says. “Everybody and their dog is with venture capitalists, getting into it, thinking they can pull it off. But a number of vertical farm operations have gone into bankruptcy, [on account of the] energy consumption costs, the labour costs and the cost per unit of food sold.”

So, while vertical farming might not yet have the capacity to feed large amounts of people, as prohibitive costs prevent it from being largely scalable, for now, it just might change the way Albertans think about where their food is grown and what it takes to get it to their tables. “Alberta is really well-placed in the greenhouse industry,” says Fry, “and if that’s the case, I don’t see why we couldn’t be well placed with the vertical farm industry, as well.”

#### **TO MARKET, TO VIRTUAL MARKET**

**Vertical farming isn’t the only way to access farm-fresh food in urban centres. Calgary-based CultivatR, which bills itself as a “virtual farmers’ market,” has over 400 products from local vendors that can be delivered to your door. These vendors are able to work outside of the international distribution channels, which are not as affected by disruptions in the supply chain, so you can always have fresh, sustainably-sourced ingredients on hand. —K.B.**

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# TECH MESSAGING

**Arleigh Vasconcellos has built a successful communications firm by focusing on innovation and technology clients.**

In 2009, when Arleigh Vasconcellos founded her tech public relations firm, some family and friends wondered if she had picked the right sector to promote. Calgary was known for oil and gas, after all. But Vasconcellos knew the city's technology and innovation scene was quietly building, and she wanted to shine a spotlight on it and tell its stories.

As a PR professional, Vasconcellos had plenty of experience in storytelling and effective messaging. After studying communications at the University of Ottawa, the born-and-raised Calgarian moved to Whistler to handle PR for a snowboarding festival. That led to jobs with Whistler Blackcomb and Tourism Whistler where, in one year alone, she planned media visits for more than 350 journalists from around the world. In 2005, she and her husband quit their jobs to pursue their dream of living in Europe and moved to London. There, she worked at a communications agency and ultimately managed PR for a global industry trade show.

The conference featured a technology track; for Vasconcellos, it was love at first PR encounter. She was enamoured with the people and their fascinating technologies. When she and her husband moved back to Calgary in early 2009, Vasconcellos launched The Agency to help innovators drum up positive PR. "These people are developing, building and making things that have the potential to change the world for good. They are phenomenally smart," she says. "And part of what draws me to them is typically they're not the best communicators. They're engineers, they're software developers. They often think in numbers."



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**ARLEIGH VASCONCELLOS,  
THE AGENCY**

By helping them with words, Vasconcellos has built a thriving PR business. She specializes in sharing stories that distinguish her clients from the competition. Whether building a website, sharing social media content, or helping a company strategize for a multi-million-dollar sale, the firm highlights how clients' technologies are solving ultra-specific problems.

To do that, Vasconcellos and her team must understand the solution — be it an agricultural, environmental, logistics or financial technology — and translate it well. They're known for asking a lot of questions, eliminating jargon and using plain language. As she often advises, "You have to tell the story so your grandma can understand it."

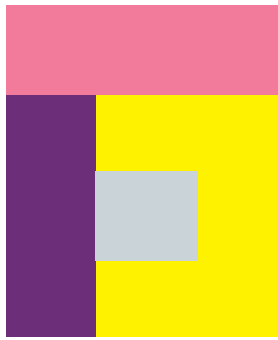
To date, The Agency has shaped communications strategies for more than 200 startups, and demand is on the rise. Vasconcellos now has clients across the country, a team of 13 full-time employees working alongside six-to-10 consultants, and an airy new office in a heritage warehouse in Inglewood. She's also passionate about mentoring and coaching entrepreneurs, having participated in Platform Calgary's Junction residency and the AccelerateAB Roundtables prior to the onset of the pandemic.

Although the city's tech sector has come a long way, Vasconcellos says it's nowhere near the finish line, and that's what excites her. "I'm really hopeful we've put the right foundations in place. There's always change, but I think enough people are driving towards success that we will continue to grow," she says. "It's nice to see Calgary's tech sector is finally starting to get the recognition it deserves."

# CHANGING OUR MINDS

**A new research chair at the Hotchkiss**

**Brain Institute will study the potential of psychedelics as a mental-health treatment.**



our decades since the launch of Prozac, a psychedelic renaissance is shaking up the idea of how we should treat depression and other mental health disorders. Those at the forefront say there is a sense of stalled progress with mental health therapy. At worst, we are in crisis — of mental health, of opioid overdoses and of addiction. But research out of

Johns Hopkins University and other prestigious institutions indicates that high doses of psychedelic substances such as psilocybin, administered in a controlled setting by medical professionals, can produce long-lasting results in a relatively short amount of time when traditional treatments like antidepressants fail.

