THE GLOBE AND MAIL

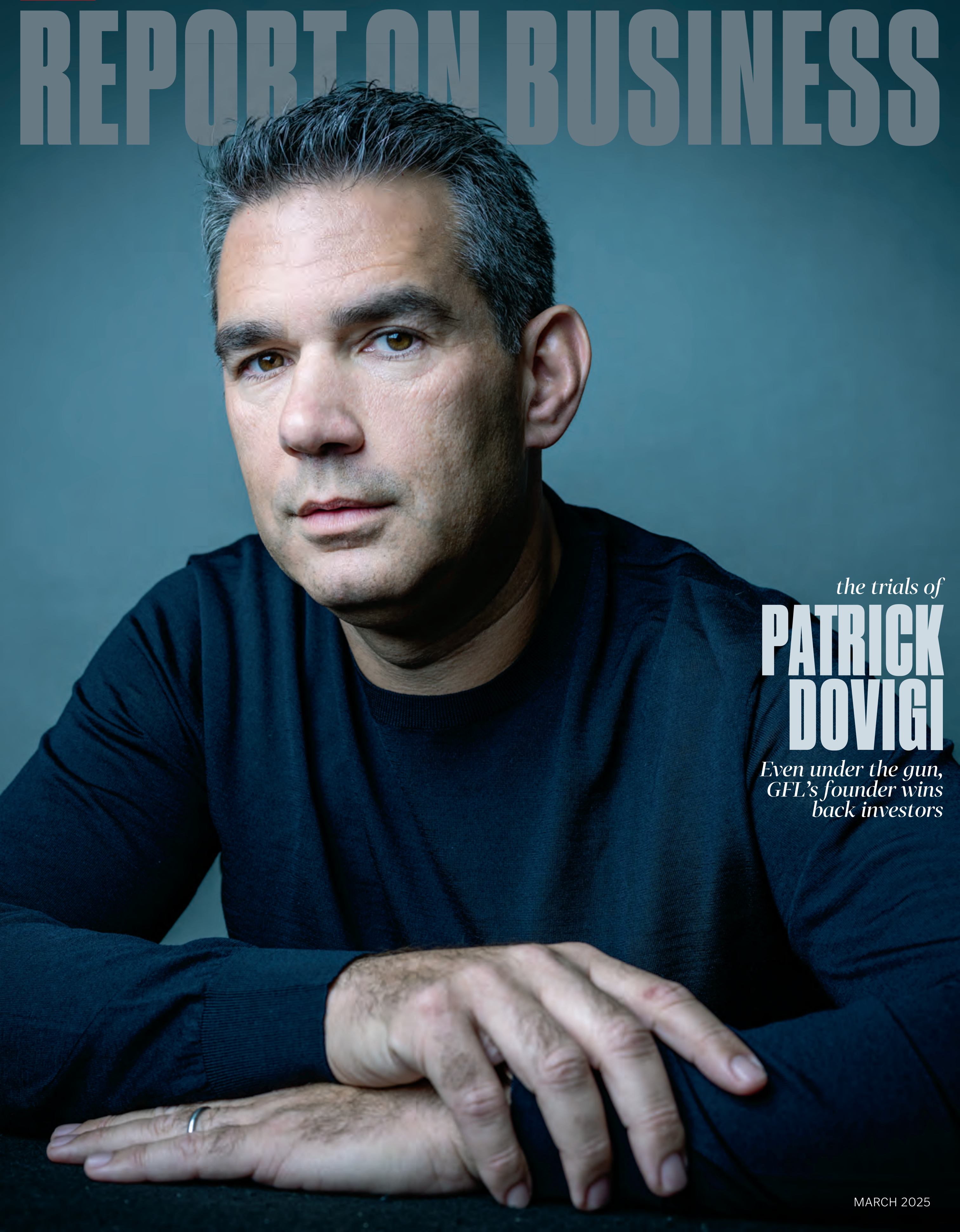
MINING GIANT BHP AND ITS CANADIAN CEO ARE INVESTING BIG IN CANADA

MEET 20 CHANGEMAKERS REINVENTING HOW WE DO BUSINESS

INSIDE THE VANCOUVER OUTFIT ELECTRIFYING THE WORLD'S TUGBOAT FLEET

ATTENTION BOSSES: IGNORE GLASSDOOR REVIEWS AT YOUR PERIL

REPORT ON BUSINESS



the trials of

PATRICK DOVIGI

Even under the gun, GFL's founder wins back investors

MARCH 2025


SIR EDMUND HILLARY AND TENZING NORGAY, 1953 FIRST SUCCESSFUL ASCENT OF MT EVEREST


CHRISTINE JANIN, 1990
MOUNTAINEER AND
POLAR EXPLORER


NATIONAL GEOGRAPHIC AND ROLEX PERPETUAL PLANET MOUNTAIN EXPEDITIONS, 2019

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/By Tim Kiladze and Robyn Doolittle

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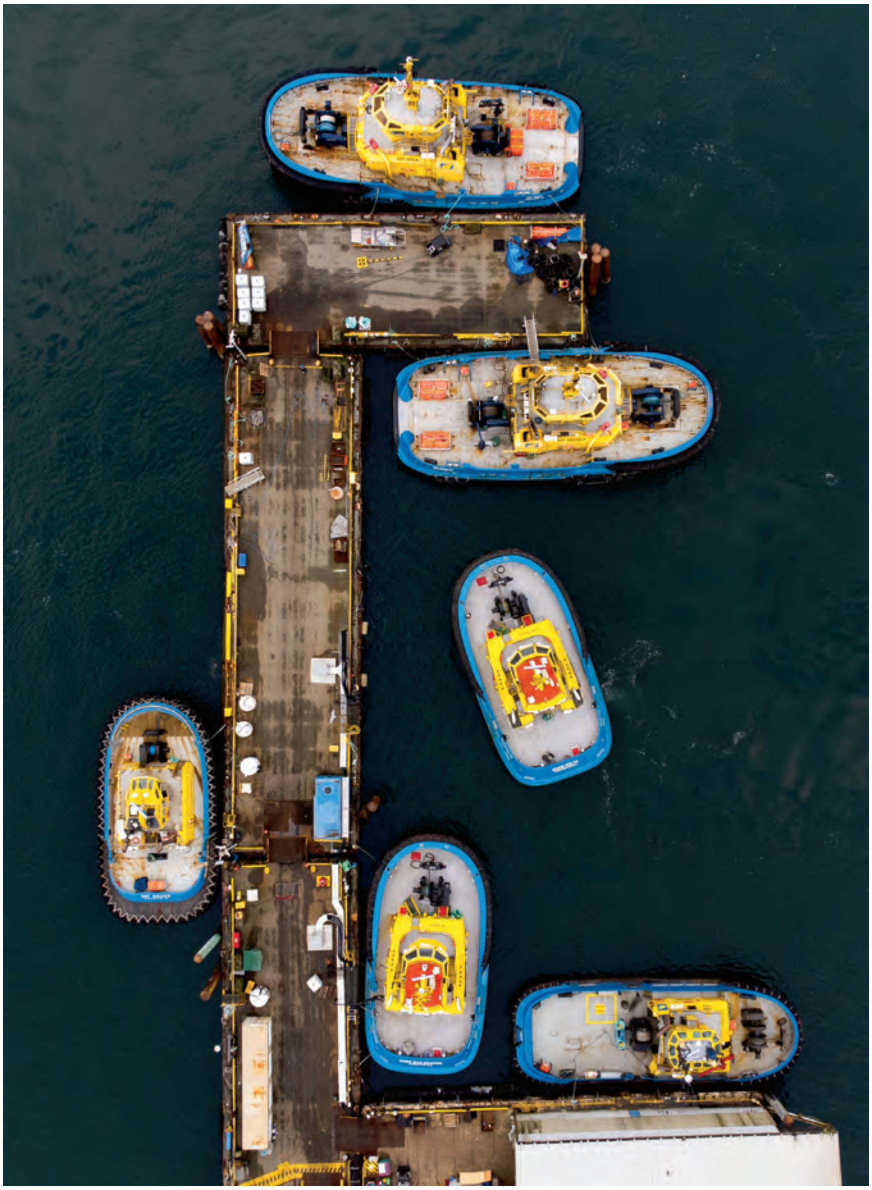
Vancouver's Robert Allan Inc. is the world's foremost designer of tugboats, and its new all-electric tugs really are the little boats that can—change everything.
/By Brian Banks



› Shipping's a dirty business. Electric tugboats to the rescue? *Page 34*

43 CHANGEMAKERS
Canadians could all use a jolt of inspiration as winter drags on and political tensions mount. So, let's meet our annual selection of 20 emerging leaders who are enthusiastically carrying torches.

COVER PHOTOGRAPH SHOT EXCLUSIVELY FOR ROB MAGAZINE BY CHRISTOPHER WAHL; (RIGHT) ALISON BOULIER

PHOTOGRAPH ON LOCATION AT THE CHASE BY DANIEL EHRENWORTH

Making change

Like most Gen Xers, I grew up watching *Mister Rogers' Neighborhood*, arguably the most soul-nourishing bit of television ever created. Lately I've been thinking a lot about Fred Rogers (bear with me here). In particular, I've been thinking about a quote from him that seems to pop up on my social media feeds during times of decided bleakness in the world: "When I was a boy and I would see scary things in the news, my mother would say to me, 'Look for the helpers. You will always find people who are helping.'"

We're living in dark and precarious times. *Everything* in the news is scary. And now more than ever, it feels like we all need to channel a little Mister Rogers to get through it—searching for those small bits of light amid the gloom. For me, one of those rays of sunshine was the raft of submissions we received for our annual list of Changemakers, featuring young entrepreneurs, activists and academics who are reinventing how Canada does business.

Take Harrison Amit, the 29-year-old entrepreneur behind Hovr, a ride-sharing app whose motto is "100% Fare is 100% Fair." According to a City of Toronto report published late last year, drivers who work for ride-hailing apps like Uber and Lyft earned a median hourly wage of less than $6 in the first four months of 2024. That's just 35% of Ontario's mandated minimum wage. The more Amit talked to drivers, the more incensed he became—and the more determined he was to help. The result was Hovr, which pays drivers a fixed base rate for each trip, plus additional pay for more time and distance. Hovr gets just a buck per ride, which is paid by the passenger, not the driver. So far, tens of thousands of drivers are on the waiting list, and 80,000 Canadians have downloaded the app.

And Amit is just one of 20 Changemakers featured in our package, which starts on page 43. If you want to feel more hopeful about the world and its future, this is your ticket.

There's another helper in this issue who deserves a shout-out. More than 25 years ago (cough, cough), I landed my first job in business journalism. My immediate boss was Brian Banks, whose calm guidance, humour and absolute mastery of the craft made me a better writer and, I hope, a better editor. It's been a long time since Brian and I have worked together, so I was absolutely delighted when he pitched the idea of travelling to Vancouver to check out the marine-electrification hub that's developing out there, centred around Robert Allan, one of the world's foremost designers of tugboats. You'll find Brian's story, "Making waves," on page 34. **/Dawn Calleja**

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STRUCTURE MY EXIT PLAN
GIVE BACK TO MY COMMUNITY
START MY NEXT ADVENTURE

Darts and laurels

In December, we unveiled our annual CEOs of the Year, featuring overall winner Neil Rossy of discount juggernaut Dollarama, along with MDA Space's Mike Greenley and McCain Foods' Max Koeune. The reviews were mixed.

Dollarama is almost a 10-bagger for me. What attracted me to the stock was the smart, practical product choices made by the company's buyers that make sense for a broad section of people across the socio-economic spectrum. While the theme of cost-of-living is in the background, this is not the place where "poor people" shop. Everyone shops there. **—Tricky.**

As regards Dollarama, it's becoming my go-to place for household items. My latest discovery is the price of their quality batteries, about 50% of what I used to pay. Should have bought their stock years ago.
—Don Weber (West Vancouver)

A great article on how a Canadian technical company can be repatriated, thrive and grow in the international business sphere. Kudos to Mike Greenley and his team. The long-term health of our economy will depend on global leaders such as MDA Space, who ensure revenue and capital stay in Canada. Unfortunately, the upper echelons of our government seem to be dominated by people with backgrounds in economics, liberal arts or law. There is a dearth of people who understand science, technology and the business thereof, so they fail to grasp what value such companies could or do have. As a result, Canada lets too many opportunities wither, permits intellectual property to leak across our borders, and allows companies to be sold to foreign buyers.
—Steve Zan (Ottawa)

Now that you've profiled the CEOs of 2024, I'll be looking forward to reading about how they are viewed by their employees at ground level (not in the executive suite), as well as the income levels and benefits offered to those employees as compared to those in the executive suite.
—Leo J. Deveau (Summerside, PEI)

Farm of the future ? Sorry, Max Koeune, but many farmers have been implementing these practices for the last 50 years. If you're serious, do it tomorrow.
—cow

A very enjoyable read. Koeune recognizes that climate change will reduce the yields of many crops. The company is using a wide variety of tools and the best science to produce quality crops, maintain soil health and minimize pesticide use. This is an example that other producers need to embrace. **—Torbayguy**

Have feedback? Email us at robmagletters@globeandmail.com or tweet us @robmagca

My farmer father-in-law told me that the McCains would offer the best price to farmers for their spuds for a few years to snuff out other buyers. Once they were the only buyers, they would drastically cut the offering price, and the farmers had no choice but to sell to them. They were despised for it. This may be an exaggeration but the story made it all the way to Ontario. It sounds like they are just another Canadian monopoly success story.
—Von Richthofen

We are the champion

Trevor Cole sat down with the CEO of SickKids Foundation, which is raising billions of dollars for research and more.

SickKids is a north star for what Canadian health care can be. Jennifer is a stellar leader of an exceptional team. Love the bold and visionary plan to raise $2 billion. Hats off to the army of donors who support this extraordinary Canadian success story. **—Paul Alofs**

Letter with no context about last month's Editor's Note

Love the carrot cake analogy... that's a powerful one that I think many can relate to.
—Shoot low on blocker side

Christopher Wahl ("*It's not easy being Green*," page 24) has spent his career documenting the Canadian identity, photographing both pre-eminent personalities and archival landscapes of the country. His prints are widely collected and form part of the Art Gallery of Ontario's permanent collection.

Brian Banks ("*Making waves*," page 34) is an award-winning writer and editor who covers nature and sustainability from his home office near Rice Lake, Ont. A fellow of the Royal Canadian Geographical Society, he's led several national business titles and most recently was founding editorial director of Electric Autonomy Canada.

WALKING IN THE WIND

"Traffic's too bad in Toronto, so we're walking to the venue"
—One Direction's **Niall Horan** on his way to perform a concert at Scotiabank Arena

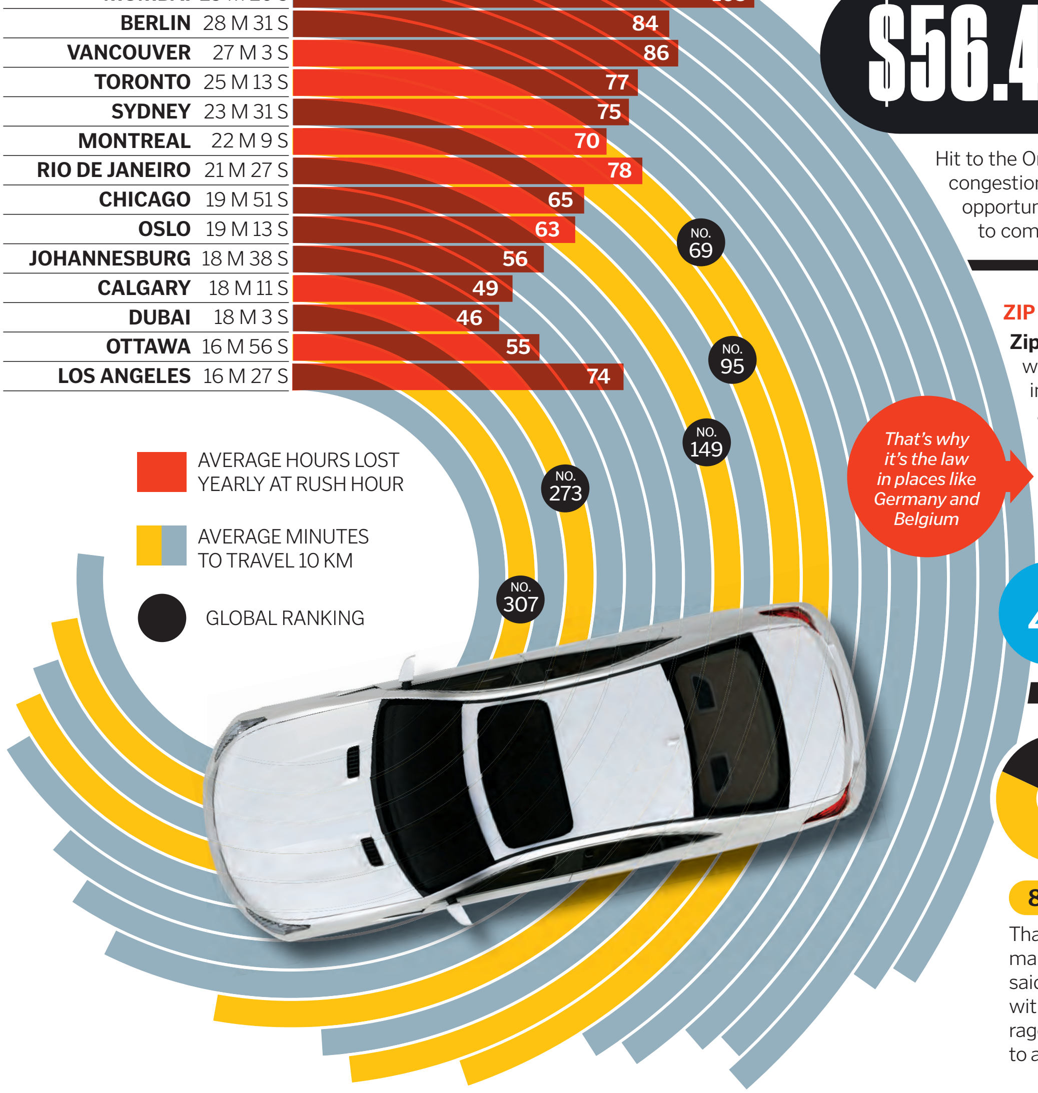
03/25

NEW RULES

Traffic-jammed

Nothing induces rage quite like sitting in traffic, and we're sorry to say that 2025 is already looking *slowww*. The Dutch location-tech company TomTom just released its annual Traffic Index, which analyzes 737 billion kilometres of trips to rank 500 cities on the average time it takes to travel 10 clicks. It also offers a sad kicker: the number of hours the average commuter loses to rush-hour jams.

