

PREPARING FOR INNOVATION
How to ensure your business is ready for

technological transformation p06

SMITH SCHOOL OF BUSINESS
Find hidden innovation capacity in you and your company p07

## **ONLINE EXCLUSIVE**

BCEDA discusses the importance for innovation in cities **industryandbusiness.ca** 

## CANADIAN \*INNOVATION



The **Dragons' Den** investor talks ideas, business, and the true key to innovation

Mediaplanet What makes the Canadian landscape so unique when it comes to innovation? Arlene Dickinson Canada has several advantages when it comes to driving innovation. We have a strong education system that produces world-class engineers, scientists, and business people as well as extraordinary natural resources, from natural gas to precious metals. We have dependable technology infrastructure, a stable and transparent government, and the secret ingredient to driving innovation which is hard working, creative, and brave entrepreneurs. As a nation, we have all the raw ingredients to be the most innovative and prosperous country in the world. The task we have before us is to turn these raw ingredients into products and turn those products into international businesses.

## $\begin{tabular}{ll} \bf MP\ What\ is\ the\ biggest\ obstacle\ you\ have\ overcome\ to\ become\ successful? \end{tabular}$

AD I've always said I wish I had dreamt bigger. People say to me, "But look at all you have done!" and I can only think of how much more I could have accomplished had I allowed myself to have a larger scale view. Ultimately, the biggest obstacle became myself and self-moderating my vision. I believe the bigger a vision you have — the more audacious a plan you have — the bigger your world becomes.

MP Why should Canadians care about entrepreneurs?

AD Canadians should care about entrepreneurs because they are the most important element of the Canadian economy, and ultimately, help build our social and cultural makeup. When an entrepreneur creates a successful business, they generate incremental wealth for the country, which contributes to the tax base, which contributes to the social programs we as Canadians hold so dear, like public health care and education. If you're a patriotic Canadian, you should be passionate about helping entrepreneurs succeed.

MP How can we encourage youth to stay innovative as they start to think about their future?

AD It's important to let our youth know that innovation doesn't just mean a tech start-up run out of your parent's garage. Innovation isn't just about technology. It's about new ideas and new ways of doing things. The reality is that innovation can happen anywhere. Innovation can happen at a marketing firm, it can happen in the food and beverage industry, or in agricultural and environmental practices.

To that end, it's important to teach youth that innovation starts with how they think about how the world operates. Seeing new ways to do things and exploring them is perhaps what youth are best at. Innovation is the fountain of youth of every industry and sector and is what's needed in order for it to be competitive. If we take the broader idea of what innovation is and teach it to youth, they can begin to practice it no matter where they are, or what they are interested in.

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## NAIT's Holistic Approach to Industry Innovation

ndustry throughout Alberta and Canada is striving to become more innovative and competitive. Its success is essential to our nation's prosperity. The Northern Alberta Institute of Technology (NAIT) is a partner in achieving these ambitions. NAIT assists industry and business partners in developing solutions and enabling their success.

Opening in Fall 2018, NAIT's new Productivity and Innovation Centre (PIC) is a game-changer that builds on the institute's established strengths and deep relationships with industry. PIC provides more than 17,650 square metres (190,000 square feet) of innovation space. Through an integrated framework called Industry Solutions, NAIT works with partners on applied research, product development and improvement, productivity enhancement, and business innovation. "NAIT works with industry partners in their pursuit to be globally competitive. The solutions NAIT offers its clients and partners will help them to succeed in our rapidly changing world," says Dr. Glenn Feltham, President and CEO of NAIT.

### Helping to innovate

Feltham attributes part of PIC's preparedness to key funding and support from the federal government. "The foresight from Ottawa in putting forward funding through the Post-Secondary Institutions Strategic Investment Fund will be transformative for NAIT and Canada," he says.

PIC is part of a natural evolution for NAIT. Since its inception in 1962 industry has been a partner to NAIT. This started with education and led to training for businesses. Then in 2007 it expanded to include applied research. PIC takes this to a new level allowing NAIT to offer comprehensive industry solutions to businesses and companies.

Most energy-related products produced in Alberta are sold out of province and to other parts of the world. Edmonton and its surrounding area have also grown to be among the top manufacturing locations in Canada.