Among the local proponents is Jim Parker, founder and CEO of Calgary-based Bloom Psychedelic Therapy and Research Centre. “Rapidly rising rates of depression, suicide and deaths by drug overdose make it clear there is an urgent need for alternatives to the current biomedical approach — i.e., ‘take a pill to fix your brain chemistry’ — which is helping some, but failing far too many,” Parker says.

With a recent Angus Reid survey indicating that 54 per cent of Canadians say their mental health has worsened since the COVID-19 pandemic was declared, our current system of referrals, specialists and waitlists — a system that is often inaccessible to those who can’t spare the time, money and energy to get well — could soon reach its breaking point. “If you have

a therapist with 30 or 40 people who they’re hanging onto for years, you’re not going to get in to [see] that therapist,” says Dr. Robert Tanguay, clinical assistant professor in the departments of psychiatry and surgery at the University of Calgary and vice president and chief medical officer of The Newly Institute, an inter-disciplinary mental-health clinical organization, operating across Canada, that offers psychedelic-assisted psychotherapy among its outpatient treatment programs. “Everything we have designed [at The Newly Institute] has been designed to be rapid access, rapid resolution of treatments and rapid return to work and life ... We can’t just keep spending money on an administrative system that’s not working. You have to look at novel ways.”

Ketamine, a dissociative anesthetic, can induce an out-of-body experience that some patients say helps separate their mind from their trauma (a process known as “ego dissolution”) and objectively evaluate it during a therapy session. Psilocybin (street name magic mushrooms) is said to induce a sense of openness and honesty that can help some patients break down emotional defenses to address painful feelings. MDMA (street name ecstasy) can induce higher levels of empathy, which could help patients learn self-forgiveness. “Studies are starting to show the three of them are very similar,” Dr. Tanguay says. “They may hit different receptors, but they have similar responses. You see massive neuronal growth. It really enhances neuroplasticity, or the ability for the brain to change and heal.”

All three psychedelics are restricted



under the federal Controlled Drugs and Substances Act, though ketamine is legally available to veterinarians and medical doctors for use as an anesthetic and for other medical purposes. Both Bloom and Newly offer ketamine-assisted therapy programs. Led by teams of nurses, psychiatrists and physicians, the programs include ketamine sessions, goal- and intention-setting therapy sessions and any other therapies tailored to a patient’s specific needs. The programs are intensive, running between four to 12 weeks, with sessions lasting between two to eight hours, three-to-five days a week.

Currently, medical professionals can apply to Health Canada’s Special Access Program to use psilocybin or MDMA as a mental health, end-of-life therapy for terminal clients, which Newly has done and Bloom plans to do in the future.



Last June, Parker donated \$3 million to the University of Calgary’s Hotchkiss Brain Institute to fund the Parker Chair of Psychedelic Research to advance knowledge about the role for psychedelics in mental health. The research chair is the first of its kind in Canada and a step forward in aligning psychedelics with lab coats rather than lava lamps in the public consciousness. “We need to test scientifically the efficacy and safety of these substances and how best to use them; that needs to be done in research settings,” Parker says. “Those studies are what is going to be required to remove the stigma around psychedelics, and that’s the key to opening minds in government, in the medical community and in the population at large, to assure people can benefit from them.”

The inaugural Parker Chair researcher is Dr. Leah Mayo, a neuroscientist who has

studied the intersections of mental health, stress and pharmacology. “I’m excited about the psychedelic part of it, but I don’t want to treat that differently than I would any other class of drugs,” Dr. Mayo says. “[I] want to be doing high-quality, high-impact science that’s going to inform clinical treatment.”

Dr. Mayo, who begins her work at the Hotchkiss Institute this September, grew up in Keweenaw Bay Indian Community on the L’Anse Reservation in Michigan, where she saw the need for mental-health services. She sees the Parker Chair as a unique opportunity that has the potential to dramatically increase accessibility to novel treatments. “Because this comes down to accessibility,” she says. “We need to design the treatments with the notion that if they’re successful, they [can] be scaled up to meet the needs of communities. Not everyone has someone like Jim Parker in their community who’s donating this money and building these clinics. Where I’m from, we don’t have that. So, how can we make sure the treatments we come up with are going to be accessible to people who really need them?”