City	Average minutes to travel 10 km	Average hours lost yearly at rush hour
BARRANQUILLA, COL.	36 M 6 S	130
KOLKATA	34 M 33 S	110
LONDON	33 M 17 S	113
DUBLIN	32 M 45 S	155
NEW YORK	31 M 6 S	98
MUMBAI	29 M 26 S	103
BERLIN	28 M 31 S	84
VANCOUVER	27 M 3 S	86
TORONTO	25 M 13 S	77
SYDNEY	23 M 31 S	75
MONTREAL	22 M 9 S	70
RIO DE JANEIRO	21 M 27 S	78
CHICAGO	19 M 51 S	65
OSLO	19 M 13 S	63
JOHANNESBURG	18 M 38 S	56
CALGARY	18 M 11 S	49
DUBAI	18 M 3 S	46
OTTAWA	16 M 56 S	55
LOS ANGELES	16 M 27 S	74



AVERAGE HOURS LOST YEARLY AT RUSH HOUR

AVERAGE MINUTES TO TRAVEL 10 KM

GLOBAL RANKING

BUMPER CARS

15% of traffic jams are weather related

10% are caused by construction

$56.4 BILLION

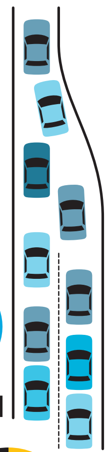
Hit to the Ontario economy from congestion, including lost economic opportunities and the social cost to commuters' quality of life

ZIP IT

Zipper merging—where vehicles stay in both lanes as long as possible, and then one car merges and one car advances—can reduce traffic backups by up to

That's why it's the law in places like Germany and Belgium

40%



83% That's how many Canadians said they've witnessed road rage, according to a 2024 poll

56% Respondents who admitted to engaging in road rage—up **5%** from 2022

PHOTOGRAPHS (CAR) GETTY IMAGES; (HORAN) ANDREW REDINGTON/GETTY IMAGES; SOURCES: CANADIAN CENTRE FOR ECONOMIC ANALYSIS; LEGER AND RATESDOTCA

THE EXCHANGE

Up and Down Under

Canadian Mike Henry runs BHP, the world's largest mining company. It's based in Australia but increasingly does business on the other side of the world—particularly in Canada, where BHP is building a $14-billion (so far) potash mine in Saskatchewan

BY TREVOR COLE

No one should have been surprised, five years ago, when Mike Henry rose to the top of the Australian mining giant BHP. When it comes to mining, Canadians have some game, and the University of British Columbia alum had built a 30-year career touching every aspect of the industry, from marketing to technology to operations. What might have opened some eyes is how decisively the understated Henry, who'd been at BHP since 2003, moved to change things up. He eliminated BHP's complicated dual listing on the London and Sydney exchanges, boosting the company's ability to make acquisitions. He improved operations, spun off BHP's oil and gas business, sold its thermal coal assets and focused the company on the minerals of the future: copper in South America and Australia, potash in Canada. In January, as the world's biggest mining company was gearing up for the 2026 start of that potash project in Jansen, Sask.—the biggest bet in the company's history—Henry spoke to us from his office in Melbourne.

Besides its vast size, what separates BHP? What makes it different in the industry?
A portfolio of commodities that are leveraged to the big mega-trends under way in the world around us. That is the single biggest determinant of value in a company like ours. Within those commodities—copper, potash, iron ore and the best of the steelmaking coals—we seek to have the best possible assets. That means large, long-life, sitting at the low end of the cost curve. We then seek to operate them exceptionally well, through the way that we develop talent internally and the way we harness their capabilities in the BHP operating system.

I've heard it said that under your watch, BHP has been less aggressive in pursuit of growth than rivals like Rio Tinto. What are you prioritizing instead of growth?
We're prioritizing valuable growth. The single biggest growth driver for a company like us is productivity, and we've enhanced that markedly. I think what you'll hear people referencing is the time frame of the growth we're unlocking. We had a relatively bare cupboard in terms of growth opportunities. We've developed significant growth optionality in copper and, of course, we've triggered $15 billion of investment in potash growth. But what people will be flagging is that this growth comes on at the end of this decade, rather than in the near term, notwithstanding the fact that we've grown in copper by more than any company in the world over the past few years.

China accounted for about 60% of your sales last year. How much dependence on one market is too much?
China is such a driving force of commodity markets globally that even when companies aren't selling directly into China, they're exposed to dynamics in China. That high proportion of sales into China is driven predominantly by the fact that we've got this big, very high-performing iron ore business—the lowest-cost, best-performing iron ore business in the world. That drives a significant share of market into China.

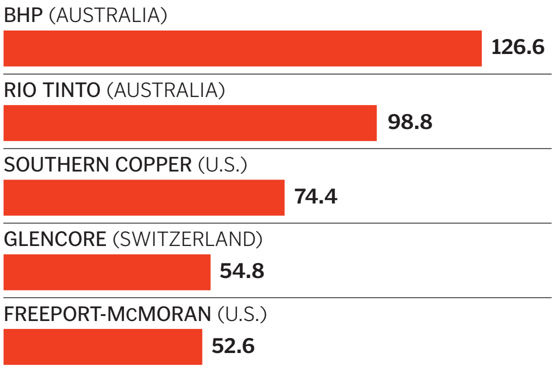
But Chinese demand is falling, and some experts think that will continue, given that China has stopped building so much, and its population is shrinking.
Well, it is. At BHP, we make very long-term bets. About a decade ago, we said that, based on all the fundamental analysis we do, Chinese steel demand would peak in the mid-2020s and then move into decline. That's the pattern for every major economy as it develops. As that happened in China, it would mean iron ore demand would peak and then move into decline, as well. That informed our strategy to become the lowest-cost supplier of iron ore in the world, because we knew competition was going to heat up. The same thinking informs how we want to grow in commodities like potash and copper, because even though Chinese demand for iron ore will shrink, its demand for other commodities will continue to grow.

You've made it clear that in the energy transition, you see more opportunity in copper than in lithium. Why?
We've said that copper is more attractive than lithium for BHP. (1) Copper demand is not solely dependent upon the

1. BHP has also mothballed its nickel assets—despite nickel being needed for the energy transition—because China had increased production from Indonesia, lowering prices, and Henry decided the operation had become uneconomical.

PHOTOGRAPHS ABIGAIL VARNEY

THE WORLD'S BIGGEST MINERS
MARKET CAP (US$ BILLIONS)



energy transition. And copper resources are relatively scarce in the Earth's crust, with greater differentiation between the quality of the deposits. So if you find the right deposit, low on the cost curve, you can generate better long-run margins than we'd be able to generate in lithium. And lithium will be more dependent on the energy transition as a sole determinant of demand.

In 2021, you estimated that demand for copper would increase 70% by 2050. Is that still true?

Yes, and here's the other interesting dynamic. In the case of copper deposits, production declines as you produce, because grade—the amount of copper per tonne of ore—declines over time. So, just to stand still, people have to develop new mines or develop more production capacity at existing mines, and then you've got the 70% growth in demand on top of that. So that's one of the reasons we see the dynamics for copper as being just so attractive, because there's going to be a lot of capital that needs to be invested in the industry that will mean sustained higher prices than a market that had slower demand growth or declining demand growth.

Let's talk about the Jansen project. When it's fully operational, how much of BHP's revenue will it account for?

After the first two stages are developed, it'll be about 8.5 million tonnes of production. (2) How much of the revenue base it forms is going to be dependent upon what's happening with prices. This is going to be a material part of BHP's long-term business and very attractive, because this will be at the low end of the cost curve, certainly among Western-world potash producers. And it requires relatively little sustaining capital. Of the capital we generate, not that much needs to be reinvested to keep the business going, unlike some other businesses. So it will create really attractive cash flow for BHP and its shareholders.

Besides cash flow, what's driving your interest in potash?

Potash demand is very resilient, because it's needed for agricultural production globally. It's not a substitutable thing, at the end of the day. Against the backdrop of a growing global population; rising living standards, which tend to lead to a more calorie-intensive diet; and the need to get more agricultural production off a constrained arable land footprint, that's going to require more fertilizer. On the supply side, there's only two big potash basins in the world. One is in Russia and Belarus, where the assets are a little bit older and obviously subject to some geopolitical disruption, and then it's Canada. So Canada is the place to be in potash. We've got the best undeveloped greenfield resource. It's right within our sweet spot when it comes to capabilities. And finally, we like Canada as an investment destination. And the way that we're going about investing in that business is going to be good for other stakeholders like Saskatchewan, Canada more broadly, First Nations in Canada, and so on. (3)

The former CEO of Nutrien, for one, has questioned the idea of building a single mine for potash, because it makes you vulnerable to events and disruption. What do you say?

We've got a strong focus on operational excellence, which makes us less subject to unexpected disruptions. And in the case of potash, some of what others have faced over time is water ingress into the shaft, for example. We've been very deliberate about our shaft construction. It's steel-lined, which is a differentiator for us.

What's the likelihood that potash will get caught up in the tariff fight with the United States? In January, the federal energy and natural resrouces minister specifically mentioned potash from the Jansen mine being part of negotiations.

It's very early days. BHP is a global company, of course, so we don't look at just one market. The U.S. is one market for potash, but we would be shipping globally. Whether potash becomes subject to tariffs or not will be a matter, I assume, for negotiation between the incoming administration in the U.S. and the government in Canada, post the next election. In the event that tariffs are implemented, because of the way commodities will re-order globally, we don't believe it's going to have a material impact on BHP sales for potash. But we continue to watch things closely.

You mentioned liking Canada as an investment destination, and you've said in the past that you're bullish on Canada. Why?

Canada is blessed. Canada is resource rich, and there's a lot of areas that remain underexplored. So we expect there's going to be even more of these attractive resources found in Canada. Canada has a highly capable work force when it comes to mining. We've been the beneficiary of that, not just in Jansen, of course. I'm Canadian, the chair of BHP is Canadian, about half my management team are either Canadian or have worked for extended periods in Canada. So it's got a ready-made workforce for a business like this. And while there's always things to be improved upon, we've found our government engagements at the local, provincial and federal levels to be very positive.

2. The Jansen project will be developed in four stages. Having already invested $4.6 billion in development, BHP will now invest $7.4 billion in Stage 1 and $6.4 billion in Stage 2 for a total of $18.5 billion.

3. BHP's relationship with First Nations got off to a rocky start in 2012 when the company was sued for $10 billion by the George Gordon First Nation, which claimed it had not been consulted on BHP's purchase of land leases. The suit was dismissed in 2020.

4. In 2022, the government of the Australian state of Queensland, with no warning, increased coal royalties to the highest rate in the world, resulting in an additional US$300 million in royalties paid in the first half of 2024 and an adjusted effective tax rate, including royalties, of 62%.

You've been critical of the permitting process in Canada, where it can take 15 years or more to get a mine into operation. What has to happen to change that?
Over the past five years, the importance of metals and mining, and the importance of critical mineral supply chains, has exploded into the consciousness of policy makers globally. Some countries are responding by focusing on making it easier to invest in mining, in-country. In the U.S., there have been multiple efforts on both sides of the aisle to progress permitting reform. The point I'm trying to make is that it already takes longer in Canada, and other countries aren't standing still. Canada has to keep that competitive dynamic in mind and look at how it can stay with the pack, or actually improve its relative position. A key area to do that is in permitting reform. That means removing duplication, speeding up the permitting process and giving rise to greater certainty around the permitting-process outcomes. In these big projects, time is money. By reducing permitting time frames, you improve the economics of the project, and by improving permitting certainty, you reduce the risk profile. Those are really the two things that will determine whether capital flows and investments get made or not.
Besides the permitting issue, how well is Canada competing for mining investment?
On government responsiveness, willingness to engage, proactiveness to try to secure investment—and this is seen through the experience we've had around Jansen—Canada is ranked right up there. When it comes to fiscal terms and fiscal certainty, that varies a little bit. In the case of potash, fiscal certainty and royalty certainty were very important. We had an example with steelmaking coal in Australia, where the government, in a very dramatic fashion, changed royalties. As a consequence, BHP can no longer invest in that state. **(4)** So this has been a positive differentiator for Canada. But there's opportunities to improve—tax reform, subsidies like those provided through things like the U.S. Inflation Reduction Act. Canada needs to recognize that other jurisdictions continue to evolve in a way that may attract more capital if there doesn't remain a focus on reform.
There's a thought out there that BHP's past is in Australia, while its future is in Chile and Canada.
In its 140-year history, BHP has reinvented itself multiple times. And that's part of what you see currently—recognizing that we're moving to a different basket of commodities. And it's not just potash in Canada. We've got investments in Brixton Metals, for example, a nascent copper company that's pursuing a copper resource in B.C. We're investing in tech companies in Canada. And through our Xplor effort, we're funding small companies that have innovative approaches to exploration, including in Canada. So, we've got quite a bit of effort underway in Canada, and we relocated our global exploration headquarters to Toronto as a sign of our confidence in the country. **(5)**
You tried several times to buy Anglo American. Why did you want it, and why did you fail?
This was one of those unique opportunities where there were some high-quality assets in its portfolio, where we thought there were synergies to be unlocked for shareholders. But as we saw, Anglo had its own priorities, which it's now in the process of executing. **(6)**
I have to ask: You're in a personal relationship with Tracy Robinson, the CEO of CN Rail, which you had to disclose to BHP's board.
Both Tracy and I recognize the importance of transparency. We personally, and the companies that we belong to, are committed to the highest standards of corporate governance. And so we disclosed it on that basis for awareness. And there were proper checks and balances put in place to ensure there was no potential conflict in terms of how that business would be executed. By way of example, I'm not involved at all, and have no line of sight on, anything to do with rail around Jansen. **(7)**
For a while, you had a reputation for being cautious, but lately, you seem to be shaking that up. You also recently tried parachute jumping in Montreal. Was the reputation wrong, or are you deliberately trying to change it?
Who knows what causes a reputation to rise? And I don't want to say it's wrong or right. What I will say is that I'm a deliberate person, and we're a deliberate company. We've got a clear strategy, and we have been absolutely consistent on strategy since I took up the role in 2020. And we're very deliberate about executing on that strategy. And that permeates the company's DNA. When our ducks are lined up, we can do bold things, and we can do them quickly.

This interview has been edited and condensed.

Trevor Cole is the author of five books, including the novel Practical Jean, *which won the Stephen Leacock Medal for Humour.*

5. As part of that move in 2021, BHP relocated about 100 geologists from Chile to Canada. Its Xplor Global Accelerator Program has invested up to $500,000 in two Canadian companies, Bronzite Exploration and Viridian Metals. Its BHP Ventures program has invested in three Canadian startups: Summit Nanotech (developing ways to extract lithium from brine); Eavor Technologies (geothermal solutions) and GeologicAI (developing advanced core-scanning tech).

6. The US$49.1-billion deal would have made BHP the world's biggest copper producer.

7. CN Rail is building a 47-kilometre rail spur that will allow BHP to transport potash from the mine to a port on the B.C. coast.

CRAPPY BIRTHDAY!
This month marks five long years since COVID-19 shut down the global economy, locked us all indoors and changed pretty much everything, from how we work (at home, in our PJs) to how we speak (hello, social distancing, doomscrolling and covidiot).

BIG IDEA

Stars and gripes

Research shows that companies—and leaders—should pay more attention to employee reviews on sites like Glassdoor

Here's a question for your next staff meeting or exec confab: what's the company's received wisdom about reviews posted on Glassdoor, the third-party workplace experience site? Nothing more than grievances from former employees, fake reviews planted by competitors, and suspiciously sunny posts from corporate climbers? Or are all those anonymous comments, aggregated metrics and top-line ratings an important source of feedback for managers, executives and recruiters?

"I do think these reviews have a really important place—especially for voices that aren't always heard in the room, and those can be equity-deserving voices that feel there's discrimination," says Jane Griffith, founder of Griffith Group Executive Search.

Others are more ambivalent. "I don't put a whole bunch of faith in Glassdoor," says Marion Halmos, a Toronto recruiting strategist. "Typically, people choose to write on them because they are disgruntled or because they are trying to make a name for themselves. Having said that, when there's a consistent set of negative reviews for an organization trying to do a recruitment campaign, then I would talk to them about their employer brand and their employee value proposition."

New research from several academic teams suggests companies should be paying closer and more systematic attention to third-party review sites by evaluating how such data either reinforces, or contradicts, more conventional HR, management and recruiting techniques.

PHOTO ILLUSTRATION THE GLOBE AND MAIL/SOURCE GETTY IMAGES

Employee experiences researcher Jenelle Morgan, a PhD candidate in industrial and organizational psychology at the University of Calgary, recounts a conversation she had with a large firm that did not have its head in the sand. "They used machine learning to go through all of those reviews," she says. "I'm seeing some level of care about what people are saying about their organization. We're seeing new roles being developed, like employee experience managers and employee engagement managers, who are keeping on top of these reviews."