Through NAIT's established partnerships it helps companies adopt technology to increase their operational efficiency, with robotic welding or automated manufacturing, for

It's not curiosity-based research, it's companies coming to us and asking for help to solve an issue.

example. This also includes consultation to help understand workflows and identify more effective methodologies.

"It's not curiosity-based research initiated by staff, it's companies coming to us and asking for help to solve an issue," says Dr. Sue Fitzsimmons, Vice President, Academic at NAIT. "We're really not about radical innovation but more about incremental innovation and the productivity solutions that go hand-in-hand with that."

### **Building solutions**

The results are already encouraging, she adds. For example, reclaiming land following oil operations has been difficult because of soil erosion, but research has created new seed technology to help plants to take root, reforesting those areas and reintroducing biodiversity.

Smaller manufacturing companies also benefit from being able to innovate a product when they don't have the expertise to create a prototype.

"They'll come to NAIT, work with our specialized equipment, and we'll support them with qualified technicians to create what they need," she says. "If they want to adopt more advanced machinery used in the prototyping process, we can provide training to help their employees learn how to use it."

Dr. Fitzsimmons is quick to note that PIC will not act as a startup incubator. Rather it will cater more to businesses that are already operating. She believes the institution brings a number of research areas together that span various industries and contribute to Canada's global economic advantage.

"Our ability to connect the dots between different kinds of industries is really heightened," she says. "I think that's going to be key to the success of whomever we work with."

Ted Kritsonis



## WHERE INDUSTRY COMES FOR SOLUTIONS AND TO SUCCEED





# Collaboration and Innovation Help Farmers Prosper

Mark Lepp CEO, FarmLink Marketing Solutions & Farm At Hand

igh yields and production rates combined with high market prices gave western Canadian grain farmers a couple of profitable years. Now, falling global commodity prices and rising equipment costs, land prices, and interest rates are putting a squeeze on that profitability.

"In these changing times, we need to be aware of the impact and react accordingly," says Mark Lepp, CEO of FarmLink Marketing Solutions and Farm At Hand.

### Take a collective approach

One innovative approach is to look at farm management through a holistic lens. Rather than coming from a "grow more" perspective, this involves looking at the entire operation to optimize costs and operations, manage risk, and sell better. However, few farmers have the time and specialized knowledge to handle all these components by themselves. That's where collaborating with diverse service providers — accountants, marketing consultants, agronomists, and hedging brokers — can help.

"If you're just trying to sell at the market highs, you're missing components such as cash flow requirements on a farm and profitability targets," says Lepp. "Marrying all these components together through that collaboration helps

the farmer make better decisions."

For example, an accountant understands the financial dynamics of the farm, while an agronomist can offer insight into the yield outlook and its impact on the markets. This helps a marketing advisor determine which crops of the entire portfolio have the greatest potential for success so a hedging broker can offer strategies to offset production risk should the yield be lower than expected.

Taking a collective approach to farm management — rather than just focusing on growing grain — will ensure that Canadian agriculture survives and thrives in changing market conditions.

Anne Papmehl



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Learn more about grain marketing advisors at <u>farmlinksolutions.ca</u>

## Innovation Puts Syncrude in the Oil Sands Spotlight

n 2014, the Alberta Science and Technology Leadership Foundation recognized Syncrude's Research and Development (R&D) Team with a Special Award for their collective 50-year contribution to the advancement of the science behind Canada's oil sands. This commitment to innovation began in 1964 and continues to this day.

Syncrude operates large oil sand mines, utility plants, and a bitumen extraction plant and upgrading facility in Northern Alberta that processes bitumen and produces value-added light, sweet crude oil for domestic consumption and export.

Innovation is a core company value that has allowed Syncrude to evolve into an industry leader when it comes to developing the oil sands and addressing environmental needs including reclaiming mine sites.

"The industry was in its infancy in 1964 and solutions to unlocking the mysteries of the oil sands needed to be invented, tested, and implemented because they simply didn't exist," says Mal Carroll, General Manager of Research and Development. "We remain committed to advancing the industry through research and development while reducing our environmental footprint and returning the land we've mined back to nature."

Syncrude is one of a few oil sands operators with a dedicated research and development facility in the oil sands industry. It is among the top 50 R&D spenders in Canada.