The existence of clinics like Newly and Bloom suggests that government policy makers may be opening their minds to research on alternative medicines. Even so, academics and medical practitioners feel the need to proceed with caution. Research data in 1950’s Saskatchewan indicated that LSD was a cost-effective, low-risk and single-dose therapy alternative to lifelong stays in institutions or daily-dose prescription medications. But, after declining political support and moral panic changed cultural attitudes, scientists were discouraged, if not banned, from continuing their research for the remainder of the 20th century. “You don’t get a third chance for these sorts of things,” says Dr. Mayo. “So, I feel like we owe it to this class of drugs to not screw it up and to see what we can do with them.”

Moving from clinical trials to everyday patients means overcoming misinformation about the risks of addiction or diversion (using psychedelics recreationally after using them for therapy), both of which Dr. Tanguay says are unsupported by current data. “The advantage, unlike opioids, benzos



**“There is an urgent need for alternatives to the current biomedical approach.”**

**JIM PARKER, BLOOM PSYCHEDELIC**

and other medications that people are prescribed and take home, [is] nothing here leaves,” he says, referring to the ketamine-assisted therapy at Newly. “The pharmacy delivers it here, it goes into our safe, you come in, you get treatment, you leave. You never get your hands on medication.”

Psychedelic-assisted therapy itself isn’t innovative — psychedelics have been used for hundreds of years for their spiritual and medicinal properties — but the fact that these therapies could be made available in the next two to three years and potentially alter our mental health care system, certainly is. “I would say that psychedelic-assisted therapy has the potential to be for mental health what the electric car is for transport,” says Parker. “It’s a massive paradigm shift. It’s pretty exciting.”

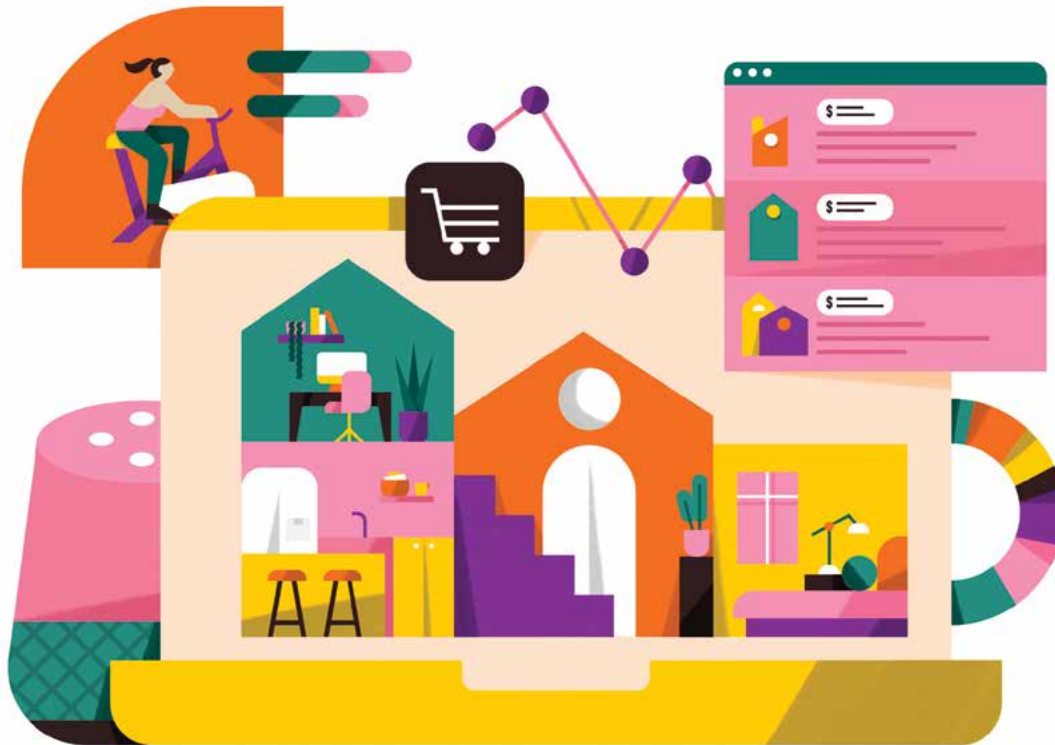
#### **HEALING THE HOSPITALITY INDUSTRY**

**SABI Mind is another psychedelic-assisted therapy clinic in Calgary embracing novel approaches to treating mental health and chronic pain, though with a special interest in treating those who work in hospitality. The clinic’s founders are entrepreneurs with ties to the hospitality industry, who had lost a close friend and mentor. The experience shed light on the mental-health struggles faced by many others in the industry, and how these struggles have compounded over the course of the pandemic, which hit this industry particularly hard. SABI Mind also has a research focus, and recently developed and launched the Canadian Psychedelic Survey, the most comprehensive survey of Canadian psychedelic use to date. —T.A.**