In fact, Morgan and Derek Chapman, a U of C associate professor of psychology, recently published a study in *Computers in Human Behaviour Reports* that evaluated almost 25,000 Glassdoor reviews to gauge their usefulness to both job seekers and firms. One of their key findings: that negative reviews from former employees tended to garner the highest helpfulness ratings. Such behaviour, they note, should prompt employers not only to pay more attention to what they're hearing during exit interviews but also to reflect on the state of the firm's brand among the broader job-seeking public.

When companies ignore middling Glassdoor ratings or are in denial about the veracity of negative comments that are out in the open for all to see, they effectively give those criticisms more credibility, Morgan and Chapman caution. "It is important that organizations develop an aptitude for evaluating their employees' experiences...and examine what leads to workers' need to publicize their narratives online," their study concludes.

There's a vast and embedded industry dedicated to taking the emotional temperature of workplaces, using surveys and other types of check-ins, as well as metrics such as turnover, the number of applicants for open positions and so on. Yet in the years since Glassdoor opened its digital, well, doors in 2008, that industry has collided with another unstoppable societal force: the online ratings industrial complex.

We all read them, from Yelp's restaurant ratings to the holiday kvetching you can find on Tripadvisor. Every small business now routinely asks customers to post a five-star rating to Google on their way out the door. The proliferation of ratings has also created a new form of media literacy. Most people who shop on Amazon recognize that the customer review drop-down is a highly contested space filled with legitimate feedback, vendor PR and misdirection.

Glassdoor and its ilk (Rate My Professors, etc.) emerged to fill a desire from job seekers to see warts-and-all information on prospective employers. But these sites also serve as a reminder that internal employee surveys—which in theory should head off the sorts of gripes that show up on Glassdoor—aren't always a reliable source of feedback about workplace problems due to lingering doubts about anonymity. "As somebody who has worked on employee survey projects, that is a valid concern," says Morgan. "Will there be retaliation? Is this really confidential? To what extent is this mandatory? There's almost a hesitance to share negative content or experiences with the organization."

GLASSDOOR COMPANY RATINGS FOR TOP FIVE BEST- AND WORST-PERFORMING CANADIAN STOCKS OF 2024

	STARS
CELESTICA	3.8
LUNDIN GOLD	4.0
BOMBARDIER	3.8
ATKINSRÉALIS	4.1
CAPITAL POWER	4.2
CURALEAF	2.9
ROGERS COMMUNICATIONS	3.6
OPENTEXT	3.4
ATS	3.6
BOYD GROUP SERVICES	2.7

HR managers and recruiters who are determined to gain a thorough understanding of a firm's culture should combine internally generated feedback with data from Glassdoor, focusing in particular on consistent types of comments or themes. "You might have a specific review that outlines some negative thing that happened with the organization," says Morgan. "But to what extent is that a consistent thread among all these other reviews?"

Griffith agrees. "We all know you can manipulate data to get it to support any story, but what we're looking for is multiple points of data and the consistencies or the variances," she says. For example, a company's internal survey results might indicate it has a fantastic culture, a cohesive senior leadership team that supports the CEO, and happy employees. "If we compare that to something like Glassdoor, and it's significantly different, then we know that there's a problem there," she says.

The tenor of employer responses to Glassdoor reviews also matters. A 2025 study published in the *International Journal of Hospitality Management* looked at 19,000 reviews by staff in 115 hotels, as well as 4,400 employer responses, posted to Glassdoor. The researchers, based in Macau and Las Vegas, found that when hotel managers answered negative reviews with forthright, explanatory responses, they could mitigate the negative effects on hiring. The study also recommends that managers tasked with posting to Glassdoor be given guidelines on how to craft "customized explanations."

Yet another analysis of Glassdoor reviews suggests that boards of directors, and their compensation consultants, may be scrutinizing these third-party evaluations more intently than C-suite executives realize. A 2024 paper published in *Organization Science* looked at publicly disclosed hiring and compensation data from about 1,200 firms and 1,760 CEOs. The four-person research team concluded that companies with better reviews on Glassdoor tended to reward their CEOs with higher compensation packages, while those whose reviews flagged fired their top executives more frequently. "These findings," they noted, "suggest that boards' evaluations of CEO compensation and retention incorporate employee satisfaction ratings."

Co-author John Li, an assistant professor of accounting at Toronto Metropolitan University, says there's a growing body of evidence in proxy statements that boards are using both internal employee satisfaction metrics and external ones like Glassdoor to make decisions about CEOs—and for a variety of reasons. Some boards simply place a premium on a company's human capital and the ability to recruit talented people, while others are more concerned with potential bad publicity or satisfying a corporate social responsibility imperative. "If CSR is a core component of the company's brand, then you might expect that employee satisfaction matters more for your board," says Li.

Whatever the motive, these repositories of anonymous comments force companies to pay attention and not just lip service. Some firms are even setting up "war rooms" to look at all sorts of data, notes Griffith. "Glassdoor, but also [proxy voting site] Glass Lewis if they're a publicly traded company on a stock exchange, LinkedIn, X/Twitter, Bluesky—wherever there are comments," she says.

Halmos, for her part, leverages Glassdoor's influence when she's hiring for a corporate client. Once it gets down to the final candidates, she'll ask if they've looked at the Glassdoor reviews and what they think about them. That helps her in two ways, she says: "One, it tells me how much research the candidate has done about the organization, and two, it potentially prevents a problem at the offer stage."

In an economy with relatively low unemployment and skills shortages, job seekers not only have the upper hand but also these additional windows into the culture of firms trying to fill jobs. Sure, there may be some distortions in those public-facing sites. Still, Morgan adds, "There's something true about the organization across these reviews, especially if you're paying attention to the common threads. I mean, you can't lie to the applicant." **/John Lorinc**

SOURCE MORNINGSTAR, GLASSDOOR (JAN. 2025)

7-WORD BOOK REVIEW

One Day, Everyone Will Have Always Been Against This by Omar El Akkad

Giller winner's heartsick breakup with the West

03/25

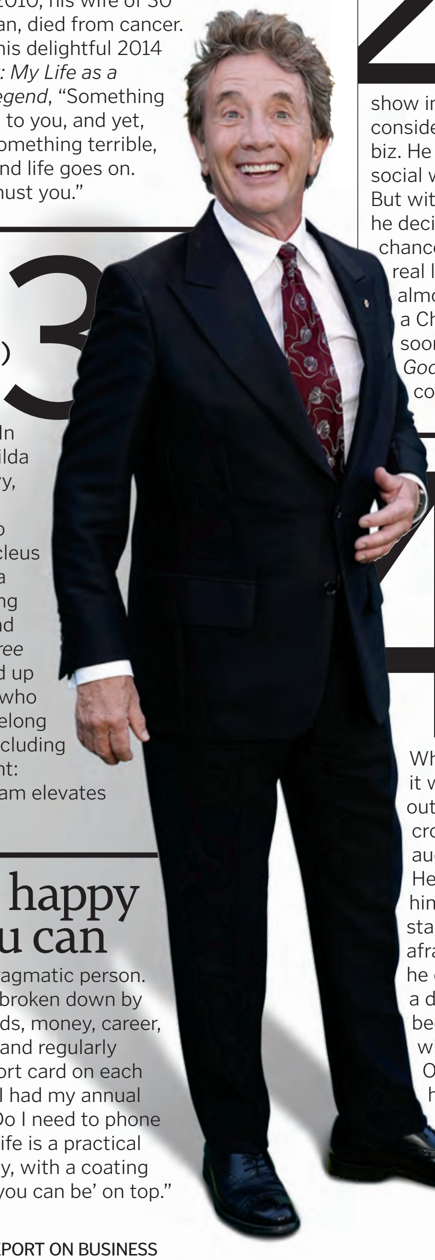
WHAT YOU CAN LEARN FROM...

Martin Short

The man who created some of comedy's best-loved characters, from Ed Grimley to Jiminy Glick, was forged 75 years ago this month in Hamilton, Ont. He stars in *Only Murders in the Building* and is reportedly dating his smokin' co-star, Meryl Streep, proving that totally decent guys do win. **/Dawn Calleja**

1 Life goes on

When Short was 12, his eldest brother, Dave, died in a car crash. By the time he was 20, both his parents were gone, too. In 2010, his wife of 30 years, Nancy Dolman, died from cancer. But as he wrote in his delightful 2014 memoir, *I Must Say: My Life as a Humble Comedy Legend*, "Something terrible can happen to you, and yet, the day after this something terrible, the sun still rises, and life goes on. And therefore, so must you."



2 CHASE YOUR DREAMS

Though young Marty spent all his time singing, dancing and making a one-man variety show in his room, he never considered a career in show biz. He went to McMaster for social work—safe, practical. But with both parents gone, he decided to give acting a chance before getting on with real life. He got his first gig almost immediately, playing a Chargex credit card. Pretty soon he landed a run in *Godspell*, and the rest is comedy history.

3 ABC (ALWAYS BE CO-STARRING)

Short has been an ensemble man for most of his career. In *Godspell*, he met Gilda Radner, Eugene Levy, Dave Thomas and Andrea Martin, who would form the nucleus of his *SCTV* family a few years later, along with John Candy and Dan Aykroyd. In *Three Amigos!*, he teamed up with Steve Martin, who would become a lifelong comedy partner (including in *OMITB*). The point: Finding the right team elevates everyone's game.

4 Don't let fear stop you

When Second City announced it was setting up a Toronto outpost, Short's *Godspell* cronies clamoured for auditions. But Short refused. He told everyone—even himself—that he preferred the stage. The truth was, he was afraid of not making it, a fact he only admitted after ditching a dinner with Bill Murray because he was ashamed of where he was at career-wise. Once he finally admitted how miserable he was, he asked for an audition and went on to become a comedy legend.

5 Be as happy as you can

Short is a deeply pragmatic person. He maintains a list broken down by health, family, friends, money, career, lifestyle and so on, and regularly gives himself a report card on each one. "Health: Have I had my annual physical? Friends: Do I need to phone so-and-so? To me, life is a practical experience each day, with a coating of 'Be as happy as you can be' on top."

ASK AN EXPERT

I need a mental health leave. How do I explain this to my staff?

Remember when Don Draper waited till he crashed and burned before retreating to a hippie commune? It's not 1970, so don't be Don. In 2025, bosses give lots of lip service to mental health at work, but they don't often practise what they preach. "It can be challenging for a leader to admit they need a break, because they think they're supposed to be representing the strength of the company," says Amy Oliver, a Winnipeg leadership coach specializing in mental health best practices. She suggests reframing that thought: "You're still leading—by example." Sure, you could pretend you're taking a really long vacation or "spending more time with family," but you'll miss the moment to demonstrate a true commitment to mental health—even and especially your own. "Remember that the decisions you make as leader foster the well-being of the whole team," says Oliver, "and consider the message you're sending." You don't owe anyone personal details or diagnoses, but do share what feels comfortable, and tell your truth without shame. In lieu of a big, scary meeting, Oliver suggests filming (a dozen times over, if necessary, to get it *just* right) a short video saying something like, "To be at my best, and lead effectively, I'm taking this time off to recharge and—I'd explicitly say this here—lead by example." Subtext: If you're suffering, it's okay to say so, because even the boss did. A hundred initiatives by the keenest mental health committee couldn't do it better. **/Rosemary Counter**

PHOTOGRAPH JORDAN STRAUSS/AP; ILLUSTRATION JOE MCKENDRY

ARTFUL LUXURY IN TORONTO'S CLASSIC NEIGHBOUR-HOODS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ONE ROXBOROUGH WEST


10 PRINCE ARTHUR

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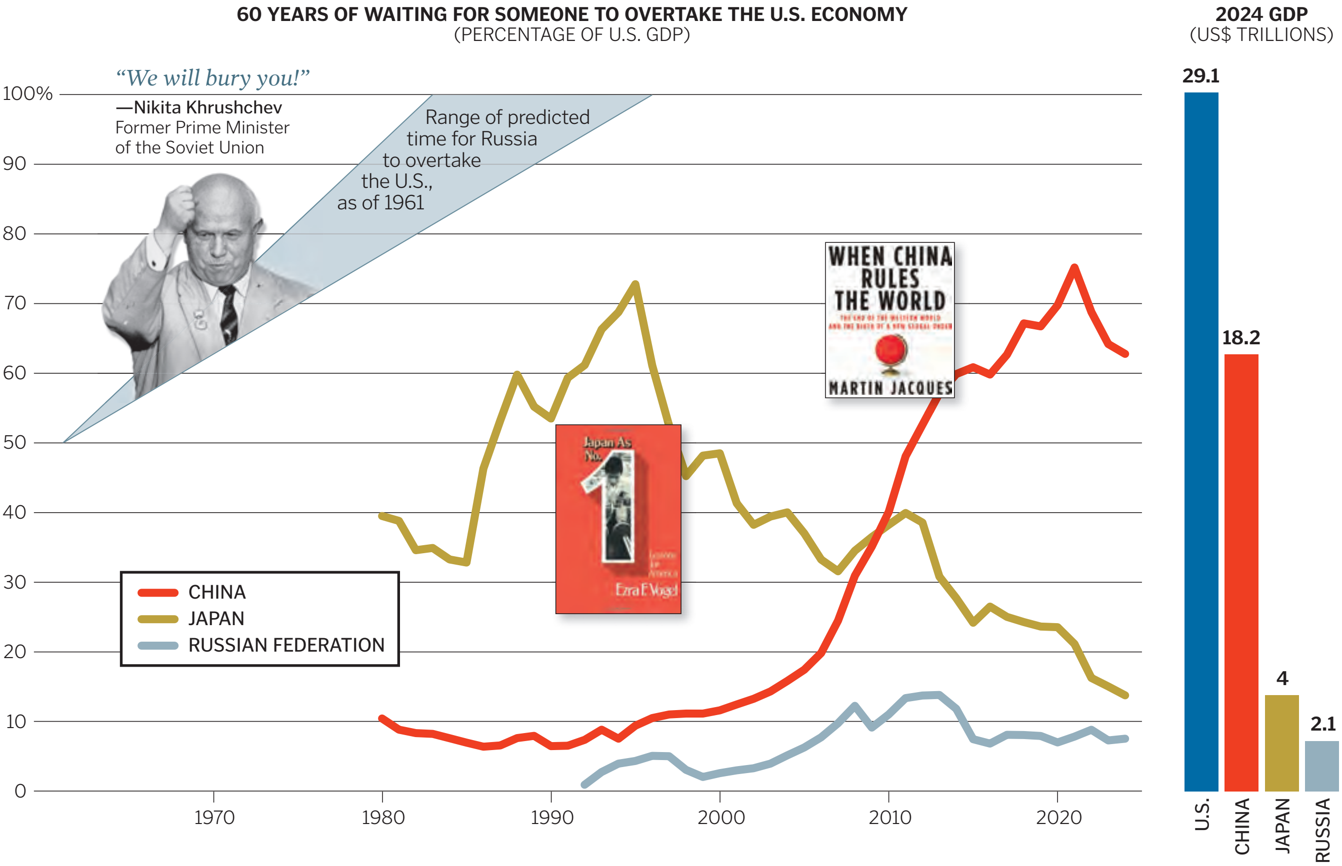


DECODER

AMERICA THE IMMUTABLE

About a decade ago, headlines trilled an economic passing-of-the-baton on a global scale. According to the International Monetary Fund, the United States was no longer the largest economy on the planet, having lost that title for the first time in nearly a century and a half, to China.

It wasn't quite that simple. The IMF based its declaration on an exchange rate called purchasing power parity, which equalizes how much stuff can be bought in different countries with local currencies. By that measure, China's gross domestic product overtook America's in 2016. But even if one used conventional market exchange rates, the U.S.'s lead was closing fast. Size matters in geopolitics, and China's apparently inevitable path to overtaking the U.S. reflected a new balance of power in the world.

Only, it's a story we've heard before. In the 1960s and '70s, academics and economists fretted that the Soviet Union was on track to jump ahead of the U.S. By the 1980s and '90s, Western business and political leaders were consumed by the prospect of Japan becoming No. 1.

In both instances, reality played out far differently. Though Soviet leader Nikita Khrushchev once declared his country would bury Western capitalism, by 1989, the USSR had collapsed. Japan's rise, accompanied by a torrid spree of Japanese conglomerates buying U.S. assets, ended when the country's asset-price bubble burst in the early 1990s. In both cases, growth rates that had previously been the envy of U.S. policy makers dramatically downshifted, and America stayed on top.

The rapid growth trajectory of China's economy appears to have stalled, too—at least for now. As a share of U.S. GDP, China's economy peaked at 74.9% in 2021 (narrowly besting Japan's peak of 72.5% in 1995) and has since rolled over as its COVID-19 lockdowns dragged on and tariff-happy U.S. presidents (Trump, then Biden, now Trump again) have sought to reclaim America's lost manufacturing clout. As a result, China's growth has slowed, made worse by a population that's now in outright decline.

China's massive size and growing wealth means it may yet reverse course and resume its ascent toward global economic domination. But history isn't on its side.

/Jason Kirby

SOURCE INTERNATIONAL MONETARY FUND

Advertisement

Koffler Arts is Now the Proud Owner of a Permanent and Expanded Home

In January, 2023, Artscape went into receivership, leaving the future of many arts organizations and artists at Artscape Youngplace, including Koffler Arts, unknown.

In the face of this uncertainty, Koffler Arts made the decision to dedicate much of our 2024 programming to showcasing the thriving community of artists and arts organizations with whom we have shared this home for the past decade.

These "DECADE" projects reinforced the need to anchor Koffler Arts within this vibrant artistic hub and, by expanding our physical space, to assure that the creative identity of Youngplace be increasingly tied to both the phenomenal artistic forces from within our community and to welcoming artists from around the world.