The company allots about \$65 million annually to research and development — more than half of which is invested in environmental initiatives.

It has invested more than \$1.5 billion over the past 50 years on its own research and in collaboration with North American universities and research organizations to advance the oil sands industry and its leading-edge technologies. While this work has led to incremental, but significant, change in processes and technology, it has also produced major industry advancements.

From corrosion and erosion abatement and extending the life of tires used for heavy haulers to hydro-transport and innovative land reclamation projects, Syncrude continues

to make steady and impactful progress for the responsible development of the oil sands.

These investments into R&D have generated an estimated \$33 billion of value for Syncrude and include more than 200 patents awarded since 1966. The innovations to responsibly mine, extract, and upgrade bitumen would not exist to the extent they do today without the work of the Syncrude's Research and Development team. Syncrude's commitment to innovation and investment in research and development will ensure these advancements continue for the life of its operation and the industry as a whole.

Mike Lupien



The Syncrude Project is a joint venture undertaking among Imperial Oil Resources Limited; Nexen Oil Sands Partnership; Sinopec Oil Sands Partnership; and Suncor Energy Inc. (with the Suncor interest held by Canadian Oil Sands Partnership #1 and Suncor Energy Ventures Partnership, both wholly owned affiliates of Suncor Energy Inc.).

## FIND THE FUTURE

The Cities Driving Canada's Innovative Economy

## **Cutting-Edge Innovation Found in Edmonton**





Last summer, when DeepMind — Google's U.K.-based artificial intelligence (AI) company — announced that it was opening its first international office in Edmonton, it was proof that the city's pioneering AI research had gained global recognition.

For decades, out of the limelight, University of Alberta researchers and Edmonton tech entrepreneurs have been developing cutting-edge AI. In fact, the University of Alberta is ranked third in the world for artificial intelligence and machine learning by csrankings.org.

Innovate Edmonton, a division of the Edmonton's Economic Development Corporation (EEDC), wants Edmonton to be recognized as be a world leader not only in AI, but in big data and health innovation as well.

"We are aiming to amp up and fuel growth in the city's tech and innovation sector," says Cheryll Watson, Vice President of Innovate Edmonton. She notes the momentum is growing thanks to support from Edmonton Mayor Don Iveson, who recently called on local investors to throw their support behind

In addition to Edmonton's strength in AI Edmonton is leaning on some other key differentiators that make the city a great location for innovation. Alberta Health Services, headquartered in Edmonton, is Canada's largest province-wide, fully integrated health system, delivering services to four million people and providing researchers and entrepreneurs with an ideal, strategic opportunity to create and experiment. Likewise, the city has been an early adopter of open data protocols, achieving global recognition for its programs.

"We're very proud of Edmonton's entrepreneurial ecosystem," says Watson. "While Silicon Valley plays an important role in raising capital and helping to grow tech business, Edmonton is one of the world's leading innovation hubs. We've just been very quiet about it. It's time for that to change."

## **Three Edmonton Companies You Need To Know**

## SAM

Every day, more than a billion tweets, photos, and videos are shared on social media, creating a rich reservoir of raw data and the perfect place for researchers to mine important information on a host of issues. SAM, a Startup Edmonton company, is turning social media chatter into real-time knowledge by using AI to monitor social media platforms such as Twitter and Instagram and alert users to breaking news events as they happen. Newsrooms and organizations around the world already use SAM.

## **SCOPE AR**

The aerospace, automotive, manufacturing, and military industries, among others, generally require extensive training of their staff and diligent maintenance procedures. Scope AR uses augmented reality (AR) to provide step-by-step interactive and visual guidance for training and maintenance purposes. The product can be used to overlay instructions onto any equipment being worked on. By simply downloading the application to any smartphone or tablet, workers can connect to an expert in real-time, and the expert is able to draw on and annotate anything they might be looking at. The company has been quietly building an impressive list of customers since being founded in 2010, such as Boeing, Tesla, Toyota, Lockheed Martin,

## DRUGBANK

A highly successful spinoff from the University of Alberta, DrugBank is the world's largest online database of drug and drug target information. Started at the University of Alberta in 2006, it's often described as an online drug encyclopedia because it provides both the composition of a drug as well as its structure. Used by millions of researchers, pharmacists, and companies around the world, including the World Health Organization and the U.S. Food and Drug Administration, DrugBank is enabling the discovery of new drugs and the repurposing of existing drugs to treat new and rare illnesses.