BY MICHAELA REAM

# PROP-TECH PROPS

**These local innovations are changing the way we buy and sell homes.**



## NEW SOLA CONDOS LISTING ON SHOPIFY

Sola is a proposed eight-storey mixed use project in West Hillhurst that will contain 172 homes with unique amenities, luxury finishes — and the latest technologies. “I’ve been involved for over 30 years in real estate development and always been focused on tech and innovation,” says Harish Consul, president and CEO of Ocgrow Group of Companies, the leading developer behind Sola. “Now, we’re looking at how we can take real estate condo projects to the next level.” In addition to the fitness centre, indoor and outdoor rooftop terraces, heated parking garage with storage lockers, self-serve car wash

bay, bike-lockup and pet spa, Sola units will come equipped with gigabit ethernet high-speed internet. Ocgrow has also partnered with Amazon (all units are equipped with Alexa devices) and with Shopify, to sell, buy and virtually tour Sola units online.

Consul says his company has seen interest from Ontario and B.C. real estate investors who believe in the growth of Calgary, something he believes is a good sign. “There’s a huge amount of tech job growth coming in,” he says, “so we’re seeing a lot of investors now looking at Calgary to get involved.”  
[solacalgary.com](http://solacalgary.com)

### **BÖDE CANADA**

Launched in Alberta in 2019, Böde is an online real estate marketplace. Sellers can use market data to view what is happening in their area or check the sold data to gauge what’s selling and how to best market their home, while users can schedule viewings, check offers or set terms and conditions on a closing contract through a free account. Böde takes a one-per cent service fee from the final selling price, but home buyers are spared paying agent commission fees, and sellers are provided professional photos and measurements.  
[bode.ca](http://bode.ca)

### **OPENHOUSE.AI**

This AI-powered platform provides homebuilders with real-time data into what buyers are interested in. Once OpenHouse.ai is integrated into a homebuilder’s website, it learns to track buyers’ preferences and what they are looking for in categories such as location and design. The data allows builders to optimize plans and designs to build the perfect home for buyers — at the right price.  
[openhouse.ai](http://openhouse.ai)

### **OWNLY**

Ownly is an all-in-one shopping tool designed to streamline the real-estate purchasing and homebuilding processes. The online platform lets users shop around, get finance options, make offers, place a deposit and purchase a lot or home. Ownly also provides insight into credit capabilities and what communities and upgrades are currently popular. Users can preview available lots for sale, then fully design and furnish a custom home, all online.  
[theownly.io](http://theownly.io)

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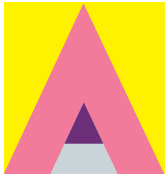
**Start Here**





# THE META MAN

**How tech entrepreneur Trevor Doerksen is augmenting reality.**



s CEO of ePlay Digital Inc., Calgary's Trevor Doerksen spends most of his days in the metaverse. Founded in 2016, ePlay is a mobile game creator

and publisher specializing in sports and entertainment augmented reality (AR) titles. Doerksen co-created its flagship game Big Shot Basketball, Howie Mandel's Howie Go Viral and the running app, Klocked. In January 2022, ePlay released Fan Freak, an app where users play daily fantasy, pick sheet and streak games with professional sports teams.

The next iteration of the Internet, the metaverse is a fully realized digital world in which users can play, work and learn. It refers to virtual reality, AR, or a hybrid of the two. In the metaverse, your custom-designed avatar can engage in real-world scenarios such as business meetings, weddings, sports, dating and concerts.

It's kitschy, for sure, but some people are questioning why they'd want to host/attend a meeting as an avatar in the metaverse. "Innovation for innovation's sake can be fun and interesting," says Doerksen, 52, named one of the Top 20 Thinkers in Social TV and Second Screen in 2012. "But I'm pragmatic, and some of these applications are not needed and kludgy."

What Doerksen is enjoying about the spatial realm are the audio and visual enhancements. When you run in the physical world with Klocked, for example, you can hear the breath and footsteps on your headphones of passing competitors, the tempo matching/boosting Weav music, and messages announcing pace and landmarks. Post-race, you can watch the special effects



emitted from your exclusively designed Tattshoos sneakers when you overtake runners, as well as the slow-motion replay. A marathon runner himself, Doerksen says what differentiates ePlay from its Peloton, Zwift and Facebook's Supernatural competitors is that its games actually take users outside.

The metaverse is also attracting speculators who are purchasing real estate, the equivalent to buying domains on the Internet. In January 2022, ePlay announced the release of the Klocked World Metaverse Real Estate Platform that allows users to purchase and develop sports property to participate, host and design sporting events, gear, trophies and other content for ePlay games. The first lots sold were in London and Paris.