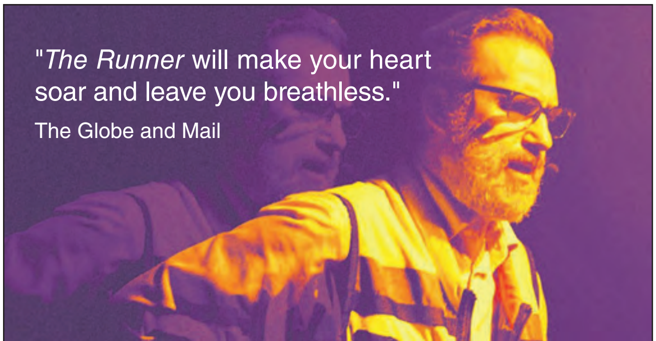
Alongside our gallery space on the ground floor of the newly named "Youngplace", Koffler Arts is now also the proud owner of an additional gallery, multi-disciplinary and performance space on the 3rd and top floor, overlooking the magnificent Toronto cityscape towards the east.

We hope you will join us in celebrating the great Jewish and pan-cultural visual and performing arts, literary events and more that comprise Koffler Arts' rich and ever-exploratory offerings.

Matthew Jocelyn
General Director

Precious support for this purchase came from the Canada Cultural Spaces Fund of the Department of Canadian Heritage, from the City of Toronto, from the Koffler Family Foundation as well as from numerous private donors •

Koffler Arts is excited to welcome Toronto-born, Brooklyn-based artist Elana Herzog to our gallery for a solo exhibition (February 13 - May 11), curated by artist Jessica Stockholder. The exhibition surveys Herzog's thirty five-year career, and features a new site responsive installation made using wallpaper designed by the artist, metal staples, textiles, and paint.



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REVENUE (2024 Q3 TTM) **$1.4 BILLION**

PROFIT (2024 Q3 TTM) **$63.9 MILLION**

THREE-YEAR SHARE PRICE GAIN **49%**

P/E RATIO (TRAILING) **14**

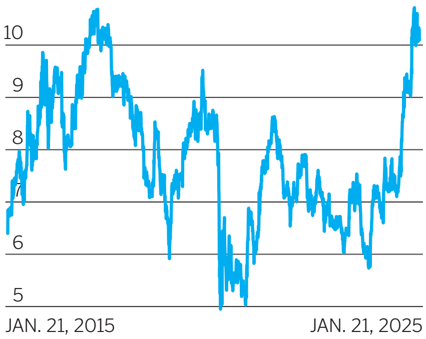
Canada's long-term care (LTC) sector was hammered when COVID-19 arrived. Many elderly residents died, and vaccines didn't exist yet. There was political controversy, too. Who should care for the elderly—governments or the for-profit private sector?

It's hard to imagine anyone more qualified to serve as CEO of the biggest publicly traded Canadian company in the business than Dr. Michael Guerriere. "Mike is fine," he says.

Guerriere was named CEO in 2018 with a highly varied resumé. After 10 years of medical training, he went to work as an internal medicine specialist at Toronto's St. Michael's Hospital in the 1990s. "I practised for one and a half years and then got into management. I was asked to take on a temporary role," he says. He also earned an MBA from the Kellogg School of Management at Chicago's Northwestern University.

Temporary has turned into three decades. Among other things, Guerriere had exec jobs in teaching hospitals for 10 years, chaired the board of governors of Toronto Metropolitan University and helped launch the Courtyard Group, a consultancy that was bought by the health care arm of Telus Corp. in 2011.

EXTENDICARE INC.
SHARE PRICE ON TSX



He didn't have much time to find his feet at Extendicare. "It changed me, just watching the heroism of our 22,000 staff coming to work every day," Guerriere says. He also says there's been "a good policy response to the pandemic." Funding in Ontario was increased to add 30% more LTC staff and 58,000 beds.

Now, governments and companies have time to tackle some fundamental issues. One is an aging society. "The biggest demographic Extendicare serves is over 80," Guerriere says. But 95% of them want to age at home. Hence the need for large amounts of capital that governments alone can't afford—they need help from the private sector.

Extendicare owns and operates 123 LTC homes in three provinces—Ontario, Alberta and Manitoba. But in 2023, it formed a 15%-owned joint venture with Montreal-based Axium Infrastructure Inc. It will own the new homes Extendicare builds and operates in the future.

Guerriere is also proud of the fact that, as of the third quarter of 2024, more than half (53%) of Extendicare's previous 12 months of operating income came from services—home health care and managed services—rather than LTC.

At age 61, he thinks the company has plenty of room to grow. "Me and my team are just getting started," he says. **/John Daly**

FOMO INVESTING

Five things we learned from Darcy Briggs

The turmoil continued in Ottawa and Washington in early January—bigly. Justin Trudeau resigned as Canada's Prime Minister and Donald Trump was inaugurated as the 47th U.S. President. How do savvy bond traders and portfolio managers separate political tumult from fundamentals? We asked Darcy Briggs, senior vice-president and portfolio manager with fund giant Franklin Templeton Canada. **/J.D.**

1. Remember that bond markets are really big. The total U.S. bond market—government and corporate—is about $57 trillion. In Canada, the market is about $5.4 trillion, and Briggs oversees $5.5 billion. The global bond market is over $220 trillion. "That's a lot of debt," he says. Those markets are unlikely to be rattled by headlines—even several days of them.

2. Some bond market clichés are true, says Briggs. "Central banks control the front end of the yield curve [market yields on bonds maturing in a few years or less], and the back end of the yield curve [yields on bonds maturing, say, in 10 years or more] reflects expectations of growth and inflation."

3. From 2022 to 2024, yield curves were inverted as central banks hiked policy interest rates to fight inflation. But they've since cut rates to restimulate growth, and curves slope up to the right again. "Canadian rates are less than U.S. ones because of sluggish economic performance here and chronic productivity challenges," Briggs says.

4. Politics occasionally knock markets for a loop. One example, Briggs says, is then-British PM Liz Truss's controversial minibudget in September 2022, which slashed taxes and forecast much higher future deficits. "The long end of the yield curve blew out," he says. Bond prices (which move opposite to yields) plunged, and yields skyrocketed. Truss stepped down after 50 days in office.

5. So what will Trump 2.0 bring? If Canada keeps rates down to help with a wave of mortgage renewals in 2025, and if Trump implements pro-growth policies that include tax cuts and deregulation, and doesn't impose many tariffs, and if U.S. inflation remains low, "I think yield curves will be normalized," Briggs says. That's a lot of ifs.

PHOTOGRAPH GETTY IMAGES

SMART MONEY

STEPHEN ARPIN

MANAGING DIRECTOR, CANADIAN EQUITIES
BEUTEL, GOODMAN & CO. LTD., TORONTO

A master's in American history seems an unlikely path to becoming a money manager, but it may have helped Stephen Arpin. After landing an equity-trading role at Beutel, Goodman in 1993—the decade when mutual funds took off—he was hooked by the challenge of picking winning stocks. Because his bosses liked the fact that he could look at the world differently, he was offered a job as an analyst and then lead manager on the Beutel Goodman Small Cap Fund. His stock bets, meanwhile, have paid off. The F series of this $592-million fund, which he co-runs with William Otton, has outpaced the S&P/TSX SmallCap Total Return Index since 2006. That fund is part of $1.6 billion in small-cap assets the pair run at the firm. In January, we asked Arpin for his small-cap outlook and why he likes MDA Space.

What's your strategy to beat your index?
We're a value manager focused on high-quality, free-cash-flow-generative businesses. We are looking for companies that trade at a substantial discount to our assessment of their real value to try to get a 100% return over four years. Our portfolio holds 35 to 45 companies. We aim to control downside risk, which is a large part of how we drive returns. But we have made mistakes, such as with ABC Technologies and VerticalScope, which didn't work out.

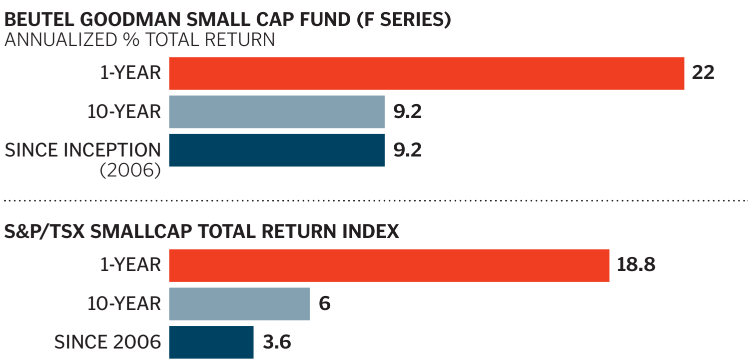
Given that your benchmark index gained 19% last year, what's your outlook for this year?
Energy and materials make up over 50% of that index, so that helped returns. But we own names in other areas where there's a better opportunity, and we are more overweight industrials and financials. Small caps tend to be better positioned when economic growth is strong and are also more sensitive to the risk appetite of investors. High-yield bond spreads are tight, and interest rates have been easing. That is positive, because money is cheaper and can drive more acquisition activity, too. But there's one very important exogenous risk, and it's the U.S. tariff threat, because that could drive a substantial economic slowdown.

MDA Space is a big holding. What's the attraction?
MDA is a global leader in manufacturing satellites and builds the Canadarm series of robotic arms. Over the past decade, the cost of putting satellites into orbit has decreased dramatically. Instead of putting up large satellites, we now see these low-Earth-orbit satellites. Elon Musk's Starlink satellite, which has been vital for communications in Ukraine's war against Russia, is an example. MDA has a large backlog of orders, and satellite manufacturing does not require heavy capital expenditure, so the prospect for free cash-flow generation is attractive.

What other names do you favour now?
Fashion is a difficult business, but we like Aritzia because this retailer really resonates with women. It's a real entrepreneurial success story. We see substantial opportunity for expansion in the United States and maybe internationally. Another is EQB, which owns Equitable Bank. It's the leader in the near-prime lending business for single-family homes in Canada and has also been generating a return on equity in the mid-teens.

Your fund is light on resources but owns Alamos Gold and Triple Flag Precious Metals. Why?
Declining interest rates are generally favourable for gold. It's hard to predict the gold price, so we look for businesses in safe jurisdictions with low cost structures. Alamos Gold, which has a strong balance sheet, used its cash flow from its Mulatos mine in Mexico to make smart purchases in acquiring the Young-Davidson mine and Island Gold mine in Canada. Triple Flag is a gold royalty company, so it doesn't have capital expenditures, and offers diversification across different mines and geographies.

Do potential takeover targets play a role in your investing strategy?
We don't buy businesses with the expectation that they'll be taken over, but as larger companies find it harder to grow internally, they naturally look for acquisitions. Our takeovers last year included Canadian Western Bank, Copperleaf Technologies, Heroux-Devtek, Sleep Country Canada, Altius Renewable Royalties and Softchoice. Primo Water was a merger with BlueTriton Brands, but we sold it afterward because the combined entity became a U.S.-listed stock. **/Shirley Won**



SOURCE MORNINGSTAR DIRECT; RETURNS TO DEC. 31, 2024

PHOTOGRAPH JOHN PACKMAN

IT'S NOT EASY BEING GREEN

HOW PATRICK DOVIGI BUILT ONE OF THE BIGGEST WASTE MANAGEMENT COMPANIES IN NORTH AMERICA, ACCRUED BILLIONS IN DEBT, HAD HIS HOUSE SHOT AT, PULLED OFF A MEGA SALE, AND MANAGED TO KEEP INVESTORS ONSIDE

by
TIM KILADZE
and
ROBYN DOOLITTLE

photographs by
CHRISTOPHER WAHL

IT WAS AFTER MIDNIGHT ON JUNE 1 WHEN THE SHOOTER ARRIVED

at the industrial lot in Vaughan, a suburb north of Toronto. The property—a local hub for Green Infrastructure Partners (GIP), the construction outfit spun off from Canadian garbage giant GFL Environmental—was deserted, save for the rows of signature fluorescent-green machinery parked along the perimeter.

The perpetrator approached the maintenance facility and opened fire, spraying the front door, windows and two vehicles with bullets.

The attack didn't make the news—this is the first time it's been reported—but York Regional Police opened an investigation, and detectives soon came to believe that the gunman had been hired to send a message. A month later, there were two strikes in five days: Six dump trucks at the GIP lot were set ablaze, followed by a fiery attack on equipment at a GIP road construction site about 20 minutes north. (Around the same time, police in Windsor, Ont., said they believed an arsonist had torched half a dozen commercial vehicles at a local GFL property, but investigators say they now believe it was a case of spontaneous combustion.)

Things went quiet until Sept. 29, when a gunman fired on the Rosedale home of GFL's founder and CEO, Patrick Dovigi; one of the bullets went through his front door and grazed his living room couch. An hour later, someone shot nine bullets through the front door of former GFL senior vice-president Ted Manziaris, who still consults for GIP.

Dovigi—who leads one of Canada's largest and most visible companies, with those bright green GFL trucks picking up trash from more than 700 municipalities across Canada and the U.S.—initially described the attack on his home as a botched robbery. But after *The Globe and Mail* reported on the back-to-back shootings—and that police believe they were linked—he said: "This is not *The Sopranos*." (A month later, another GFL office in Toronto was shot at.)

Dovigi had reason to be prickly, not least because of the obvious threat the attacks posed to him, his family and his employees. But GFL was also in the middle of a big transaction. In June, the same month the violence started, *The Globe* reported that the waste giant was looking to sell its environmental services division. A sale could help the company—which generates most of its $8 billion or so in annual revenue hauling residential and commercial waste—pay down its debt. If it fell through, GFL's shares could continue the slide they'd started in the summer of 2023.

From its earliest days, GFL has been a serial acquirer, borrowing money to fund purchases of smaller rivals. Investors didn't seem to care; the company's debt load simply grew as the GFL empire expanded. Private equity firm after private equity firm lined up to invest, and after its 2020 initial public offering, institutional fund managers got positively giddy for the stock; GFL's market value is now close to $25 billion.

But 2024 was looking grim. Investors were getting nervous about its debt load, given high interest rates. The waste management company had a massive valuation but wasn't profitable. Dovigi was earning $68.5 million a year, making him Canada's highest-paid executive. And the attacks put GFL under a different spotlight.

Yet in January, GFL signed a deal to sell 56% of its environmental services division to a pair of private equity partners for $6.2 billion in cash proceeds—money that would be used to pay down debt and buy back shares. GFL's stock has now climbed nearly 50% above its 2024 low, and it's up more than 150% since the IPO in March 2020. The company's debt is even on track for an upgrade.

"If I could script a transaction perfectly," Dovigi says now, "that's exactly what happened."

No one who's followed his career will be surprised Dovigi pulled this off. As one former insider says: "When the shit's up against him, he comes up like roses."

GFL is unquestionably a success. But sometimes, the wins come with an asterisk—not that most investors seem to care.

The guy appears, well, bulletproof.

GFL is headquartered in Vaughan, but Dovigi and his tight team of executives often work out of an office in Yorkville, near the area once known as Toronto's Mink Mile.

Dovigi strides into the eighth-floor boardroom in a parka and navy cashmere sweater. It's mid-January, and he's agreed to a wide-ranging interview. Nothing's off the table.

So, first things first: Why did someone set fire to GFL equipment and shoot up his house?

"I wish I knew," he says.

That's a very different response than the botched-robbery theory he put to reporters in the fall. "All I knew," he says now, "was what I was told by the security guard at the house. The police didn't even call me for, like, five days after it happened." (Police opened an investigation immediately.)

It's easy to see why the finance world has embraced him. At 45, Dovigi is charismatic and smooth, but somehow still sounds like a hockey guy from northern Ontario. And he's unapologetically confident. When pressed about the complex terms of the recent sale, for instance, he says simply: "I became a billionaire by doing this. At some point, my track record sort of speaks for itself."

If you've tracked GFL's rise from nothing to fourth-largest player in North America, you know the broad strokes of Dovigi's origin story: He grew up in Sault Ste. Marie, a small city famous for its steel manufacturing, emerged as a goaltending phenom and was later drafted by the Edmonton Oilers. Instead of pursuing hockey, he took a job at a small investment firm, where he was put in charge of a failing waste transfer site and got a crash course in the garbage business.

There's more to it than that, of course, and the details provide a fuller picture of the man who's managed to chart a course that shouldn't work but somehow does.

By 18, Dovigi had left the Sault to play for the Ontario Hockey League's St. Michael's Majors in Toronto, where he was billetted with the wealthy Leibel family in posh Forest Hill. Lorne Leibel was a former Olympic sailor better known as the founder and president of Canada Homes, and one of the country's wealthiest developers. His son Cody played for the Majors, too, and he and Dovigi became good friends.

In the summers, Dovigi would play shinny with Cody's friends in Forest Hill, a group that included scions from some of the city's wealthiest families. Eventually, he was drafted in the second round to the Oilers, but he says that when it became clear he'd spend much of his career in the minors, he opted not to sign. He enrolled in business school at what's now Toronto Metropolitan University. A year in, someone in his new network told him that a bank called Standard Mercantile was looking for young talent.

At Standard Merc, Dovigi worked alongside Romeo DiBattista Jr., son of the wealthy owner of Brovi Investments. (DiBattista later made headlines during the Toronto Mayor Rob Ford crack scandal in 2013. Court documents connected to a police probe of Ford's drug use highlighted DiBattista's phone call with an alleged drug dealer, later acquitted, who sometimes drove Ford around. Reports at the time indicated DiBattista and the mayor were known to socialize at an after-hours club. DiBattista was never charged, and the police document didn't allege any criminality. His lawyer, Jeffrey Kaufman, says DiBattista and Ford grew up together, adding: "Mr. DiBattista had absolutely no involvement in the crack scandal," and said that the call to the driver, Sandro Lisi—whose family owned a painting company—pertained to a plastering contract.)

Standard Merc had lent money to a transfer station in Vaughan called 310 Waste, but after Ontario's environment ministry discovered the owners were illegally storing thousands of tonnes of garbage on site, Standard wanted out. Since the scarcity of transfer stations gave them value, Brovi, which had a second mortgage on the property, agreed to take it over under a new company called Waste Excellence Corp. Dovigi was made a director and sent in to oversee the cleanup. “The deal I had with Brovi was that they were going to put up all the capital, I was going to do all the work, and we were going to split the profit 50-50,” he says. As part of the agreement, he says, he would be paid $250,000 a year.