Catherine Roberts

## **Think Smart, Think Milton**

For one of the youngest, most educated communities in Canada, working smarter isn't just a goal — it's a necessity. For several years, Milton has been integrating smart initiatives and leveraging technology to make the community more efficient and sustainable, while attracting the types of businesses and labour artificial intelligence, IoT, and open data to force that fuel innovation.

As the Town continues to tell these stories of innovation, behind the scenes, Milton has been investing in energy-saving solutions and intuitive technology to keep its community safe and better connected.

The Town recognizes that building a more initiatives will continue to expand. intelligent community is a long-term goal that outcome — improving the overall quality of life in Milton.

Some of Milton's smart initiatives include upgrades to wi-fi in the downtown core, improvements to digital customer service, interactive GIS and smart sensor integration, smart traffic management technology, datadriven emergency service enhancements, and energy-efficient solutions for community

As a regional hub for local businesses, start-ups, and entrepreneurs, the Milton Education Village Innovation Centre has

been instrumental in attracting and developing ventures to enhance smart initiatives in the community. Through partnerships with organizations like 3OpenLabs and Tech Data, the Centre is enabling pilot projects for smart vehicle tracking and inviting the expertise in grow within the community.

As the Town welcomes leading academic and research institutions like Wilfrid Laurier University and Conestoga College, opportunities to explore and participate in projects that will enhance Milton's portfolio of smart city

Coupled with the fact that Milton is cen involves both small and large initiatives, but trally located along Ontario's Innovation collectively, all its efforts focus on the same Corridor, growing smart is a natural evolution

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## Learn why Milton is "A Place of Possibility" by visiting Milton.ca

## Ready to Do **Business? Goderich** is Waiting



Town of Goderich



Goderich has been a key port in Ontario since it was a trading post. With the only deep-water port on the east side of Lake Huron, expansion plans are paving the way for new businesses and residents to arrive. The Town took control of its port via the federal government's Port Divestiture Program in 1999, as the largest revenue-generator out of 300 regional ports in Canada. With a \$29 million refurbishment over the last 15 years from user fees, the Town continues to become a modern hub.

Now, another \$16 million is being put towards an infrastructure program, creating new land to increase shipping activity and add an incentive for businesses to set up shop in the Town.

"The expansion project provides opportunities for relocating or existing industry to enter into leases with the Town and improve access to the St Lawrence Seaway & Hwy H2O, leading to more marine shipping and fewer trucks on the road," says Larry McCabe, Chief Administrative Officer for the Town of Goderich. "With this infrastructure in place, we are ready for industry to come and do business."

McCabe points out that this is an opportunity for aggregate, potash or other agricultural products to lease the new port lands.

## **Open for business**

Economic Development Officer, Linda Sicoli says, "There is so much opportunity here and by investing wisely in innovation to improve our ability to compete in Canadian and world markets, we are ready to operate at the speed of business."

Mayor Kevin Morrison indicates "These are exciting times for Goderich and our smart growth strategies will bring investment, newcomers and tourism into the local economy".

In 2011, a powerful F3 tornado damaged the Town's downtown core and residential neighbourhoods, all now rebuilt and modernized with high-tech additions. High-speed fibre optic technology is now available throughout the municipality, and new home builds loom on the horizon, further strengthening the local economy and increasing opportunity for growth in Goderich.

"Although we might be known as the 'prettiest town in Canada' due to our natural beauty and Victorian-inspired architecture," says McCabe, "Goderich appeals to those who can work remotely and desire a high quality of life for their family that includes first class recreation and sunset beaches, just a two-and-a-half hour drive from the GTA."



## **Innovation in Calgary Leading to Positive Change Across Canada**



Mary Moran President & CEO. Calgary Economic

The energy in Calgary is stronger than ever thanks to the innovation happening across

Technological advancements are setting off a wave of creativity and spurring an influx of opportunity for emerging industries, new companies, and top talent. The innovation ecosystem in Calgary brings together clusters of educators, governments, think-tanks, established companies, and ambitious entrepreneurs to make industries more efficient and effective.

prides itself on.