"I like to think of the metaverse as augmented reality, not as an alternate reality. I'm too grounded in the real world to want to replace it," Doerksen says. Looking to the future, he foresees we'll be wearing smart sunglasses that will literally change the way we see the world. And someday, when those sunglasses connect to our visual cortex, anything imagined will be possible in any resolution. 🕶️

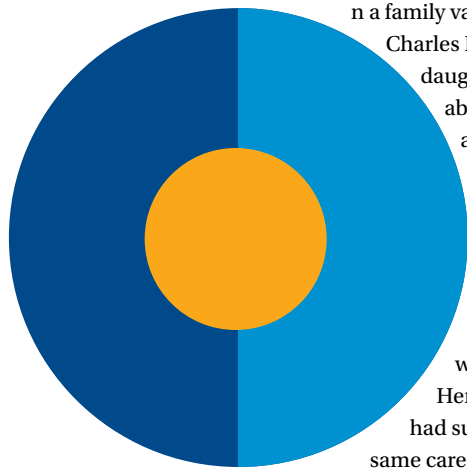


**"I like to think of the metaverse as augmented reality, not as an alternate reality. I'm too grounded in the real world to want to replace it."**

**TREVOR DOERKSEN, EPLAY DIGITAL INC.**

# ENDING TECH- NOLOGY POVERTY

**Through his social enterprise company, Charles Buchanan helps budget-conscious non-profits get their systems up to speed.**



In a family vacation to Mexico in 2016, Charles Buchanan asked his eldest daughter, then in Grade 11, about her career plans. Her answer would ultimately upend *his* career.

In Mexico, Buchanan's daughter told her father that she enjoyed math and science but hadn't yet decided what she would do after high school.

Her guidance counsellor had suggested engineering, the same career as her father. She asked

Buchanan about his job, what it entailed, what about it was interesting. Buchanan, then a vice-president at a fintech firm, explained that he sold data analytics software to financial institutions.

His daughter pressed further: what *exactly* was the purpose of his job?

"Well," he recalls saying, "I guess I help banks make money."

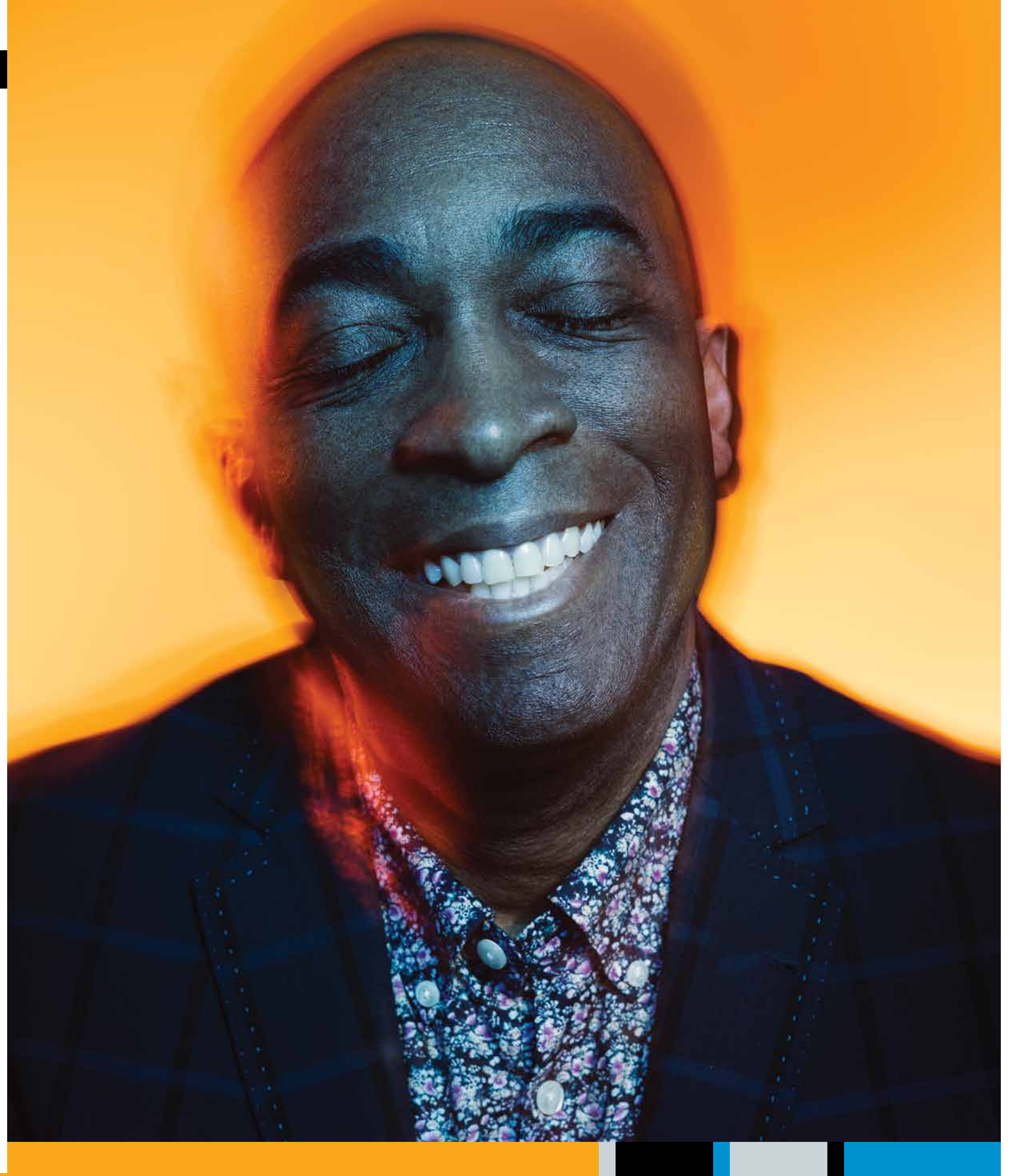
As he tells it, she responded with: "Oh, that's really noble, Dad." The words landed like a punch. Buchanan spent some time thinking about what she said. He went for a walk and thought some more. That day, he decided to quit his job and move on.