Just after Thanksgiving 2004, as Dovigi was about to take over the transfer station, a massive fire broke out and continued to burn for weeks. (Three men involved in running the station before Dovigi came on board—Robert Sansone, Edmon Hanna and Guido Titton—were eventually sentenced to jail time for offences against the Environmental Protection Act in connection with the fire.)

Once the blaze was finally under control, Dovigi called the big waste companies with an offer: Haul out the garbage at his expense and dump it at their landfill sites for free, then agree to use the station once it reopened. They took the deal, and around the fall of 2006, the station reopened. The business exceeded even the most optimistic projections. As one of the only licensed transfer stations around, it had a booming clientele, and the land—roughly seven acres—was valuable. Dovigi figured he and Brovi had made around $10 million, and he says he was ready to collect his half.

Instead, Brovi sued Dovigi, alleging he’d stolen at least $673,000 through fraudulent schemes, including forged cheque signatures and diverting Brovi funds to personal companies. (DiBattista’s affidavit in the case says Dovigi had been promised a 20% stake in the waste facility, and that this deal wasn’t made until May 2006.) The claim was eventually settled.

Speaking about the case in detail for the first time, Dovigi says the accusations were false. “The DiBattistas know that they owe me 50%, they come up with this story,” he says. He didn’t have the money to take them on in court, though, so he says he agreed to a $500,000 payout. “I’ll never forget—I think the date was May 21, 2007. I literally walked out of the office and said, ‘This is the worst mistake you guys are ever going to make in your life—but thank you.’ ”

In a statement to *The Globe*, DiBattista says it was “ludicrous” to suggest Dovigi was ever getting half the profit. He also says the lawsuit was settled with Dovigi paying Brovi $500,000, not the other way around.

That summer, back in Forest Hill with his hockey buds, Dovigi laid out his vision for a new waste company. He had two things going for him: He now had connections in the industry, and it was the income-trust era, with markets so frothy that all sorts of garbage—figuratively speaking—was going public.

One of the players suggested Dovigi talk to his dad, Barry Goldberg, an investment banker at Genuity Capital Markets. Goldberg was intrigued, but this wasn’t really his area, so he sent Dovigi to Genuity’s boss, David Kassie. “I explained it all to him,” Dovigi says about that first meeting. “Here’s what I have. Here’s what I know I can close on. Here’s the price. Here’s what I believe we can make, how much leverage I think we can put on them.”

He’d identified three acquisition targets (research he says he compiled by cold-calling businesses in the recycling and waste section of the Yellow Pages to see who was open to selling and what they had to offer). Two were in Pickering, just east of Toronto—a transfer station and a processor of liquid waste. The third was a Toronto hauling company that also operated a transfer station. Kassie was impressed. “One of the challenges, especially with younger people, is they’re really good or passionate about the area, but they don’t have the financial skills. They’re not solving for shareholder value,” Kassie says now. Dovigi, he adds, “actually had financial acumen.”

And his pitch made sense. Kassie had once run CIBC World Markets, so he had a track record of investing in emerging companies. He was also familiar with Laidlaw and Philip Services, both of which had become dominant players in the waste business by cobbling together smaller rivals. The thinking was always that investors would appreciate bigger entities whose revenues were spread across multiple geographies (unlike mom-and-pop shops that tended to focus on a municipality or two). “It’s a pretty well-trodden path,” Kassie says. Worst-case scenario, they’d end up selling the assets for a mediocre return.

Dovigi was looking for $10 million, and Kassie was willing to write the cheque, on one condition: The money had to be committed by year’s end—Genuity had a use-it-or-lose-it arrangement to invest about $100 million annually for the Healthcare of Ontario Pension Plan. Ultimately, Genuity put up the cash, promising the pension fund an 8% return. Dovigi and the firm would split the remaining profit 40-60.

GFL Environmental’s first official day of operation was Dec. 21, 2007.

The 2008 financial crisis gave GFL a new raison d’être. Dovigi’s initial plan was to compile a few businesses and flip them for a tidy profit. But as the financial system unravelled, he saw opportunity in chaos.

With many of the big U.S. waste management companies looking to unload underperforming transfer stations, Dovigi became the perfect buyer. He picked up three more stations and virtually overnight became the dominant player in the Greater Toronto Area.

Three years in, GFL received an offer that Dovigi says would have made his investors three times their money. But he insisted they hold on. “I literally went to pound the table. I said, ‘We’re not going to sell. This is the craziest thing. Do not sell the business now. We literally have the whole country to ourselves,’ ” he recalls. “We need to raise more money.”

“Go find it” was Kassie’s reply. That led Dovigi to Roark Capital, a small but growing private equity firm in Atlanta led by Jeffrey Keenan, who’d run waste management company IESI. Dovigi’s pitch was a classic roll-up, and the more of the waste supply chain he controlled, the more profitable GFL would be. He wanted to expand into hauling via National Waste Services, which had contracts in Hamilton and other cities, and Turtle Island Recycling—co-founded by Ted Manziaris, whose home was also shot last fall—which collected trash on Toronto’s western flank of Etobicoke.

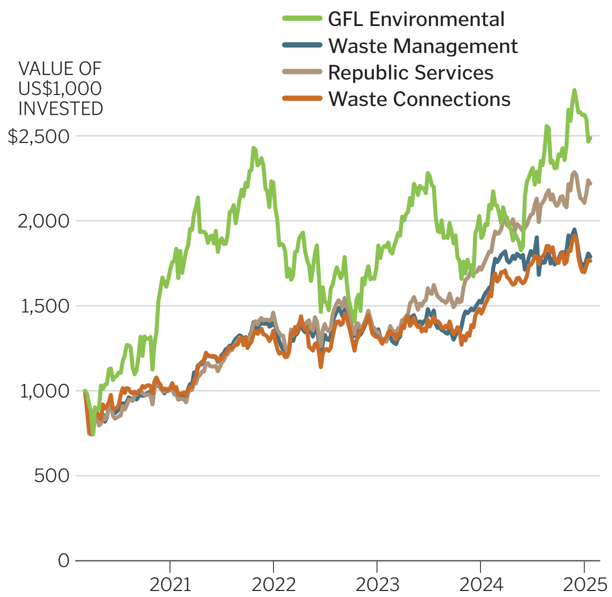
Roark greenlit the deal.

In 2011, Dovigi pulled off one of GFL’s pivotal moves, winning Toronto’s first major collection contract with a bid of $17.5 million, $3.5 million less than the closest competitor. With Canada’s largest city on its resumé, GFL snapped up municipal contracts across the country, including in Winnipeg, Calgary, Vancouver, Halifax and Windsor, Ont.

Two tailwinds worked in Dovigi’s favour: ultralow interest rates and the growing popularity of private capital. The two are intertwined, since private equity firms buy companies using lots of debt, and near-zero rates gave them ample access to cheap financing.

Waste management might seem like a strange business for PE to love—it can't be scaled by, say, selling the same software program over and over, and it's capital intensive, requiring fleets of trucks that wear down over time. There's also the regulatory risk that comes with providing a municipal service that has an environmental element to it. But waste companies have become one of PE's favourite assets, not least because they throw off cash. Plus, they've largely proven capable of handling their debt loads—at least when rates were low—and waste is a defensive business that doesn't shrink all that much during severe downturns. Analysts at RBC recently calculated that the three largest U.S. players saw demand fall by just 4% during the global lockdown in 2020. Waste, then, is considered an infrastructure asset, like a toll road or a port.

THE BIG FOUR: GFL VS. ITS U.S. RIVALS



So when Roark wanted to sell in 2013, two other PE firms, HPS Investment Partners and Genuity (via a new fund) were happy to buy them out. And each time GFL swapped backers, it got new capital to deploy. In October 2015, it made its largest acquision to that point, buying the waste assets of TransForce Inc. for about $800 million. To close the deal, Dovigi secured a $458-million equity investment from Macquarie.

The following year, GFL's expansion spree sent it across the U.S. border for the first time, to buy Michigan-based Rizzo Environmental Services from PE firm Kinderhook Industries. The business came with more than 40 municipal contracts, most significantly in and around Detroit.

Just weeks after the deal was announced, news broke that Rizzo executive Chuck Rizzo was the subject of an FBI corruption probe, having allegedly bribed local politicians to secure multimillion-dollar garbage contracts. He was later sentenced to 66 months in prison. GFL denied any knowledge of the investigation. "This is not the way GFL conducts business," Dovigi told reporters. "We take these allegations very seriously." Today, he has somewhat softer language when addressing Rizzo's crimes, which included covering the legal expenses of a local politician and loaning thousands to elected officials. "Bribery, if you want to call it that," Dovigi says. "I mean, I would call it more an idiot."

GFL continued its U.S. roll-up, eventually expanding into two dozen states. The growth provided geographic diversification, but it was frenetic. "It's controlled chaos in there—and I mean that in the most positive way," says one former GFL employee.

With revenue exploding, GFL tested the IPO waters in 2017, but the timing was no good. Rating agencies were growing worried about its debt load, and Moody's warned about this burden after GFL borrowed another US$400 million. At the time, its debt had climbed to 6.4 times EBITDA, or earnings before interest, taxes, depreciation and amortization. Waste Connections, its closest major rival by market value, had a debt load of less than half that, according to Moody's.

As public investors grew skittish, Dovigi once again turned to private equity, trading HPS and Macquarie for BC Partners and the Ontario Teachers' Pension Plan. With their blessing, he bought Waste Industries in October 2018 for $3.3 billion, including debt.

That deal helped GFL catch up to the big three U.S. players—Waste Management, Republic Services and Waste Connections, all of which are publicly traded and whose shares had jumped an average of about 300% over the previous decade.

Dovigi decided the time was right for another IPO run, and in March 2020, just as a mysterious coronavirus was spreading, GFL got the deal done. With markets already sliding two weeks before widespread lockdowns, the company raised US$1.4 billion in new shares, listing on both the TSX and NYSE. (GFL raised another US$775 million by selling convertible units that paid annual interest.)

Shahir Guindi, former national co-chair of Osler, Hoskin & Harcourt, sat on GFL's board during the IPO. He says pegging Dovigi's success to his network and knack for raising money undersells his skill set. "His ability to raise money is one thing," says Guindi. "His ability to make money is compelling. To put businesses together, to put people together. He's very talented at making two plus two equal five."

Not everyone was convinced. Not long after the IPO, in August 2020, short seller Spruce Point Capital declared in a report that there was a "100% Downside Risk" to owning the stock. After conducting a forensic financial and accounting review, Spruce Point believed GFL was using aggressive accounting to inflate cash flow and understate debt. The report also drew a link between Dovigi and "controversial people" that "some observers have dubbed 'organized crime.'" Among other things, it made mention of the FBI investigation of Rizzo Environmental and the three men who'd been convicted relating to events at 310 Waste, but these unsubstantiated allegations of links to organized crime were never proven.

GFL's stock dipped briefly but quickly rebounded.

Dovigi, meanwhile, was more concerned with managing the growth of a newly listed company. "There's how you run a business privately, and then there's how you run a business publicly," he says now. "And those are two different things."

With markets melting down and central banks slashing rates, GFL borrowed more debt to fund new acquisitions. In June 2020, it bought a cluster of U.S. businesses for US$835 million. Two months later, GFL spent another US$1.2 billion on Houston-based WCA.

The debt-fuelled expansion could be seen as reckless, but Darryl McCoubrey, an analyst at independent research firm Veritas, says investors became entranced by one simple idea: "the promise of growth." In its first year of trading, GFL's stock jumped roughly 75%, while shares of its U.S. rivals remained flat.

Since Dovigi owned 10% of the company, his personal wealth exploded. Through 2021, he sold $81 million in stock, according to insider filings. Some of the proceeds found their way into a US$72.5-million mansion in Aspen that overlooks downtown (which he sold last year for more than US$100 million), along with multiple condos on ultra-exclusive Fisher Island in Miami. Then there's his home in Rosedale, a condo in New York, a cottage in Muskoka, another place in Aspen (which once belonged to Jack Nicholson) and a yacht that cost a reported €330 million. (Dovigi says bluntly: "I'm not hiding from it. Yes, I have beautiful houses. Yes, I have a boat. I'm not the only one in Canada who has the same. I will never own an asset that I believe I'll lose money on.")

Dovigi also started diversifying into infrastructure. In late 2021, GFL signed a deal to acquire Coco Paving, a family-owned road-paving business in Ontario, for an undisclosed sum. (Earlier in the year, CEO Jenny Coco had gotten into trouble tied to her ownership of private lender Bridging Finance, which imploded and left 26,000 investors in limbo.) GIP was created to house the paving company and a few other GFL assets. To finance the new business, he brought in HPS, which took a 47% stake; GFL owned another 45% and Dovigi 8%.

"I BECAME A BILLIONAIRE BY DOING THIS. AT SOME POINT, MY TRACK RECORD SORT OF SPEAKS FOR ITSELF"

For investors, the lingering question was fiscal discipline. Dovigi has a habit of emphasizing how much GFL is growing and downplaying what it spends to achieve that growth. That didn't seem to matter when rates were low, but when central banks started hiking them in 2022, it became more problematic.

Dovigi often talks about GFL's debt relative to adjusted EBITDA, which strips out a few additional expenses. According to him, the company's debt amounted to roughly four times annual adjusted earnings. Rating agencies S&P and Moody's had a different take, pegging GFL's debt at about five times. One reason for the disparity: the treatment of acquisition costs. GFL argues that those expenses, which amounted to $78 million in 2023, were one-time items. The rating agencies argue that since GFL is a serial acquirer, they're recurring expenses.

When interest costs finally became a concern in mid-2023, GFL promised to cool its acquisition spree, and it quietly started cutting costs. Dovigi also announced plans to sell some underperforming assets, including parts of the Rizzo business in Michigan, where Dovigi says residential collections weren't making the returns GFL was looking for. The buyer, Priority Waste (backed by—surprise—a private equity firm), also arguably had a more efficient business model, using high-tech trucks that could be operated by a single worker.

A Priority spokesperson said that at the time of the handover, the company discovered that roughly 200 of the 400 GFL trucks it received weren't roadworthy. Some appeared to have been sabotaged; Priority says others had been defecated in. Dovigi dismisses all these assertions, noting that Priority had the right to inspect the equipment before the deal closed.

GFL's debt, meanwhile, barely budged. Before selling the assets, its debt load totalled $9.6 billion. Afterward, it fell to $7.9 billion, yet by mid-2024 it had climbed back to $9.5 billion.

With GFL's share price falling—it was down around 20% between July 2023 and May 2024, while major rivals were up that much or more—Dovigi drew the ire of his second-largest shareholder. He'd long been one of Canada's best-paid CEOs—in 2018, he earned $47.5 million in total compensation. But after Dovigi's $68.5-million pay package was disclosed in March 2024, Teachers voted against it, though the vote was non-binding.

Dovigi's three major U.S. rivals all make most of their money hauling garbage and burying it at their landfill sites. GFL's mix is a bit different. The environmental services division, for instance—which offers liquid waste management and soil remediation, and contains some of the first assets Dovigi put together to form GFL—makes up about 20% of its revenue.

For years, the division seemed almost untouchable. But during the drama in 2024, some investors, including Adam Wyden, founder of ADW Capital Management in Miami, started calling for a sale. Not only would it help pay down debt, but it would also remove an overhang on the shares. Because BC Partners still owned so much stock, Wyden believed some investors were wary to buy, knowing its repeated secondary share sales would drive down the stock price. "Other investors don't go into the market and buy, because they know BC is going to keep selling," says Wyden, adding that, in his view, that's why GFL's stock has at times traded at such a discount relative to its peer group.

Under pressure, GFL launched an auction for the division, and by November, Dovigi said he expected the company to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DAYS AFTER A SHOOTER PUT NINE BULLETS THROUGH THE FRONT DOOR OF FORMER GFL EXEC TED MANZIARIS, A TRADESMAN PATCHES THE DAMAGE

earn $6 billion from the sale. He was right. But when the deal was announced in January, it came with a twist. Two private equity firms, Apollo Global Management and BC Partners, would each buy 28%, while GFL would keep 44% for itself. The new owners would also add roughly $4 billion in debt to the business.

So, while GFL can use the cash proceeds to pay down existing debt, it will remain a significant owner of a business with billions of dollars of new debt. To do this, GFL structured the deal similar to the creation of GIP. The business will sit on its balance sheet as a single line item, which means investors will only see the value of GFL's equity position. All cash flow and financial details will be kept private—though the rating agencies will rate its debt—and any money borrowed won't be consolidated with GFL's debt.

GIP's experience over the past two years highlights the trade-offs of this structure. The infrastructure business has struggled with cost overruns, and GIP has parted ways with some of its most senior talent, including CEO Christian Dover, who'd been with GFL since 2016. GFL shareholders, though, have almost no way of knowing what's happening inside the business.

Dovigi just sees the upside. "Everybody was assuming we were selling the business, we were getting $6 billion, and that was the end of it," he says. "We ended up getting $6.2 billion in cash, still owning 44%, still having an option to buy back the business in five years."

BC Partners' involvement is also unusual. As GFL's largest shareholder, the British private equity firm already technically owns a stake in the environmental services division, yet it's borrowing money to buy that same business—money that could then be used to buy back at least some of its stake in GFL. The waste giant hasn't fully spelled out that BC and Teachers will own less, but in our interview, Dovigi indicated that Teachers likely wouldn't have a board seat by May, and BC Partners would be down to one director, reflecting their reduced stakes.

Most stock analysts don't seem to mind the complexity, though. "We push back on the argument that selling environmental services is just a financial engineering exercise by GFL," CIBC analyst Kevin Chiang wrote in a recent note to clients. He calculated that even after adding in GFL's $1.8-billion portion of the new debt, the sum is less than the $3.8 billion in debt GFL said it would repay from its own balance sheet.