"The energy sector has a well-established ecosystem and is recognized as a centre of excellence globally, and as the tech ecosystem builds out, it's encompassing all of our key industries," says Mary Moran, President and CEO of Calgary Economic Development.

Driving innovation is something Calgary

**Aimsio** is one firm driving digitization in

Calgary's oil and gas sector, but the five-yearold company has customers all across North America using its software to manage their field operations. It's expanded into sectors like renewable energy and construction and CEO Ash Esmaeili sees future growth in forestry, mining, and agriculture.

The entrepreneurial energy and creativity in Calgary are critical to Aimsio's success, notes Esmaeili who, along with his co-founders, is a University of Calgary graduate.

"Everybody is talking about the digital transformation," he said. "Our intention was to build the next tech giant in Canada and that's where we are headed."

**Zedi Solutions** is a well-established energy company that is repositioning its remote sensor technology for industries that include agriculture and retail. CEO Matthew Heffernan is nominated for a 2018 Ernest C. Manning Innovation Award for repositioning its energy-related technology for growing sectors.

FLYHT Aerospace Solutions recently received a Canadian patent for FLYHTStreamTM, a commercial data streaming application that combines smart electronics, global satellites, and secure, Internet-based data delivery to stream black box data to aircraft accident investigators, airline executives, and operations and

maintenance centres in the event of an in-flight

"FLYHT is the industry leader in real-time data streaming," says CEO Tom Schmutz.

A number of patents filed by companies like FLYHT is why the C.D. Howe Institute recently named Calgary the "most innovative city in

## **Changes for the future**

Innovation in Calgary is focused on industrial sectors where disruptive technologies such as artificial intelligence, blockchain, autonomous vehicles, and 3-D printing are transforming how companies do business.

To support the innovation ecosystem, the City of Calgary created the Opportunity Calgary Investment Fund to distribute \$100 million to companies making investments in the city that will be catalysts for transformative growth in



## The Future is Unlimited in Mississauga

Major companies, booming industries - find out why Mississauga is leading when it comes to getting business done

**Mediaplanet:** What are some of the reasons companies are moving to Mississauga for their

manufacturing and business needs? Bonnie Brown: The City of Mississauga is recognized as a top business-friendly city in North America. We are here for the small business owner and the global CEO. We compete for investment in our city so businesses have access to these resources and fuel the growth of our economy. The population is incredibly talented, with two thirds of citizens having post-secondary education, which means that companies who move here can access top talent. Being close to other major cities, the airport, and highways gives businesses access to local and global networks, all while being surrounded by a nurturing, pro-business environment.

MP What are some of the developments the City is supporting to ensure economic development and

BB Mississauga will be home to a state-ofthe-art innovation hub with the development of the National Research Council (NRC) Mississauga Research Facility that is being built in the Sheridan Science and Technology Park, adjacent to the Xerox Research Centre of Canada. The facility will become a hub for advanced materials and development in Canada and a catalyst for advanced materials innovation and commercialization. This is NRC's first investment in the Greater Toronto Area and will create a very special opportunity for Mississauga to attract new investment and help our existing businesses grow and succeed. The facility is scheduled to open in the fall of 2019 and will be a great addition to our expanding innovation ecosystem.

To help celebrate and build awareness of business activity in Mississauga, we developed

a new marketing campaign that highlights unique and innovative business stories, as told by our businesses and industry champions. This campaign will showcase Mississauga's attributes as a global player in advancing innovation as well as its widespread impact on the Canadian economy.

## MP What role does innovation play in developing Mississauga's business sector?

**BB** Innovation is the engine of economic growth and sustainability. It allows us to attract top talent by having top educational institutions and companies driving our economic pipeline. We have companies investing in capital improvement and our booming science, engineering, and tech sector — these things are an imperative part of our strategy and ensure we remain competitive on a global scale. The opportunity is truly unlimited in Mississauga and we plan to make sure everyone knows it.