By the time the family landed back in Calgary, Buchanan had figured out the blueprint for what would become Technology Helps, his Calgary-based company that provides technological empowerment for non-profit organizations.

Buchanan's first step was founding Technology Helps' predecessor, the non-profit organization Ignite Tech. Three years later, he made the decision to buy the Ignite Tech assets and revamp it as a social enterprise — a for-profit company, but one with minimal aspirations for profit.

It's no easy gig, primarily because as a social enterprise, the company runs counter to principles of good business with its aim to deliver high-tech, world-class services to a sector with little ability to pay. What Technology Helps does with IT is akin to providing fine-dining wait service at the food bank, he explains. "How can you do that effectively and still be marginally profitable? I see that as a puzzle," Buchanan says. "We're not going to scale it back. The people we serve deserve that."

The idea for Technology Helps is rooted in Buchanan's dual roles as a business leader and a community volunteer.



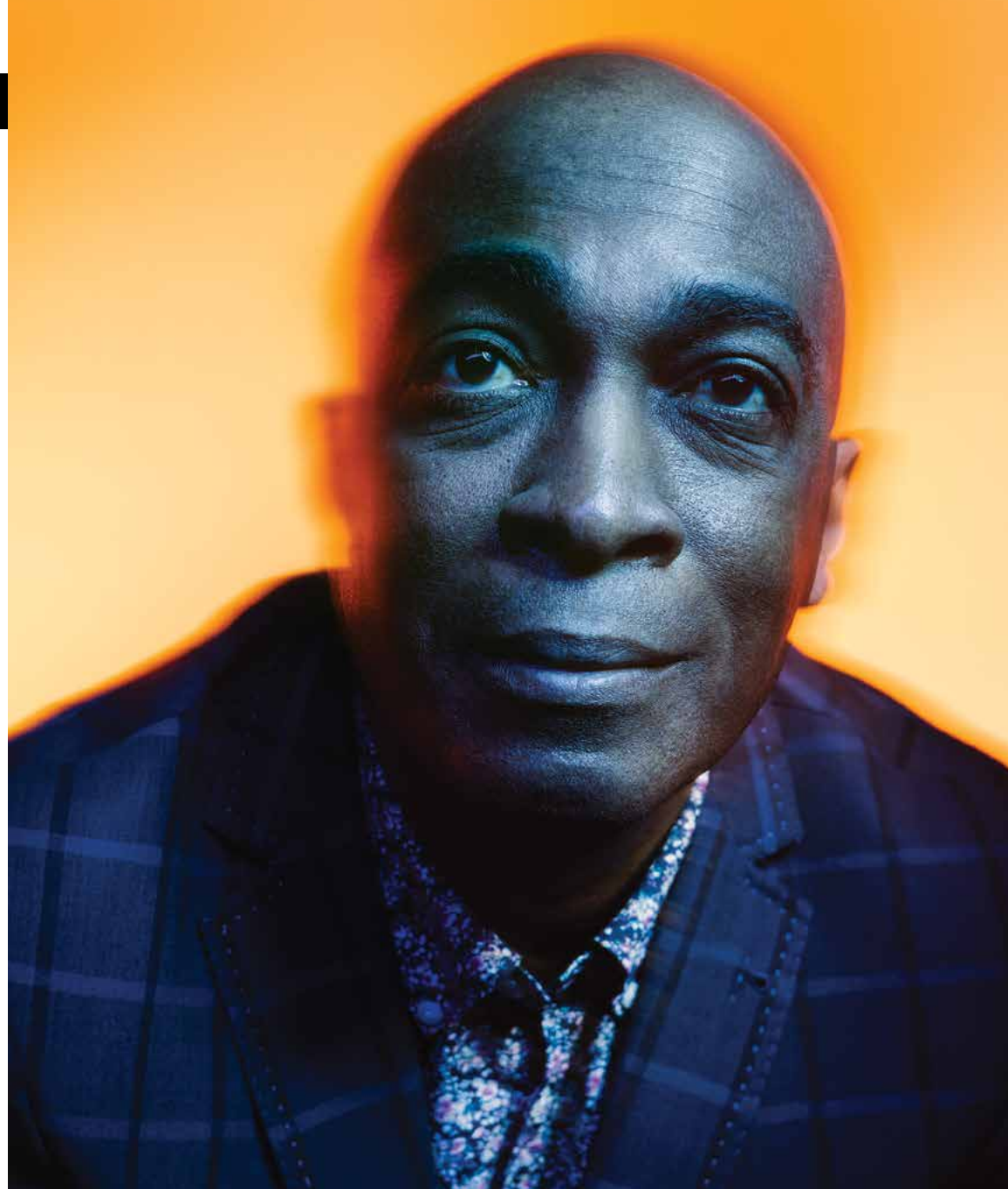
As a corporate management consultant, his clients were a who's who of Alberta industry: Suncor, Enerplus, Telus and Bell. He also worked for Deloitte and Devon Energy. His volunteer work over the past two decades includes serving on the board for the Centre for Newcomers since 2011, and as board chair from 2016 to 2018.

In 2016, the Centre hired Anila Lee Yuen as CEO. Yuen found out early that the Centre's internet was a mess. The organization ran on the same system a single family would have in their home, but it covered a 40,000-square-foot building where staff look after more than 10,000 clients a year. The cost of upgrading, however, was outside of the Centre's budget. Cash-strapped non-profits are always making difficult decisions about where their money goes and technology rarely wins, says Yuen. "Are you going to put [limited funds] into your IT system? Or are you going to put it into clients living below the poverty line?" she says. "I'm going to choose the client first, 100 per cent of the time."