Even Veritas's McCoubrey acknowledges that being a GFL skeptic can feel like screaming into the wind. "I've been 'sell' since the IPO," he says, "and I've been wrong since then."

Late in January, police in York Region and Toronto called to tell Dovigi they were close to making an arrest in both the arson and shooting cases, though he says he can't talk about specifics until charges are laid. (Police wouldn't confirm this to *The Globe*.) What he will say: His top priority is ensuring the safety and well-being of his employees. "Money can fix a lot of things, but when things like this happen, it shakes people up, it shakes us up as a senior management team," Dovigi says. "We can hold our heads up high, knowing we've always competed fairly, and at some point, justice will be served."

As for the business itself, Dovigi's not taking a breath. Even though he's got more competition from PE buyers, there are still scores of smaller players to scoop up—RBC analysts estimate there are several thousand in the field. GFL is also reaping the benefits of price increases that all the waste giants have been able to push through in the past two years. And because interest payments will eat up less of GFL's revenue, it'll have more capital to spend on its renewable energy projects, such as creating clean fuel by capturing the natural gases emitted by decomposing garbage. RBC forecasts that renewable natural gas will account for roughly 10% of the natural gas supply in the U.S. by 2040, up from less than 1% today.

Kassie, Dovigi's first financial backer, loves the aggression, what with Canada facing a productivity crisis and a shrinking number of global champions. "We need more of that in Canada," he says.

But that aggression can be a double-edged sword. GFL's business model is eerily similar to the Canadian waste roll-ups that came before it, including Laidlaw and Philips. Both ended in misery. The real test might just be whether GFL can walk the fine line between growth and financial discipline. For 15 years, Dovigi had ultralow rates as a comfort blanket. Those no longer exist.

He'll also have to navigate life as a truly public company. Once BC Partners and Teachers sell down their shares, they'll have much less control, and Dovigi could be subject to more public market norms—including more scrutiny of his pay.

Toward the end of our interview, while he's talking about how he pulled off one of the largest IPOs in Canadian history, the conversation finally turns to that remarkable compensation package.

"Is that why you're worth $70 million?" he's asked.

He pauses for a moment.

"I'm underpaid," Dovigi says. "If I was under private equity, I'd get paid a lot more."

PHOTOGRAPH ROBYN DOOLITTLE


SAAM VOLTA
SAAM VOLTA

MAKING WAVES

SHIPPING IS A DIRTY BUSINESS. BUT FOR B.C.-BASED ROBERT ALLAN LTD., THE WORLD'S FOREMOST DESIGNER OF ELECTRIC TUGBOATS, THAT'S A HUGE OPPORTUNITY

BY BRIAN BANKS

PHOTOGRAPHS BY ALISON BOULIER

L

LNG Canada CEO Jason Klein wanted to make a splash. It was spring 2023, and in just a few months, a who's who from the liquefied natural gas industry would be in Vancouver for the International Gas Union's first global LNG conference since COVID-19. Ocean-going carriers weren't due to start hauling the liquid-gas output from Klein's Shell-led, $40-billion joint venture, under construction 650 kilometres north in Kitimat, on the traditional territory of the Haisla Nation, for two more years. But he had an idea.

A few years earlier, with LNG Canada's support, the project's marine services provider, HaiSea Marine—a joint venture between the Haisla Nation and Vancouver's Seaspan ULC, a marine conglomerate that operates tugs, barges, commercial ferries and a shipyard—had ordered three battery-electric harbour tugboats. It was a bold move. At the time, no one had yet built a fully electric working tug. But LNG Canada wanted the lowest-emission fleet possible to service the 170 carriers expected annually in Phase 1 of the project. As well, the Haisla Nation, HaiSea's majority owner, wanted the cleanest and quietest tugs available to protect the integrity of the Douglas Channel, a 140-kilometre corridor of dense coastal rainforest and waters rich with orca, humpbacks and other marine life leading to the terminal.

What ultimately made it possible was having the right designer on hand: Vancouver naval architect and marine engineering firm Robert Allan Ltd.

Though hardly a household name, the 97-year-old, 100-employee company is "probably the foremost tug designer in the world," says John Snyder, New York–based managing editor at Riviera Maritime Media. Pick any major global port, and you're likely to find Robert Allan tugs; more than 1,000 are currently at work around the world. Seaspan and Robert Allan had a long history of collaboration, so they started talking. At first, an electric-diesel hybrid seemed like the solution. But by the time Robert Allan signed a contract with HaiSea in 2019, they'd settled on a state-of-the-art vessel that would be able to do its regular harbour tug duties, getting large ships in and out of their berths, on electric propulsion alone. Packed with more than 5.2 megawatt hours (MWh) of batteries—the equivalent of about 65 Teslas—it promised near-instant power, none of the dirty exhaust or carbon emissions you'd get from a regular tug, and very little noise.

The Volta, one of two electric tugboats in SAAM's towage fleet, leaves the dock in Vancouver harbour

Klein knew that the first of those new tugs, the HaiSea Wamis, was nearing completion at Sanmar Shipyards in Türkiye. So he asked his counterpart at Sanmar for a favour: Could the builders speed up their work, get the boat to Vancouver and park it at the dock outside the Convention Centre in time for the conference?

The answer was yes, barely.

"The shipyard pulled out all the stops," says Michael Fitzpatrick, CEO at Robert Allan, recounting the story in his office tower boardroom, an eight-minute walk from where the Wamis docked. "The conference started on a Monday, and it arrived on, like, the Saturday before—just in time. They made a big splash about it. And it is a big splash. It was the first full battery-electric boat we'd done."

Getting the Wamis out of the shipyard wasn't the only hurdle. After leaving the dock on the Sea of Marmara near Istanbul, the 28-metre tug had to sail under its own power (it has two backup diesel generator sets) through the Mediterranean, across the Atlantic, through the Panama Canal, up the Pacific coast to Burrard Inlet and finally under the Lions Gate Bridge into Vancouver harbour. It took roughly 50 days—50 days of people at Robert Allan, HaiSea and LNG Canada anxiously tracking its progress on the MarineTraffic website. "There were a lot of eyeballs watching it every day," says Fitzpatrick.

Today, anyone with an interest in tugboats or overall marine decarbonization has their eyeballs on the budding, low-emission maritime hub taking shape in Robert Allan's own backyard. The Wamis, along with its two electric sister tugs, the HaiSea Wee'git and HaiSea Brave, plus a pair of Robert Allan–designed dual-fuel LNG-diesel long-range escort tugs, the HaiSea Kermode and HaiSea Warrior, are now in the Douglas Channel. Their crews, which include a sizable percentage of Haisla Nation members, are making final preparations for the start of carrier operations this summer. Meanwhile, back in Vancouver, SAAM Towage, one of the Western hemisphere's largest tugboat operators, headquartered in Chile, is running two smaller Robert Allan electric tugs. Delivered in 2024, they're used to assist bulk carriers taking coal from Neptune Terminals, co-owned by Elk Valley Resources, on the north shore, and to service ships loaded with grain and crude oil. Added to that, the tugs' battery maker, Corvus Energy, the world's largest supplier of marine batteries, is local. Although it is headquartered in Norway, Corvus was founded in Richmond and still does its R&D, product development and some manufacturing there.

The story of how HaiSea and SAAM, working with Robert Allan and Corvus, chose zero-emission tugs, found partners to help justify the upfront costs (SAAM's boats were about 70% more than a same-size diesel tug, which vary widely in price) and tackled the charging logistics holds lessons for operators the world over. Equally revealing are the roles these boats play in their operations, and the nature of their design and performance—which seems to surprise and delight everyone. "They are amazing to experience when you know how a conventional vessel works," says Sander Bikkers, president of SAAM Towage Canada.

Bikkers is sitting at a small table next to the galley aboard one of SAAM's new tugs, moored at the company dock on the southeastern edge of Vancouver's harbour. Large terminal buildings, cranes and stacks of green, red and blue shipping containers line the shore to the west; along the road behind, rail lines are jammed with tanker cars. He's just shown me the tug's battery room, where wall-to-wall rows of white metal packs are stacked 15 deep behind an airlock entrance; the spacious bridge with floor-to-ceiling-windows on all sides; and the three-megawatt power supply and charging cables on the dock. But it's the boat's sound and feel when it leaves port or digs in against the massive hull of a giant carrier that defines the contrast for Bikkers.

"At the startup [in a diesel tugboat], there's lots of noise in the engine room. You have to protect your ears. It will take some time to go to full speed. The whole vessel starts to vibrate. And then it comes up and goes. *These* tugboats," he says, gesturing around him, "the first time I was on it, I was so amazed about the silence in the engine room...And then when you're in the wheelhouse, you have to look at your gauges because you don't hear anything to judge speed. You don't feel it, you don't hear it."

Robert Allan's aim, of course, is to see that experience replicated. Locally, there are about 40 berthing tugs working in the Port of Vancouver, handling both domestic carriers and the roughly 3,000 deep-sea cargo ships that arrive annually. But bigger opportunities abound. To that end, it's stoking demand for its electric tugs by leveraging its time-tested strategy of partnering with leading international shipyards. By the end of 2024, two more of its Sanmar-made ElectRA tugs were deployed in Europe—at the Sanmar Shipyard and the Port of Oslo—and seven more were on order for use in far-flung locales. Robert Allan has also signed agreements with two other shipyards in Türkiye that give them the exclusive rights to sell and build two other new electric lines, the VoltRA series (to Med Marine) and the eRA series (Uzmar Shipyard). On top of that, it says it expected to finalize orders for at least seven more electric tugs, to be built at different shipyards outside of Türkiye, early in 2025.

"Last year, when all five electric tugs were in Vancouver, they represented 50% of the global market," says Fitzpatrick. "By this fall, there will be about 25, and 14 will be Robert Allan. It's not like, 'Boom, they're taking over.' But it's growing."

T

The marine industry has come a long way from its messy origins, but it's still a dirty business. According to a 2024 Pacific Environment report, 50,000 large cargo ships emit roughly a billion tonnes of greenhouse gases a year—up to 3% of global CO_2 emissions—along with "huge amounts of toxic particulate matter, acid gases and metals." The global ship-handling and coastal tugboat fleet, which numbers around 20,000, adds to that stew, as do all the other working vessels involved in intercoastal shipping. While carbon emissions are the long-term focus, air pollution has an immediate impact on

Robert Allan's CEO, Michael Fitzpatrick (right), with project director and naval architect Mike Phillips. Below: part of the battery room on the SAAM Volta

port communities. One study cited by Pacific Environment found that more than 200,000 premature deaths were attributable to global shipping-sourced emissions each year.

The five HaiSea and SAAM electric tugs eliminate about 7,500 tonnes of emissions annually—the equivalent of 1,500 combustion-engine cars. While not insignificant, electrifying even a large number of tugboats isn't going to make a dent in overall shipping emissions. For ocean-going container ships, bulk carriers and tankers, other measures are needed.

In April, the International Maritime Organization's Marine Environment Protection Committee will meet in London. Its goal is to finalize binding fuel-standard and GHG-pricing policies to keep the sector on track to meet the IMO's target of net zero emissions around 2050. For large transoceanic vessels, electrification won't be part of the solution until the amount of energy that batteries can store increases exponentially. Instead, the focus is on increasing efficiency, coupled with a move to replace carbon-intensive bunker and diesel fuel with lower-carbon alternatives—chiefly methanol, ammonia, hydrogen, biofuels or renewable diesel. In Europe, the introduction of the FuelEU Maritime Regulation offers a preview of what the IMO plan might look like. Starting this year, all ships over 5,000 gross tonnage—anything bigger than a small cargo ship—calling at European ports are required to reduce the GHG intensity of their energy use,

compared to a 2020 baseline, on a graduated scale (2% in 2025, 6% in 2030, up to 80% in 2050). Non-compliant ships must pay fees or buy offsets.

"It's not certain the IMO will go ahead with the [fee] at this point," says David Wooley, director of the Environmental Center at Berkeley's Goldman School of Public Policy and lead author of the Pacific Environment report. "But there is a lot of momentum there, and it's supported by the industry itself, the Maersks and some of the other big operators of bulkers and tankers and container vessels."

Despite the IMO's focus on larger vessels, Wooley stresses the potential impact of electrification for harbour craft, including tugs and ferries, as well as vessels used for intercoastal and inland shipping. For operators of these boats, he says, switching from fossil fuels to electricity will cut carbon emissions, and "it's got a huge immediate benefit in terms of air quality in port, coastal and river-based cities."

Many jurisdictions are already mandating stiffer action to improve air quality by reducing diesel soot and nitrogen oxides (NO_X) from harbour craft, in conjunction with meeting climate goals. Canadian rules require ships in port areas to burn low-sulphur fuel, for example. The FuelEU regulations also require container and passenger ships to plug into shoreside electrical power rather than running their engines while docked. Vancouver first introduced this measure for cruise ships back in 2009. In January, the U.S. Environmental Protection Agency approved the California Air Resources Board's waiver request to update its Commercial Harbor Craft Regulation. The changes accelerate the rate at which ferries, tugs and other workboats must further reduce emissions and/or switch to zero-emission propulsion. According to Wooley, this change, the FuelEU program, along with similar measures being adopted in China and India, will "create a big surge in demand for shipyards that produce those kinds of vessels."

Understanding the range of vessels that are candidates for electrification—and working to expand it—is the prime directive at Corvus Energy. Its Richmond operations are a mix of cubicles and a modest, high-ceiling warehouse space with a semi-automated production line and assembly area, and an R&D lab behind closed doors. I'm met by Maryam Ebrahimian, senior sales manager for North America, and Mariella Deltcheva, senior vice-president of manufacturing and a Corvus board member.

"Anything you see out in the sea can be electrified now, as long as they go back to dock for charging once a day," Ebrahimian explains. "Ferries are the biggest segment for us, followed by workboats, including tugs, offshore supply vessels, wind-farm supply vessels, aquaculture fishing boats, yachts."

Both say the tug market is one of Corvus's fastest-growing segments globally. "I think it is the future," says Deltcheva. "All you have to do is go to a big port

●● **Sander Bikkers, president of SAAM Towage Canada, through the rear porthole of the SAAM Volta**

and see all those tugboats. The business case has to make sense for individual operators, but it's there for the taking."

Corvus is extending the reach of its products and the size of the potential market in two main ways: scouting for suitable new cells so it can reduce the size and weight of its battery modules while increasing their energy density, and adding flexibility to the way vessels can install them so they're able to get more energy storage into the same size boat. Its newest offering, the Dolphin line, for example, packs about three times the energy in the same space as its longstanding Orca batteries (the ones used in the HaiSea and SAAM tugs). The new modules also don't need to be stacked on a rack when they're installed, which saves on weight and space. Says Deltcheva: "Everybody loves Dolphin because it can fit into nooks and crannies, is very configurable and more powerful than the equivalent in our older Orca for the same volumetric density."

Corvus was founded in 2009. A year earlier, Robert Allan designed its first electric-diesel hybrid tugboat. About the same time, it created its first in-house tool to model emission reductions, capital costs and ongoing total cost of ownership for different powering configurations.

These developments coincided with a major organizational milestone. In 2008, a group of 10 senior employees bought the company from Robert Allan, grandson of the founder. That original ownership group has now grown to 32. At the time of the buyout, Fitzpatrick was one of the firm's senior naval architects. Originally from Toronto, he ran a windsurfing store before moving to Australia to attend university. He got a naval architecture degree and worked with an Australian ship design firm, then returned to Canada to work at Robert Allan.

Fitzpatrick became CEO in 2015. By then, the focus on decarbonization had started to build. But the most dramatic shift came around COVID, in step with a growing corporate focus on net zero. Before 2020, he says, there was modest interest in how to reduce emissions. "But coming out of COVID, it was a complete change."

For Robert Allan, Fitzpatrick says, this translates into a big opportunity. Boats ordered today will still be in operation in 2040 or 2050. That means they either need to support net zero strategies now or be retrofittable so they do so in the future. "Our share of the diesel harbour tug market is maybe 30% internationally," he says. "Our share for lower-emission, complicated vessels is more than 50%. We're moving into an area where our expertise is more valuable than it was before."

Commissions for new designs drawing on that expertise are also the lifeblood of Robert Allan's business. "We're basically consulting engineers," says Fitzpatrick. "We're generating intellectual property in that we get to design something, and then sell it again and again and again. The royalties we collect represent a significant percentage of our revenue and almost all of our profit."

In 2019, roughly one out of 10 vessels that the firm designed were reduced-emission solutions. Now, it's about seven in 10. "They're not all zero-emission," Fitzgerald stresses. "With electric tugs, you need clean electricity for it to make any sense. You also need operations and shoreside infrastructure that can support that." Around the world, he estimates that pure battery-electric tugs could take 10% of the market, with hybrids taking another 20%. "The majority of the market needs other options." The alternatives include diesel tugs fitted with exhaust after-treatment to meet the IMO's newest standard for NO_x emissions, as well as tugs and other working boats designed to run on LNG (which eliminates NO_x and reduces CO_2) or green methanol, which is the "least bad viable solution" from a CO_2 perspective, Fitzpatrick says.

Later this year, in fact, the world's first methanol-fuelled escort tugs, designed by Robert Allan and built at Sanmar, will go into operation in the Port of Vancouver. The two tugs, bought by Kotug Canada, will escort oil tankers between the Trans Mountain terminal and the open Pacific. Since that facility was expanded last year, oil tanker traffic through the harbour has tripled, to an average of 17 vessels per month, up from five or six.

Even if you've got clean electricity and the right operational profile, the decision to buy battery-electric tugs still faces another major barrier: upfront capital. Bikkers's experience at SAAM Towage is a case study in how operators can use partnerships and creative financing to overcome this hurdle.

