

IGNITE: Sparking innovation from New Brunswick to the world

Photo credit: Matthew Gorveatte

“Fredericton has a bias for ‘yes’ when it comes to innovation,” says the energetic Larry Shaw, CEO of Ignite and Knowledge Park.

Welcome to one of North America’s “smartest” cities, where businesses and industries rush to create, invent, adapt, incubate and export technological goods and services at a blistering pace—more than \$1 billion in start-up exits in the past decade alone.

Host to four universities, six training colleges, 2,800 highly qualified graduates a year, and one of the most loyal and driven workforces in Canada, Fredericton has been recognized as one of the Intelligent Community Forum’s Smart21 Communities of the Year, the past three years running (2020, 2021, and 2022). As a major learning hub for New Brunswick that’s also home to 70 per cent of the province’s knowledge-based industries, it’s a place that fDI magazine recognizes as the “#1 Micro-City in North America.”

At the centre of all this, is Ignite, the capital region’s economic development agency committed to attracting new investment and people from across the globe and equipping local businesses with world-beating skills of their own. This vibrant region encompasses Fredericton and surrounding areas and municipalities such as Oromocto, Hanwell and New Maryland.

For more than a decade, Shaw, the veteran business executive has been Ignite’s CEO, muse and mapmaker, both figuratively and literally. “If you look here, you can see what I mean by strategic clustering,” he says pointing



Cyber Centre - Knowledge Park (Submitted photo)

to a schematic of the city's central district. "There are at least 30 nodes of innovation all within five square kilometers. That's no accident."

Indeed, the number of public and private research and innovation institutes and organizations—and their proximity to one another—do seem intentional. There's BioNB, New Brunswick Innovation Foundation, New Brunswick Health Research and Productivity Council, and the premises of Ignite, itself. There's also the collaboration with post-secondary institutions such as St. Thomas University, the Hugh John Flemming Forestry Centre, and the University of New Brunswick—with its associated programs Energia Ventures, the Summer Institute, the Technology Management and Entrepreneurship (TME) certification, the Faculty of Management, and the Institute of Biomedical Engineering.

Says Shaw: "The most relevant thing to know is that there has been a very, very concerted effort over the past 30 years to establish and grow a knowledge-based economy here, and from here for all of New Brunswick. The deliberate degree of interconnectedness between private, government and academia intelligently fosters growth and industry collaboration. That's the key. It's a force multiplier."

Dr. David MaGee, vice-president (research) at the University of New Brunswick, agrees. "UNB is New Brunswick's research leader, and we're proud to deliver 70 per cent of the province's sponsored research," he says. "Through innovation partnerships, our researchers are better enabled to work on solving the

grand, complex challenges facing our world, to leverage their expertise, and to teach tomorrow's research and industry leaders. That research has a very real, and positive impact on our communities and our world, and collaborative partnerships are important in creating that impact."

Another multiplier is Ignite's own positioning with its peer organizations, Planet Hatch and Knowledge Park. While the former develops globally competitive entrepreneurs and start-ups by funding, events, coaching and mentorship, and by offering creative physical infrastructure for business growth, the latter provides a launching pad for companies converting ideas into game-changing technologies.

Deloitte has been a tenant of Knowledge Park for almost three years—since its acquisition of cloud-

based consulting services firm Blue Spurs Consulting Inc. in June 2019. Before that, Blue Spurs had called Knowledge Park home for over 10 years.

"Innovation is an important piece of the foundation that is essential for driving opportunities and growth in New Brunswick—for both business and academia," says Mike Leblanc, Partner at Deloitte, Cloud Engineering. "The fresh ideas that new talent brings enable innovation, and academia is a particularly important part of this cycle."

Adds Duane Dunfield, New Brunswick Leader and Director, Canadian Delivery Centre, Cloud Transformation, at Deloitte: "The more digital transformation is driven in New Brunswick, the more academia can expand their programs in response to the demand from businesses for skilled practitioners, thus continuing the cycle of growth and innovation."