**Bonnie Brown** Director, Economic Development, City of Mississauga







## **Q&A with Bianca Wylie**



Bianca Wylie leads work on public sector technology policy for Canada at Dgen Network and is the co-founder of Tech Reset Canada. She spoke with Mediaplanet about big data, governance, and innovation

## **Mediaplanet** What is big data? Why is it important for citizens to understand the impact of big data?

**Bianca Wylie** Big data is what it sounds like — lots of data. Big data creates new threats to our privacy because as the amount of data companies collect about us increases, so do the ways that it can be sold, and used to track us, profile us, sell us things, and influence our behaviour. One of the biggest problems is that we're still trying to manage data at the personal level and not the collective level. We don't have legal frameworks for collective privacy, but the impacts of big data are collective too. For example, if you live in the United States but aren't on Facebook, the outcome of the last election still impacts you. You can't opt out.

## **MP** How does data governance (the way data is regulated) affect the security of users' information?

**BW** The major data governance considerations are around data collection, ownership, and usage. Of these, collection is critical. We must fundamentally rethink what personal data we allow to be collected. If data isn't collected, it can't become a security problem.

## MP What could the future of data governance look like?

**BW** The future of data governance must address collective privacy. It might include a set of defined digital rights or new models for informed consent to ensure people truly know

how their data will be used. Exploring who can collect and own data and under what terms are vital discussions to have. Regulating data properly will rebuild an environment of trust where companies that respect and operate transparently will thrive and those that rely on poor data governance practices and lack of consumer knowledge will suffer.

## **MP** What are "smart cities"? Why is the prospect of these cities both exciting and scary?

BW Smart cities use data to support the delivery and development of urban services and spaces. Smart city tech can be used for energy conservation, managing traffic flow, and more. Smart cities are not neutral or inherently progressive — they reflect the city policies that data and tech support. This is why we urgently need to talk about our policies for data governance and have these hard conversations about the type of society we want now and in the future.

Read the Centre for International Governance Innovation's series on *Data Governance in a Digital Age* to explore options for a Canadian data strategy at **CIGIonline.org/data.** 

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Centre for International Governance Innovation

## Prepare Your Company for Successful Technological Transformation



National Director, Technology Solutions, MNP

n today's increasingly competitive marketplace, Canadian businesses are constantly facing an array of new challenges. Chief among them is how a company can effectively respond to rapid advancements in technology and ensure they can thrive and remain relevant into the future.

"Techology-driven innovation is a key issue for Canadian corporations," says Scott Greenlay, National Director of Technology Solutions at MNP, a leading national accounting, tax, and business consulting firm in Canada. "Technology is a disruptive force. In

the past, it tended to impact us slowly. Now, however, technology is bringing in new competitors at a high speed. Society is so engaged with technology that we're communicating and learning about new products and services at an incredible speed. To succeed, companies need to transform quickly to meet these changes."

Greenlay has good reason to emphasize the demands technology advances play in precipitating business transformations. In a 2017 survey of 1,200 corporate leaders entitled *CAPTURING THE CHANGE WAVE: How Canadian Businesses are Transforming,* MNP found that 83 percent of Canadian companies are currently experiencing technological-based change. The report goes on to state that "successful companies are those that embrace change and are focused on making ongoing improvement part of their DNA."

## Technology's overarching influence

Greenlay underscores that evolving technology isn't just a challenge in and of itself. It also influences two areas vital to corporate prosperity: skilled staffing and an appropriate business model. "The ability to access skills and talent in areas of technology and disruption are at an all-time low. Additionally,



business models used to be very stable, but what we're seeing with technology-driven innovation are incredible rates of change on how business models work."

While companies are aware they must evolve to survive, many are not sure what steps to take for a triumphant transformation. "Technology has really changed the game, and it offers both an opportunity and a threat to Canadian business," says Greenlay. "Knowing you need to change isn't enough. You must also be effective at making changes and many organizations just don't have the experience to know how to go about it. They are uncertain about developing the right strategy."

## Steps to successful transformation

Although Greenlay acknowledges that cost and time can be an issue, having skilled people and a solid vision can go far to ensuring an effective corporate evolution.

"It's vital to have the right team with the right experience because with those two elements in place, many barriers can be overcome. For example, cost can be balanced against returns and investment decisions. Staffing challenges can be addressed through recruiting expertly skilled people or partnering with firms with experience in technology and innovation," explains Greenlay. When it comes to adopting new technology and innovation, executives need to be fully committed to the transformation. "If they don't know how to approach the process or have the expertise in-house, they must be willing to reach out to those who do," notes Greenlay. "It's important to look beyond quick and easy, as success is about investing in innovations and changes that will work for the business in the long run."