The story starts with a fleet-plan review Bikkers launched in 2020. While SAAM has more than 20 tugs in its B.C. fleet, its harbour tugs in Vancouver mostly work close to the company dock. The harbour's tides produce a strong current, which means the majority of ship movement and tugboat activity takes place in a few narrow windows each day, when the tide is slack. "We found out, on average, most of our tugs only work nine hours a day maximum," says Bikkers. "The other 15 hours, they're either being serviced by our maintenance department, or they can be charged. It makes perfect sense to buy an electric tug."

Given the price tag, however, the electric option didn't make sense without some guarantee they could bring in added business to offset the higher cost. Bikkers's solution: find large companies that would sign long-term contracts with SAAM in order to reduce their overall CO_2 emissions by replacing the diesel tugs servicing their vessels with electric. That's when German bulk carrier Oldendorff, an existing diesel tug client, introduced SAAM to one of its clients, the mining giant Teck. At that time, Teck was the co-owner of Neptune Terminals, where it loaded steelmaking coal mined in the interior of B.C. (That business was acquired by Glencore and renamed Elk Valley Resources in 2024.)

"We thought it was a great initiative," says Michael O'Shaughnessy, now Elk Valley's vice-president of marketing and logistics. "We have some control over our Scope 1 and Scope 2 emissions. But once you get into Scope 3, we count on our partners' expertise to lead that. We would never have thought of an electric tugboat." In late 2022, the companies announced an agreement that would see SAAM acquire and deploy two electric tugboats to service the Neptune terminal on an exclusive long-term contract. That and $8.6 million in funding from the province through its CleanBC program were enough to seal the deal.

HaiSea's new electric harbour tugboats, led by the Wamis, will be servicing the new LNG terminal in Kitimat

PHOTOGRAPH ANDREW FYFE

W

While getting the HaiSea Wamis to Vancouver in time for the 2023 LNG conference was a highlight for everyone involved, it was also a prelude to an even bigger moment for Jordan Pechie, president of Seaspan Marine Transportation, and Crystal Smith, chief councillor of the Haisla Nation: the day the Wamis sailed "home" to Kitimat last summer.

Named for the Haisla explorer who, according to Haisla oral history, sought sanctuary with his family in Kitamaat Village, marking the beginning of the Haisla Nation, the Wamis sailed up the Douglas Channel and into Kitamaat guided by a crew of eight Haisla members. "It was of massive significance to have that particular tug come into our waters and come home first," says Smith.

The LNG Canada project, as well as Cedar LNG, a second processing venture, majority-owned by the Haisla Nation, now under construction in the same channel, are regarded by the Haisla and neighbouring Gitxaala and Gitga'at First Nations as fundamental to a new era of economic reconciliation and generational career opportunities. As such, the Wamis and the rest of the HaiSea tug fleet and the opportunities they provide are a tangible and highly symbolic extension of that promise.

Pechie, a former marine captain, was hired by Seaspan six years ago to be senior project manager on the HaiSea Marine project. He saw the project through its early design stages, working closely with Robert Allan; hired the team that oversaw the boats' construction in Sanmar; and even designed and commissioned the floating operations and maintenance facility, called the Zewén (Haisla for coho), now onsite and in use by the team running HaiSea. Appropriately, then, he was also aboard the Wamis, alongside Smith, when it sailed into the village.

"Seeing the tears in all the mariners' eyes as they got this incredible opportunity to come back home and work, and being welcomed by the village on the dock, with hereditary chiefs and everyone singing...it's something you can't explain until you feel it," says Pechie, who is Métis. "This doesn't happen normally. We've partnered with an entire nation."

The fact that the HaiSea tugs also represent a new frontier in the marine world isn't lost on Smith. "We could not be more proud to be part of that first with Seaspan. And seeing where Indigenous participation can play a meaningful part in changing an outlook on a whole industry, it was absolutely amazing."

Fitzpatrick and the team at Robert Allan might not have known it when they started, but it's clear now they couldn't ask for a better calling card. "People's reaction...it's still ongoing," says Smith. "We have other joint ventures that come visit Kitamaat. And they all ask: 'Where are the tugs?'"


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Congratulations to these recent appointees

Andrew Saunders, President and CEO of The Globe and Mail, extends best wishes to the following individuals who were recently featured in the Report on Business Section of The Globe and Mail newspaper. Congratulations on your new appointments.

Anu Nijhawan
to Chair of the Board of Governors, Canadian Tax Foundation
Bennett Jones

Mike Ludwick
to President and CEO
Bison Transport Inc.

Jérôme Porlier
to Executive VP, Tissue
Cascades

Jean-David Tardif
to Executive VP, Packaging
Cascades

Karen Sheriff
to Chair of the Board of Directors
Emera Inc.

Tom Woods
to Chair of the Board of Directors
Institute of Corporate Directors

Dexter John
to Board of Directors
Institute of Corporate Directors

Christian Fournier
to Chair of the Board of Directors
Insurance Bureau of Canada

Jeff Matthews
to President and CEO
Irving Oil

Darwin G. Sobkow
to President and CEO
Richardson International

The Honourable Patrick J. Boyle
to "Of Counsel", Tax Law and Tax Litigation & Dispute Resolution
KPMG Law

An Van Gerven
to President
Pfizer Canada ULC

Ziyana Kotadia
to Board of Directors
Plan International Canada

Rania Llewellyn
to Board of Directors
Plan International Canada

William Onuwa
to Board of Directors
Plan International Canada

Scott Donald, CPA, CMA
to Vice-Chair of the Board
Western Surety Company

Greg Salmon, CPA, CMA
to President and CEO
Western Surety Company

Ken Bolt
to President and CEO
Wynward Insurance Group

CHANGEMAKERS

CHAR Technologies turns forestry waste into renewable energy

photograph by **Bailey McLean**

Meet 20 emerging leaders reinventing how Canada does business

■ Now more than ever, we could all use a little sunshine. (Like, come on, 2025—give us a break already.) That means it's the perfect time for our annual Changemakers list. Once again, we put out the call for nominations from both the business community and across *The Globe and Mail*, searching for young entrepreneurs, academics, activists and other professionals devoted to making the world a better place. And we found them—paying gig drivers more fairly, giving a boost to Black entrepreneurs, providing safe spaces for Indigenous patients, making patent searches easier, helping break down Canada's monopolies and more. Get ready to feel inspired.

CHANGE

Sasha Luccioni

AI researcher with **Hugging Face**

For helping to measure the environmental impacts of generative AI

by **Joe Castaldo**

photograph by **Guillaume Simoneau**

■ Sasha Luccioni came across an academic study in 2019 that changed the course of her research. She was completing a post-doc at the Mila AI Institute in Montreal when she read a paper from the University of Massachusetts, Amherst, that estimated the carbon footprint of training different AI models. At the higher end, the process could emit five times the carbon dioxide that a single car spews out during its lifespan. “I thought, *That can’t be the case for all AI models*,” Luccioni says. “These were huge numbers.”

She was correct that not every AI model is an energy hog. But her work since has shown that the generative AI models that have recently exploded in popularity require a lot of energy. Today, Luccioni is one of the leading researchers on the environmental impact of AI, bringing much-needed scrutiny to the climate footprint of our AI era and forcing companies, governments and regulators to grapple with the potential costs.

Luccioni worked in the private sector after finishing her PhD in AI at the Université du Québec à Montréal in 2016 but soon hit a quarter-life crisis. “I was increasingly worried about the climate crisis and had climate anxiety,” she says. She wondered if she should quit her job to plant trees or teach kids about composting. Her partner suggested she put her PhD toward combating climate change. “That was my eureka moment,” she says.

Luccioni convinced Mila scientific director Yoshua Bengio to take her on as a postdoctoral researcher, and she became a founding member of Climate Change AI, a non-profit that brings academics together to explore how the technology can address environmental challenges. But after reading that UMass study, led by Emma Strubell, in 2019, she realized developers had no way to determine the environmental effects of their own models.

Along with her colleagues, Luccioni helped to build software called CodeCarbon that estimates the amount of carbon dioxide produced by executing code and offers suggestions for tapping into computing power fuelled by renewable energy. It’s been downloaded millions of times since its release in 2020. She’s also worked with Strubell on a study showing that general-purpose AI models—like those underlying ChatGPT—are more expensive and energy-intensive than those tailored for specific tasks, challenging the industry ethos that bigger models are always better.

One of her studies found that training an open-source generative AI model used as much energy as 30 homes in a year and emitted nearly 25 tonnes of carbon dioxide, equivalent to driving a car five times around the world. That might not sound like much, but the proprietary models these days are orders of magnitude larger, and using them after training consumes energy, too.

These days, as the AI and climate lead at New York machine-learning company Hugging Face, Luccioni is working to convince developers to take part in a program to score models based on energy efficiency. The idea was inspired by the Energy Star ratings developed by the Environmental Protection Agency to designate energy-efficient products, such as TVs, fridges and lightbulbs. A similar system for AI would bring about more transparency—companies are reluctant to release many details about their models—and allow users to make informed choices.

Luccioni has had no problem working with open-source models, but companies have so far been reluctant to subject their proprietary AI models to this level of examination, even if they agree that the concept is a necessary one. “It’s been an uphill battle,” she says. “They’re afraid of looking bad, essentially.”

But Luccioni’s work is keeping the pressure on. Besides, if AI companies remain opaque about the climate impact of their models, they’re looking pretty bad already.

MAKERS

CHA

Yinka Adesesan

Black Innovation Programs Manager at Toronto Metropolitan University's **DMZ**

For helping to unlock the potential of Black entrepreneurs

by **Rosemary Counter** / photograph by **William Verse**

■ At home in Nigeria, Yinka Adesesan watched too many talented entrepreneurs launch businesses that started strong and fizzled out—his own included. Granted, a customized T-shirt store (run out of the back of his mother's car, no less) probably wasn't a million-dollar idea, but its teenage founder had the kind of ambition and innovative gusto that would serve him well no matter what he did. These days, Adesesan is putting it to work at TMU's business incubator, DMZ.

After immigrating to Canada with his family in 2022 (via Barcelona, where he earned a master's in design management), Adesesan landed at DMZ, where he was promptly promoted. His tall task: "Identify and bridge the gaps in opportunity, funding and support that disadvantage Black founders." Statistics Canada reports that a mere 2.1% of the country's business owners are Black (more than two-thirds of them men); at DMZ, 24% of its 850 portfolio companies are Black-led.

Adesesan is watching that number climb thanks to his many and multifaceted efforts. Among them, over $2.5 million distributed in grants and services that directly support 1,000-plus Black entrepreneurs across Canada. Programs include the Black Innovation Launchpad, which teaches entrepreneurial skills to aspiring business owners, and Dream Hub virtual workshops, which allow founders to network and collaborate. The $5,000 Black Youth Entrepreneurship Award, meanwhile, goes to a particularly impressive up-and-coming founder.

Adesesan's biggest endeavour thus far, just two months into his new gig, was leading the annual Black Innovation Summit, where 10 Black-led startups pitched a panel of judges for their portion of $55,000 in funding. The winner, if you're curious, was Montreal-based Cleanster, which connects property owners with top-rated cleaners. At its helm was (young, Black, female) Gloria Oppong; her perfect pitch won both the top prize of $30,000 and the $5,000 People's Choice Award.

Summit guests, meanwhile, enjoyed a day-long networking event and roundtable discussions to share their successes and failures and mingle with like-minded entrepreneurs. "Yinka's commitment to connecting as many Black entrepreneurs as possible to our programs and collaborating with other players who are also dedicated to a more equitable ecosystem has transformed DMZ into a true catalyst for change," says DMZ executive director Abdullah Snobar. "He's driving widespread impact across Canada by helping more Black-led startups thrive through partnerships and collaboration."

Crucially, Adesesan's "founders first" philosophy nurtures the business owner more than the actual business—90% of startups fail, and many entrepreneurs fail many, many times before they finally succeed. "Failure is still a success if it makes you smarter," he says. The key is to find another idea and try again—but capital helps, and that's DMZ's mission. As Adesesan puts it: "Just being able not to worry about money helps you do better business."

NGE

MAKERS

CHANGE

Orlane Panet

For helping to nourish the concrete jungle

Co-founder of **MicroHabitat** in Montreal

■ It's not often that corporate sustainability projects extend beyond ambitious declarations about carbon neutrality on company websites and into the tangible world. But Orlane Panet, the Montreal-based co-founder of MicroHabitat, is spreading a service that allows her clients to get their hands dirty—and fill their bellies, too.

MicroHabitat is an urban farming company that partners with corporations, real estate companies and government institutions like hospitals and schools to give unused spaces—like rooftops or vacant lots—new life as mini farms. The concept has produced bountiful results: MicroHabitat clients have donated to 38 food banks across North America and cultivated more than 73,000 pounds of fresh local produce. They've also donated 21,752 breakfasts to Canada's Breakfast Club and 6,500 meals through America's No Kid Hungry initiative.

MicroHabitat was conceived in 2016 by Alexandre Ferrari-Roy, a friend of Panet's. She, meanwhile, was fresh out of business school; inspired by what he was attempting she joined him. While he developed the biodiversity and farming-related parts of the operation, Panet tackled the nitty-gritty of making the business actually work. "I've done all the jobs my staff have done," Panet says. With the company now up to 50 permanent employees and 100 seasonal farming staff, "I know the granularity of every role," she says.

After initially targeting the hospitality industry, Panet and Ferrari-Roy decided to broaden their impact so that more people could benefit from their model—which, after all, solved a number of social and environmental challenges. "We connected with major real estate players and property owners with global portfolios that wanted to bring forward a sustainable action," she says. "But it goes beyond sustainability, touching social impact and just the quality of life of human beings in general."

Since then, MicroHabitat has expanded into office, retail, distribution and industrial spaces, with clients ranging from Calgary's suburban Southcentre Mall to the rooftops of skyscrapers in Dallas and New York City. Panet says that amid the growth, the COVID-19 pandemic—which initially presented as an existential threat—became an opportunity. At first, companies withdrew from their office leases. Now, however, they're looking for ways to entice tenants with amenities that foster community and connect workers with nature. MicroHabitat's gardeners host urban farming workshops and facilitate donations of produce to local charities, helping employees and tenants feel like they're doing something for the greater good. "People have redefined the purpose of the workplace. Humans need to have access to outdoor spaces, to connect with community, to connect with nature," Panet says. "People are connecting deeply with what MicroHabitat is offering."

This year, MicroHabitat is set to expand into the U.K., Switzerland, France and Germany. But ask her about the project that's closest to her heart—the one she contemplates during late nights at the office—and she'll highlight MicroHabitat's local initiatives. "We work with Quebec's youth protection department, and that has a deeper meaning to me," she says. "We're creating a space where food becomes a platform for education, for connection."

That sparkle she sees in the eyes of MicroHabitat's young farming participants is what drives her. "These kids are proud of growing food, and they see how magical food can be."

by **Claire Porter Robbins**

photograph by **Kristine Nyborg**

M

AKERS

CHANGE

Andrew White

Founder and CEO of Toronto-based **CHAR Technologies**

For turning forestry waste into biocoal for making steel

by **Jameson Berkow**

photograph by **Bailey McLean**

Making steel is one of the most carbon-intensive activities on the planet. Blast furnaces consume vast amounts of coking coal to reach the scorching temperature—1,000°C—required to create molten iron, the essential ingredient in steel. And the industry is responsible for up to 9% of global greenhouse gas emissions.

Andrew White didn't know much about that back in 2009, when he was doing his master's in chemical and environmental engineering at the University of Toronto. He and his professor were visiting a farm outside London, Ont., that was making biogas via anaerobic digestion. The process uses bacteria similar to those that exist inside a cow's stomach to break down organic waste—such as food or manure—anaerobically, meaning without oxygen. "We saw this big pile of compost—fibrous, what looks like wet, dirty straw," says White. "That was the waste product from the anaerobic digestion process."

The stuff stunk—bad. "It smells very strongly of ammonia—*really* strongly," says White. They shovelled some of it into black garbage bags—which, by the way, failed to contain the stench—loaded it into the professor's SUV and drove it back to Toronto. "We started to ask whether we could make activated carbon—like the stuff in a Brita filter—out of this material, to pull sulphur out of the gas."

The result of that work eventually led to the creation of CHAR Technologies Ltd., a publicly traded company on the TSX Venture Exchange. Using a technology called high-temperature pyrolysis, CHAR is able to turn forestry waste products (the parts of the tree lumber companies would otherwise throw away) into various renewable energy products, including biocoal, which can replace metallurgical coal in steelmaking. The process is autothermal, meaning no external heat sources are required, and excess energy is created, thereby making the final product carbon-negative.

In 2023, CHAR became the first Canadian company to receive funding from the ArcelorMittal's XCarb Innovation Fund for its efforts to replace coal in steelmaking. CHAR has also been working with Hamilton-based Dofasco—now owned by ArcelorMittal—since 2017 to produce replacements for metallurgical coal. Dofasco is one of many producers in the process of switching from traditional blast furnaces to electric arc models, which have been shown to reduce emissions by roughly 75%. Electric arc furnaces require dramatically less coal, making it possible for CHAR to produce enough biocoal to fully meet steelmakers' needs.

Over the next several decades, White says he expects steelmakers to shift to whole new technologies that will allow them to reduce or eliminate their carbon footprint. "But between now and the next 25 to 30 years, there's a lot of these industrial processes that are going to keep running, and we can decarbonize them for the short term."

White hopes to bring CHAR's technology to a wide range of other industries, too. "Is Ontario going to continue to be a leader in battery technology? Because a bunch of those components are carbon-based. Could they be biocarbon instead of fossil carbon? That's just one example," he says. "You could go into energy storage like supercapacitors—all sorts of cool and interesting things."