Yuen informed Buchanan about the internet issues at the Centre for Newcomers and he pulled in some friends from different tech companies to examine weaknesses in the organization's technology and find ways to fix problems without blowing the budget. Buchanan started to think that this wasn't an isolated case and set out to do technology reviews at the other non-profits where he volunteered. The results, he says, were "shocking." Everywhere, he saw the same pattern: Agencies were overpaying for technology but not getting the services they needed. "They have absolutely no technical infrastructure that supports the business that they're doing. They're technologically hollow," he says.

Buchanan says he doesn't buy into the concept that there should be a strict divide between the corporate world and non-profit organizations. He wants the concept of social impact woven into the for-profit world and, vice-versa, he'd like to see people in non-profit organizations fairly compensated for the work they do. "I'm pushing really hard for the erosion of that binary," he says. "You can't just be for-profit or non-profit; for money or for good. That's way too simplistic, and it's actually a dumb way to look at the world."

The name Technology Helps has a double meaning: technology helps non-profits and



the company's job is to help with technology. Its employees are a mix of former executives from large companies and young graduates in tech. The firm has never advertised — business grows chiefly by word of mouth. To date, the company has worked with more than 200 non-profit groups, mostly in Alberta but also a handful in Ontario and Atlantic Canada.

The challenge lies in offering a high-tech service to high-needs clients, but without charging significant fees. Technology Helps generates revenue by charging for services at cost-plus pricing, or enough to cover the associated costs plus a percentage. They also work with organizations to apply for outside funding to cover upgrades to a non-

profit's technology. When the work can't be completed in-house by the Technology Helps team, Buchanan and staff negotiate reduced pricing for non-profits with other vendors.