Sandra MacGregor



## Tomorrow's Technology is Shaping Business Today

For more information on how MNP can help you, contact:

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## The Era of Innovation and Entrepreneurship

Finding the Hidden Powers, Mindsets, and Culture to Drive Change

Shari Hughson
Director, Master of Management
Innovation & Entrepreneurship,
at Smith School of Business,
Queen's University

n almost every department of every organization in every industry, a key challenge is how to drive rapid innovation in response to marketplace changes. For many companies, it is almost an existential challenge to build teams that can inspire and execute major innovation initiatives.

But the answer is in plain sight — the people already in your organization, and the entrepreneurs and startups that may be circling your business. Employers need to see their potential and shift to a learning-focused, project-driven environment where employees play the role of owner.

## **Identify the innovators**

Your unidentified intrapreneurs are often the ones who get bored easily, may be completing side projects or outside work during office time, and have diverse interests. They're the ones who challenge assumptions at a meeting and push themselves to try new things and projects. They may be outliers who are described by co-workers as different. They stand out from the crowd. Their quirkiness and diverse way of thinking make them

incredible at bringing a fresh perspective to a discussion.

If company leaders identify those hidden innovators and give them projects they can develop and own, they will drive innovation within the firm. But these intrapreneurs must be given room to fail and the support to operate within an environment of uncertainty. Even if an idea doesn't pan out, the team will have learned a tremendous amount about the marketplace or internal process that needs to be changed. Celebrating what has been learned rather than commiserating on a failure will herald a shift in corporate culture.

## **Build strong relationships**

Instead of feeling threatened by entrepreneurs and startups that are active in your space, embrace them!

Entrepreneurs are always searching for the next great opportunity and it might just be with an asset of your organization. For example, finding under-used protected assets — like copyrights, intellectual property, and proprietary processes — within your organization that an entrepreneur can repurpose, license, or use to build a commercial opportunity can create value for both parties.

Startups love to have strategic partners, especially organizations who already have the customers, connections, resources, funding, and support they need to move forward. Businesses that work collaboratively with entrepreneurs, support them, and celebrate their success can create a win for everyone. Change your corporate culture to see opportunities where you would have otherwise seen threats from new marketplace players.

## A common thread

Within organizations, intrapreneurs and entrepreneurs are the jack-of-all-trades business people with expertise in design, systems, user experience, and research and experiments.

They are your agile project managers, critical market and industry analysts, futurists, and above all, great salespeople.

In the Master of Management Innovation & Entrepreneurship program at Smith School of Business, we find natural talent and strengths that match both the intrapreneur

and entrepreneur profiles. Through the program, we create leaders of corporate innovation and startup and scale-up experts from an entrepreneurial point of view.

We're launching careers for innovators and entrepreneurs and supporting organizations with innovation or startup internships. We partner with organizations to build capacity, find startup assets within the organization, and strategically align your needs with our students whether they are corporate innovators or entrepreneurs.

At Smith School of Business, we offer executive education, consulting, and customized corporate packages to assist organizations around the world with their transition to the era of innovation and entrepreneurship.

Shari Hughson

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magine a retail experience unlike any other, where displays from the leading running brand in Canada are innovative in both design and functionality. A retail experience that drives curiosity and motivates consumers to live an active lifestyle - this is what you'll find at any of the 25 New Balance shop-in shops opening in Running Room retail locations across Canada.

New Balance (NB) shop-in-shops are innovating the customer retail experience. Aside from making more NB products

available to consumers, they're showcasing the products in a more engaging way within the store. "By having head-to-toe looks on the mannequins, you can tell a bigger brand story and build a better consumer retail presence than you could by having a couple of products displayed on a big footwear wall," says Jon Purdy, Senior Marketing Manager at New Balance Canada, Inc.

## **Innovation through product** function and design

to Retail Innovation

At the core of NB's innovation efforts are the products themselves which blend function with fashion. On the function side, durability and performance are paramount.