MAKERS

CHANG

Meet more young leaders helping to change Canada for the better

HARRISON AMIT

Founder of Hovr (Toronto)

When Harrison Amit arrived in Toronto in 2018, he was awed by ride-sharing services like Uber and Lyft. “We didn’t have those in Nova Scotia, and they were such an easy way to get around,” says the 29-year-old. Once he got talking to drivers, though, he heard a different story: “They described an incredibly exploitative model, like a mobile sweatshop.” Drivers make far less than minimum wage, can’t predict their income and have no recourse against AI technology that automatically pairs customers willing to pay the most with drivers willing to accept the least. Unable to resist the entrepreneurial urge to solve a problem, Amit created and launched RideHovr, a.k.a. Hovr, last May, with the tagline “100% Fare is 100% Fair.” Drivers get a fixed base rate, plus additional pay for more time and distance, while Hovr gets a mere dollar per trip—from the rider. How much more does an ethical ride-share cost? “Most trips are actually less expensive than Uber,” says Amit. Hovr is currently working at ramping things up for supply to meet demand: More than 55,000 drivers are currently on Hovr’s waitlist, and 80,000 Torontonians have downloaded the app. **/RC**

BRENDAN MACARTHUR-STEVENS

Partner at Blakes (Calgary)

When he’s not litigating commercial disputes for one of Canada’s premier law firms, Brendan MacArthur-Stevens is feeding his soul by advocating for LGBTQ+ rights. Just one case among many: In 2023, for the first time in Canadian history, the Supreme Court expressly used the word “transgender” in a legal decision that recognized transgender and queer youth as “an acutely vulnerable—yet brave and resilient—group.” For the history-making moment, they might thank the young Calgarian lawyer for providing his pro-bono services to represent the underrepresented voices of the queer youth community—a community he’s proud to be part of. The historic ruling was “one of the highlights of my life,” says MacArthur-Stevens, although at just 35 years old, his work as LGBTQ+ legal champion is just beginning. **/RC**

SHERRY LARJANI

President of Spotlight Development (Toronto)

As a housing developer, Sherry Larjani was disheartened by the stigma and resistance surrounding affordable housing. So she launched The Inclusive, which dedicates 70% of its units to affordability—far surpassing the typical 10% to 20% allocation in traditional projects. With 6,000 units in progress across cities like Toronto, Mississauga and Richmond Hill, The Inclusive is more than housing—it’s a comprehensive network of support. Each development includes services tailored to the community, from food banks and education facilities to 24-hour childcare. “This is about building a model that tackles the housing crisis while truly empowering people,” she says. Rather than leaving the responsibility to government initiatives that often fall short of their stated goals, Larjani has taken the onus on herself to prove that housing can be innovative and inclusive. **/Liza Agrba**

ERIN BURY

Co-founder and CEO of Willful (Toronto)

Here’s a staggering statistic: 57% of Canadians don’t have a will. For those under 35, it’s 89%. Not long ago, Erin Bury was one of them. It was 2015. Her husband’s uncle had recently died, and the couple realized they needed to draw up a will pronto. They didn’t have kids yet, but they did own property, and they wanted to make things as easy as possible should the unthinkable happen. But as Bury and Kevin Oulds found, writing a will is time-consuming, pricey (upward of $1,500 for even a basic document) and just plain bleak. “There had to be a better way,” she says. “How do we take this really opaque, complex thing everyone knows they need but don’t prioritize because it’s uncomfortable, and democratize it?” The couple hit on an idea: a step-by-step platform that helps users distribute their assets, appoint guardians for their kids and pets, and name an executor to carry out their final wishes. In 2017, they launched Willful. “The result is a customized legal document drafted and reviewed annually by human estate lawyers,” says Bury. There are some limits—blended families, children with disabilities and so on—but for the vast majority of Canadians, Willful is a one-stop shop. So far, it’s helped more than 150,000 customers (most of them young married parents, but plenty of boomer retirees, as well) to create wills, along with power-of-attorney documents. The company’s goal is to ensure every Canadian has a will, and it’s teamed up with partners like Scotiabank, CAA and Wealthsimple to make it happen. “Our biggest challenge isn’t that we’re the David versus the Goliath,” says Bury. “We mostly compete with complacency.” **/Dawn Calleja**

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ZAIN ZAIDI

Founder of TransCrypts (Whitby, Ont.)

Generations of Zain Zaidi's family have faced upheaval and adversity, including during the chaos of the partition of India and Pakistan. That history is part of what drove Zaidi to start TransCrypts, with the aim of helping users wrest control of their personal data from bureaucracies. In his senior year at San Jose State University, where he was studying electrical engineering and computer science, Zaidi teamed up with his Toronto-based cousin, Ali Zaheer, to create their blockchain-based flagship product, which streamlines employment and income verification, allowing users to bypass traditional, often discriminatory, background checks. One of its most impactful initiatives—offered free through partnerships with non-profits—is its decentralized medical records platform. Launched near the start of the war in Ukraine, the platform allows refugees to securely store and transport their medical information. To date, it's facilitated the transfer of more than 200,000 medical records across seven countries, including in the aftermath of the earthquake in Türkiye in early 2023. That product spurred a $3.2-million funding led by Mark Cuban. "Zain is incredibly humble, curious and collaborative," says Jon French, director of University of Toronto Entrepreneurship, which housed TransCrypts before its launch as a standalone company. "He's using blockchain and AI to make a real impact on the world." **/LA**

TATIANA ESTEVEZ

Founder and CEO of Permalution (Montreal)

When Tatiana Estevez and her Quebec-based team talk about the cloud, they mean literal clouds. Some two billion people currently lack safe drinking water, and according to the UN, two-thirds of countries won't have enough water to cover their needs by 2030. "We're addressing the problem of water scarcity by, as I like to say, milking the clouds," says Estevez. A three-unit collection system (a predictive "atlas" to choose the best spots, a radar sensor to analyze the water content and quality, and durable fog collectors) essentially harvests fog, converting it to between 150 and 2,000 litres of water per unit, per day, from remote corners of the planet. A straightforward process that's comparable to windmills for water, Estevez's fog collectors are currently being put to the test in Abu Dhabi and scaling up to industrial-size models that are affordable, efficient and safe. "Water that comes straight from the source is very high-quality, comparable to distilled water," says Estevez, who was recently named by the World Bank as a CEO Water Champion. **/RC**

SANJA FIDLER

Associate professor at University of Toronto and VP of AI research at Nvidia (Toronto)

University of Toronto professor Sanja Fidler was tapped by Nvidia in 2018 to lead the GPU-maker's new research lab in the city. Her work had already spanned the gamut of AI applications, including computer vision and early stabs at generative AI, such as a music-composition program that has the distinction of being featured in an episode of *The Simpsons*. At Nvidia, the Slovenian-born Fidler has always strived to produce research that will be useful in the real world. One of the projects her lab contributed to was unveiled earlier this year. Cosmos, as the company calls it, is a world foundation model—an AI model that understands how objects move over time in 3-D space, crucial for more advanced self-driving vehicles and robotics applications. "The intuition behind this was that if I can train a model that can anticipate what's going to happen next," she says, "that model, under the hood, knows how the world works. That's what robots need." **/JC**

KAROLINA VALENTE

Founder and CEO of VoxCell BioInnovation (Victoria)

Karolina Valente's personal connection to cancer research began with her late mother's battle with breast cancer. While completing her PhD, she founded VoxCell to create 3-D bioprinted tissue for drug testing, complete with blood vessels to mimic human samples more accurately than other products on the market. With oncology drug trials facing a 95% failure rate, VoxCell's tech helps pharmaceutical companies eliminate ineffective drugs early, saving valuable time and resources in the development pipeline. The company's first product, focused on triple-negative breast cancer, launches next year, paving the way for faster, more effective treatments. "This business is about accelerating life-saving breakthroughs," Valente says. **/LA**

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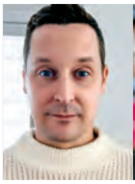
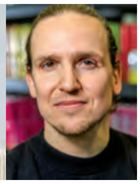

LOUIS BELLEMARE AND SIMON POULIN

Co-founders of Upside Drinks (Montreal)

Louis Bellemare, a veteran of the bar and alcohol industry, was newly sober. Simon Poulin was leaning that way. But both of them found it hard to find non-alcoholic options. Retailers had—still have—limited alcohol-free options, mostly major brands like Molson and Heineken. Any time a limited-edition craft option hit shelves, it quickly disappeared. With an increasing number of their fellow millennials and Gen Zers eschewing alcohol, Bellemare and Poulin realized there was a huge demand for a one-stop online shop for alcohol-free beer, spirits and wine. They launched Upside in 2022, filling 100 orders a month out of Bellemare's basement. Now, they're shipping 5,000. Revenue grew by 250% last year, and Poulin says they expect to hit eight digits this year. Part of that strategy involves creating a community for the sober and sober-curious, and targeting bars, restaurants and hotels both for delivery services and helping them create non-alcoholic menus to keep non-drinkers satisfied—and spending. "There are a lot of people on a mindful drinking journey," says Poulin, who now only drinks on special occasions. "It's all about inclusivity." **/DC**

AZRAH MANJI-SAVIN

Co-founder and CEO of Syzl (Toronto)

For Azrah Manji-Savin, food isn't just sustenance—it's culture, history and an economic lifeline. Growing up in a family of refugees who came to Canada during the Ugandan crisis in the '70s, she saw firsthand how selling home-cooked meals sustained immigrant communities. That ethos inspired her to co-found Syzl, a sort of Airbnb for kitchens. The idea is simple: connect food entrepreneurs with commercial kitchens on an as-needed basis and at affordable prices. It's also the first kitchen platform in North America to offer at-checkout single-day insurance. That makes scaling easier for small businesses. "We're inspired by gig workers and side hustlers," Savin says. "Flexibility is at the heart of what we do."

With most users hailing from immigrant and newcomer communities—and a majority of them women—Syzl is changing the economics of food production while staying innovative and compliant. "We're not just moving fast and breaking things," Manji-Savin says. "We're building something sustainable." **/LA**

KELLE HURD

Vice-chair for Indigenous Health, Department of Medicine, University of Calgary

As one of few Indigenous physicians at U of C, Dr. Kelle Hurd—Métis on her paternal side and with a grandmother of Luiseño heritage—is championing safe medical spaces from the inside out. Of her many positions and endeavours in urban and rural practices across Alberta, Hurd oversees educational delivery to faculty, residents and new students. "We're creating culturally safe spaces where Indigenous patients can access meaningful care that resonates with them," she says. Staff under Hurd's watch are taught trauma-informed care that incorporates Indigenous ways of healing as an adjunct to Western medicine. One small but also huge example: Accommodation of smudging—a ceremonial burning of plants to cleanse negative energy—when patients are admitted to hospital. **/RC**

RYLAN KINNON

Co-founder and CEO, SpacesShared (Toronto)

Rylan Kinnon started thinking about how to use homeowners' empty bedrooms when he was working on student mental health issues for Ontario colleges. He'd spent considerable time in Sault Ste. Marie, where the population was steadily declining. Yet, there was a lack of affordable housing, and post-secondary students were feeling the pinch. He'd read about housing models that matched students with senior citizens. The student gets an affordable room close to school; the senior gets some extra income and help with household tasks. That idea blossomed into SpacesShared, a home-sharing platform that matches students with homeowners who have empty bedrooms. Kinnon's company started in early 2023, partnering with Georgian College in Barrie, Ont., and Humber College in Toronto. Today, it works with a few dozen post-secondary schools, including Lakehead University, Trent University and the University of Toronto, with more to come. **/Rachelle Younglai**

MAKE

KELDON BESTER

Founder of the Canadian Anti-Monopoly Project (Ottawa)

In 2017, when Keldon Bester was studying at the Harvard Kennedy School, Lina Khan—a rising star among antitrust thinkers who would later become chair of the U.S. Federal Trade Commission—gave a talk to a small group of students. Bester already sensed that something had gone badly wrong in the economy, with each sector dominated by just a few companies, and Khan's talk—an emerging antidote to the long reign of the bigger-is-better corporate ethos—had him hooked.

Then came a formative summer in Washington, D.C., at the Open Markets Institute, a competition-policy think tank that fought against monopoly power. Bester saw how to wield "a powerful set of ideas" to foment change. Back home in Canada, after two years at the Competition Bureau, he leapt into an activist role by co-founding the Canadian Anti-Monopoly Project—just as the federal Liberals proposed a potential overhaul of the 1980s-era Competition Act.

Bester was there in Ottawa calling on Parliament to break from the laissez-faire law that effectively greenlit every corporate merger. As executive director of CAMP, he testified at House and Senate committees, and helped build political support to toughen rules on mergers in heavily concentrated industries. These and other changes in the new Competition Act garnered rare unanimous approval in a fractious Parliament.

As momentum accelerates, the daily work of change churns on. In the fall of 2024, Bester co-wrote a report that detailed the deleterious taint of monopoly power throughout the Canadian food production system, from seeds and fertilizers to the kitchen table. **/David Ebner**

STEPHANIE CURCIO

CEO of NLPatent (Toronto)

Search for "chair" in a patent database, and you won't find it described as a chair—it's a "structure for supporting a seated human body." That complexity is what Stephanie Curcio's NLPatent simplifies. After years as a Bay Street IP lawyer, she co-founded the company to harness AI for navigating patent data. Using advanced language models, the platform decodes dense patent language to help unlock innovation. Since launching its revamped system in 2022, the company has achieved over 100% year-over-year growth, serving 55 law firms, universities and other clients across the U.S., Canada, Europe and Asia. "We're democratizing access to patent data," Curcio says. **/LA**

EFOSA OBANO

Founder of the Black Founders Network & African Impact Initiative (Toronto)

When Efosa Obano was growing up in Nigeria, access to electricity and the internet was a luxury, not a given. "I remember learning that there were places in the world where those things were available 24/7," he says. "And I realized that entrepreneurs were the ones creating that access." After graduating in 2018, he launched the African Impact Initiative to support entrepreneurs across the continent, and in 2021, he founded the Black Founders Network (BFN), which supports Black entrepreneurs in Canada and abroad. His efforts have empowered more than 15,000 entrepreneurs with training and facilitated more than $10 million in funding to fuel their business growth. "I want to get to a place where seeing thriving Black founders in every industry is completely ordinary," he says. **/LA**

JULIE SEGAL

Senior program manager, climate finance, at Environmental Defence (Montreal)

Julie Segal's role at the advocacy organization Environmental Defence is to advance climate-related financial policy and regulation—a job that just got a whole lot harder under Trump 2.0. But if anyone can keep climate justice top-of-mind in a world gone mad, it's Segal, who's also a visiting fellow on just transition at the Grantham Research Institute at the London School of Economics. At just 29, she's advised on the Climate-Aligned Finance Act in the Canadian Senate, appeared numerous times at the standing committee on the environment and sustainable development in Ottawa, and has presented at conferences worldwide, including the OECD's 2024 Forum on Green Finance and Investment. She's also had high-level meetings with most of Canada's major federal parties—a rare thing for an environmental NGO—to speak about climate change's impact on the financial system, "both in terms of how finance works and how finance is at risk because of it, and to convey to them some truths that were tough to swallow," says Keith Brooks, Environmental Defence's programs director. "Julie did a lot of work to frame this up as a missing piece of Canada's climate plan and to push for commitments." **/DC**

In Canada, women have led the way in the growth of the game

Game changer

Christina Litz, president of the Northern Super League, on how the new six-team women's soccer league is pitching a whole new audience

The highlight of my soccer career was scoring 10 goals in one game when I was nine. It was pretty downhill from there. We all have our skills. I'm not an athlete. I'm here to enable really good athletes.

The Northern Super League was born because Diana Matheson, former national-team midfielder and Olympian, and overall super-smart woman, wanted to stay involved in the sport after the end of her playing career. I was brought in to help operationalize the league—take the big idea and build it. We launched the name and brand last spring, and we signed a few major broadcast agreements, so next year our games will be carried on TSN/RDS, and CBC and Radio-Canada.

I'm from Winnipeg, and my earliest and fondest memories are around going to Bombers and Jets games. I've always been a casual fan, though, and I don't think sport has done a very good job of welcoming people who aren't avid fans into the experience. When I made the transition to the Canadian Football League from entertainment and women's lifestyle, it was intimidating. I had a great experience, but it speaks to the fact that there's so much opportunity to welcome people in, no matter what kind of fan they are. I see women's sports going out to communities that haven't always been welcome—whether it's the LGBTQ+ community or others—and saying, "Come on in." And guess what? Once you go to a game, you want to come back. That's a good business model, and it's embedded in the DNA of women's professional sports.

April 16, 2025
Inaugural kickoff

Six teams

AFC Toronto
-
Montreal Roses
-
Vancouver Rise
-
Calgary Wild
-
Halifax Tides
-
Ottawa Rapids

We're going to be in six markets across the country, and the majority of our roster is going to be Canadian. In Canada, in particular, women have led the way in the growth of the game—Canadians know the names of players like Diana Matheson and Christine Sinclair, even more so than on the men's side, which is a tremendous advantage for us. And soccer is so international, so when we look at growth potential, we're looking worldwide. We believe we'll be a very attractive market for players around the world. Canada is a great place to live and has a great reputation. And out of the gate, we'll likely be in the top five women's leagues in terms of pay, with a salary cap of $1.6 million per team, a guaranteed minimum wage of $50,000, and one player on every team who can be paid outside that cap. And because this is a league built by a player and with players, we've got very friendly benefits: progressive maternity leave, access to mental health support, even benefits relating to fertility treatments.

It's a very attractive market, and we're seeing that in the players being signed to our league on the international front. They can potentially play here and then look at going to other, more developed leagues in the future. That's an income stream for the clubs, but it also brings a tremendous amount of interest from international media, which is where most leagues make the vast majority of their money.

This is a country where people play so many different sports, and it's only getting more interesting—obviously soccer, but also emerging field sports like cricket and rugby, which has always been here but goes through ebbs and flows. But we still get painted as being a hockey nation. I love hockey, and it will always have its rightful place in the ecosystem, but in the years and decades ahead, soccer will be right up there with hockey for popularity, engagement and good business. **/Interview by Alex Mlynek**

ILLUSTRATION KYLE SCOTT