Meanwhile, Planet Hatch has helped create over 319 start-ups and 728 jobs since its inception in 2013. It fulfills an important role in the market by providing entrepreneurs with the tools and skills they need to succeed, says its Manager of Innovation and Entrepreneurial Services Kelly Smith, who credits a deep and diverse support network for its progress. "Our success and metrics could not have been met without the support of our partners and funders," she says. "Atlantic



Planet Hatch - Knowledge Park (Submitted photo)







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Canada Opportunities Agency, Opportunities New Brunswick, University of New Brunswick, the Fredericton Chamber of Commerce and the Department of Post Secondary Education, Training and Labour all play a significant and crucial role to our success and the success of our founders.”

The entrepreneurship centre works alongside its partners to offer valuable resources to start-ups in all sectors from IT, biotech, and engineering, to retail, and food & beverage. In the past year, more than 65 per cent of Planet Hatch clients were starting a business for the first time and over 61 per cent of clients were newcomers. This influx of innovation and ambition, alongside the support offered by organizations such as Planet Hatch, is part of what Smith says makes Fredericton the ideal place to start a business: “We’re helping small businesses start and grow, which not only creates more job opportunities, but adds to the diversity and culture of the Fredericton Region.

The combined effects of Ignite Fredericton Region’s investment attraction, local market and population growth support, and business counselling and mentoring are, in fact, a matter of record. In 2021 alone, Ignite, Planet Hatch, and Knowledge Park averaged more than 8,000 hours in mentoring and coaching, helped launch 40 new start-ups, supported the creation of 462 full-time-equivalent private-sector

jobs, added 40 new community members to the Local Immigration Partnership network, and launched six accelerator programs for entrepreneurs and start-ups.

What’s more, all of this has been geared to continue. Cutting-edge developments in new, competitive sectors like cybersecurity, biotechnology and artificial intelligence, as well as in established, growing ones like forestry, agriculture, and oil & gas, emerge like clockwork in a city that, despite appearances, hardly ever sleeps.

“When we think of economic development in New Brunswick, a roadmap of milestones quickly emerges,” Shaw says. “The 1990s saw the prosperous growth of call centres and the shift to a knowledge-based economy. The early 2000s witnessed the emergence of the region as an internationally recognized smart city, quickly followed by the rise of entrepreneurial leadership, with Fredericton being recognized as the start-up capital of Canada. As we look beyond the horizon, we can see elements of what our economic opportunities over the next decade will be.”

Indeed, he’s utterly cleared-eyed about that. “By fostering these kind of R&D-private enterprise partnerships—collaborations between businesses, academic institution, and governments and the innovations they produce—we’re future-proofing industry for the entire region.”

Population growth and workforce development

Behind every great advance, of course, are people. “New Brunswick’s biggest strength is its human capital, no question,” Shaw says. “Industrious, passionate and collaborative, they are the key to economic growth and prosperity in our region and in all of the province’s diverse, energetic communities.”

Now consider the sheer range of opportunities currently available in the capital city region. There’s a growing demand for suitable owners and highly-skilled employees for traditional businesses, high-tech businesses and emerging enterprises in a part of the East Coast that offers the best of both urban and rural living.

That’s why Ignite Fredericton Region puts a premium on helping newcomers integrate into the area, international students find business and professional success in Greater Fredericton, and local businesses tap into this highly-skilled talent pool. With other stakeholders, such as the Fredericton Chamber of Commerce and the Multicultural Association of Fredericton, it supports the Local Immigration Partnership, which is an organized network of immigrant serving organizations, brought together to influence policy design, inclusive dialogue and settlement service excellence for newcomers in the region.

There is, for example, the Newcomers Guide containing all the information they need—access to federal, provincial and municipal services, housing, transit, education, healthcare, cultural food and groceries, and other necessities—to make Fredericton their home. “When conceptualizing this guide, I took into account all the experiences I’ve had and the challenges I had to overcome being a newcomer in the region, so that other newcomers have a guideline to navigate the initial bumps,” says Ignite’s Manager Workforce Development and Attraction, Nausheen Ali.

There’s also the Central Region Employment and Workforce (CREW) Partnership which brought together organizations like Ignite, WorkingNB, Fredericton Chamber of Commerce, Opportunities



Photo credit: BioNB

New Brunswick, ACOA and CBDC Southwest, to develop a workforce development strategy for the Fredericton region. More than a strategy, it includes an action plan that converts the research and recommendations into practical tools to help connect the right talent with the right skills at the right time for the right role. “This strategy aims to be the driving force behind the very essence of attracting and retaining the population that our industries need and providing our labour force with the skills that help them integrate into the jobs of the future,” Ali says.