On the fashion side, the product design team strives to ensure the product look and colours are on trend for footwear, apparel, and accessories. "We really push the envelope with new products, weaves, and technologies because people want the latest and greatest," says Purdy. "Whether it's lightness infusion, water resistance, the anti-microbial wicking system, or closure system, our design team ensures that both function and style work cohesively together."

The company's leading mid-sole technology is Fresh Foam, a foam-based compound that was developed based on running patterns and observations of how people's feet hit the ground. "As a platform, Fresh Foam is an innovative product that resonates both with the running community and lifestyle consumers," says Purdy.

ew balance

Also reflected in the product design and materials is the company's commitment to environmental sustainability. NB is working to eventually create products that are completely recoverable, do not require the use of toxic substances, and have no adverse impact on the environment.

## **Fearlessly independent**

To become the best global running brand, NB stays true to its roots in everything - defining its brand position, developing its products,

and working with its retail and wholesale partners. "We've been fearlessly independent since 1906 when we started," says Purdy. "It's in everything we do."

Check out a New Balance shop-in shop at a Running Room near you to see why independence and innovation are a match made in retail heaven.

Anne Papmehl

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## The Impact, Benefits, and **Opportunities for Canadians**

Based in Toronto at global innovation hub MaRS Discovery District, Ying Tam is the Managing Director of MaRS Health Venture Services, where he works with entrepreneurs to build high-impact, high-growth ventures and innovative health ecosystems to improve health outcomes and positively impact patients' lives

### Mediaplanet How is artificial intelligence revolutionizing the health landscape?

**Ying Tam** The human body is incredibly complex and our minds can't manage and make sense of all that information on their own. Artificial intelligence (AI) is able to augment researchers' and clinicians' capacities by sifting through vast amounts of data to quickly and reliably surface the important information, like an image from a batch of scans that shows signs of cancer

or a molecule that could lead to a life-saving therapeutic. AI is starting to make a difference in improving clinical efficiency by sounding the alarm about early signs of disease and helping scientists and clinicians focus their efforts where they are needed

### MP What are some of the biggest AI trends in the health care field?

YT Canadian companies are leveraging

machine learning to develop new therapies, diagnostics, and therapeutic treatments. We're seeing companies like Deep Genomics and Atomwise apply the massive data-crunching power of AI in the search for new therapeutics to make the drug-discovery process faster and more precise. Toronto-based venture Analytics 4 Life is using AI to listen to and analyze a patient's heartbeat to detect coronary artery disease, reducing the need for lengthy, costly, and invasive tests.

**Ying Tam** 

Managing Director, MaRS Health Venture Services

### MP How can patients access the benefits of AI technologies?

YT Doctors, clinicians, and health organizations are already putting select AI-powered technologies into practice, enabling patients to access the benefits. Swift Medical, a Toronto-based startup, has developed a smartphone tool that evaluates the severity

of wounds using AI. It's being used with over 100,000 patients a month. BlueDot is using big data to track, predict, and prevent the spread of infectious diseases from the Ebola and Zika viruses to the flu. The BlueDot team has worked with public health officials for vears and recently launched a travel app called George Health Companion to help people stay informed about diseases in regions where they're travelling. AI-powered chatbots developed by Toronto-based startup conversationHEALTH help patients stay on track with their medications, appointments, and other reminders. Patients can also access health bots via apps like Facebook Messenger or Slack.

### MP What are some issues that AI might present in the health care industry?

YT The successful adoption of AI in health care introduces technological, regulatory, ethical, and system challenges. The data infrastructure required to manage and store the vast datasets needed by AI is going to involve massive upgrades by health care institutions. Regulatory processes must also change to account for AI solutions that are evolving based on changing data inputs. Finally, there are a variety of questions around the oversight of AI — how do we clinically validate an AI solution? What do we do if an AI error or bias negatively impacts a patient's outcomes or causes harm?

## MP How will these issues affect the Canadian health care industry?

YT As a single-payer health care system, Canada has an AI advantage through its large repository of diverse health data. Ontario, for example, has a database that tracks every interaction a patient has had with the health system going back to the mid-1980s. Despite this, the development cycle for AI technologies will place strains on an already stressed system. As health care costs continue to rise and we risk falling behind in health care delivery, AI offers solutions we can't afford not to embrace.



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