Buchanan says they're in a constant process of trying to find affordable, innovative ways to deliver solutions to clients' problems. When a group comes to Technology Helps, the team carries out a technology review to identify ways to make the organization's IT system align with its strategic plan, while functioning better and more securely, and all within a tight budget. Technology Helps also offers ongoing IT support for organizations — something that was not part of the initial plan but that clients kept requesting.



# YOU CAN'T JUST BE FOR-PROFIT OR NON-PROFIT; FOR MONEY OR FOR GOOD. THAT'S WAY TOO SIMPLISTIC



CHARLES BUCHANAN

He uses the phrase “technology poverty” to describe what happens at non-profit organizations. Agencies often don’t invest in technology infrastructure because it’s an administrative expense, an area where non-profits try to minimize spending. But, as a result, they don’t have resources to fully support their clients or staff. Many have unreliable and insecure internet. They lack the data analytics to figure out how they might perform better. They rely on outdated systems for fundraising. In the end, they fall further behind.

Buchanan is the kind of person who can’t resist a challenge. He was born in Jamaica, the seventh of eight kids, and says he learned early on to speak up and be assertive or he’d be overlooked. His family expected kids to figure out solutions to dilemmas on their own.

The family moved to Toronto in 1977, when Buchanan was a young child. He sped through school, skipping Grades 1 and 6. In high school, he spent hours in the public library trying to figure out the computers of the 1980s. “I find it strange that someone wouldn’t have an interest in wanting to know how things work,” he says. “I don’t find ignorance very comforting.”

At age 20, he graduated from the University of Toronto with a degree in computer engineering. Buchanan’s first job out of university was in the field of artificial intelligence. He felt the engineering side of the work was interest-

ing, but he didn’t understand the business side enough. So, after one year, he walked away from his high-paying job and enrolled in business school at Queen’s University.

While on a business trip to Calgary in 1993, Buchanan concluded Alberta made more sense as a home base. He would be paid the same salary, but his monthly rent would drop to \$425. As a bonus, the city was young and fun. Electric Avenue nightlife was in full swing and, as an avid hiker and birdwatcher, he liked that the mountains were a short car ride away.

Buchanan describes himself as an insomniac. It’s something he dislikes, but also uses to his advantage as, throughout much of his career, he has spent nights doing unpaid work as a community volunteer. Ironically, Buchanan will tell you he actually hates the word “volunteer” and tries to avoid using it.

He feels that the problem with volunteering (the word, not the act) is the suggestion that a person is offering their unpaid time as something exceptional, an unusual goodness of heart. Rather, Buchanan sees volunteering as an act of participation in one’s community. “You don’t ‘volunteer’ to help your family or your neighbours,” he says. “That’s just being a participant in your community, using your talents and your gifts.” During interviews, he asks potential new hires about their volunteer work. If they don’t have an answer, “I usually don’t have a follow-up question,” he says.

In addition to the Centre for Newcomers, Buchanan has volunteered with the Calgary Foundation, Inn From the Cold and the United Way. Currently, he’s also an entrepreneur mentor at the Venture Mentoring Service of Alberta, a group of experienced hands in finance and tech who coach younger people coming up in business.

In late 2019, he helped found the Calgary Black Chambers, a group of Black business leaders and entrepreneurs who mentor youth and provide networking opportunities for young professionals. Colleagues describe him as deeply energetic, a bit nerdy and curious. He also has a reputation for consistently showing up to help. “When he gets behind an organization, he *really* gets behind them,” says Monique Auffrey, executive director of YouthLink. “He attends the AGM. He watches on social media. He helps promote.”

Auffrey met Buchanan in 2016, when she was executive director of Discovery House, an organization dedicated to ending the cycle of domestic violence. When he told her about his idea for Technology Helps, she thought his vision was “beautiful” and his plan would address an under-appreciated need within the non-profit sector. But she wondered about the difficulty of pulling it off. “He was taking a big leap out of the corporate environment and secure employment with a top Calgary oil and gas company ... to come and help the non-profit sector in this way,” she says.

For a man who likes solving problems, Buchanan says Technology Helps has been the single most challenging thing he’s ever done. He says he has never worked as hard as he has in the last six years. Despite his efforts, technology poverty still exists, and it still keeps Buchanan up at night. “My wiring does not allow me to check out of it,” he says.

He acknowledges that technology poverty is a difficult problem to “solve.” It’s like saying you’re going to end world hunger: nobody should lose the desire to solve the problem, but the objective should be more about creating systemic change. Currently, he is working on plans to address technology poverty in his ancestral home of Jamaica. “I don’t think we’re going to become the world’s largest social-impact technology business,” he says. “But I see taking our practices global. Let’s make Technology Helps a movement.” 🌐