And, of course, there’s Planet Hatch, a place for newcomer entrepreneurs to collaborate, connect, and grow. This, Ali says, fits in perfectly with the Business Immigrant Essentials Program, funded by Opportunities New Brunswick and facilitated by Planet Hatch, which helps newcomer entrepreneurs start and scale their start-up or honed enterprises quickly: “Being the only designated Startup Visa incubator



Planet Hatch - Knowledge Park (Submitted photo)

in New Brunswick, Planet Hatch is not only the beacon for innovation in the local business demographic but is also leading an economic in-flow of dollars and skills that in turn create jobs and income prospects for newcomers and locals alike.”

For Norm Couturier and Tom Batty, co-founders of Terris—an

Earth intelligence software company that helps organizations monitor their terrestrial assets and infrastructure from orbiting satellites—the value of this people-focused model of collective innovation speaks for itself. “When you are developing an ecosystem, catalyst is king,” Couturier says. “If I can have

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Kognitiv Spark (Submitted photo)

more people doing more innovative things all within close proximity to each other, it just it creates catalyst and momentum. It attracts investments, through investment capital, it attracts new talent, people become interested in what's going on there."

That's important to him not just intellectually, but up close and personal. "We formed Terris in 2018, but I had mentored start-ups at Planet Hatch and gave talks there. So, it was a logical place to incubate my own next start-up, which is the ninth tech start-up that I've cofounded in the past 30 years."

Key to this, he says, is local talent. Terris now employs 14 people working on everything from human resources to software development and geomatics engineering. "Being a very forward, innovative technology company, we need great talent," he says. "Both Tom and I believe this and so we've emanated that to our corporate belief. We believe in developing local emerging talent. And developing emerging talent locally doesn't just mean those

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who were actually born here; it just means those who are here now. They came from a backyard somewhere. They're just happy to be here now. So let's create an opportunity to harness that. For us, it's working out fabulously."

Local in-market business support

That's the kind of reasoning that resonates daily on the ground in the local marketplace, where good ideas and creative problem-solving matter more than ever in a globally competitive world. "We have to think what our businesses here need now," Shaw says. "And that's the capacity to thrive beyond their borders."

Ignite Fredericton Region offers on-going and collaborative business support services that help companies solve problems, identify their best development tools and tactics, and acquire the resources they need to succeed both domestically and abroad.

If they are looking to grow, it

can help them leverage the local, newcomer and international student talent pipeline from Fredericton's four universities and seven training colleges; and take advantage of available programs, such as WorkingNB through Post-Secondary Education, Training and Labour (PETL).

If they are looking to exit their company in the next five-to-ten years, it can help them identify potential business partners, potential businesses for sale and/or investors who may be interested in becoming owners of their businesses. Succession Made Simple NB, a collaborative project amongst numerous stakeholders (including the NB Association of CBDCs, Atlantic Canada Opportunities Agency, Opportunities NB, Working NB, the Department of Post-Secondary Institutions Training and Labour, Tourism NB, DAAF, and Ignite Fredericton Region) supports both buyers and sellers across the province through programming and self-guided toolkits.

With Ignite Fredericton Region,

there's help with General Business Advice—leveraging customized consulting services with its economic development specialists. Businesses also gain access to networks, contacts, support services, and applicable funding programs to match their goals. Says its Director, Sarah Corey Hollohan: "It's important for us to offer concierge-style services to the business community, whether it be through one-on-one counselling or tailored accelerator programs such as our E-Commerce accelerator, each business is unique and experiences growth challenges/opportunities differently."

The organization also provides Funding Navigation to everything from venture capital to government programs supporting business growth. Its Accelerators help identify needs and access programming available for entrepreneurs and companies going through various cycles of entrepreneurship; whether it be through Ignite or Planet Hatch, the local market can access these

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programs. Says Shaw: “Our entire province is smaller than most of the regions we need to compete in, so it is important that our local businesses grow to be able to succeed in larger jurisdictions around the world.”

Strategic innovation support

Still, if the past few years have shown anything, punching above its weight is New Brunswick’s signature move. The province is often described as a “living lab”. The Siemens Smart Grid Centre of Competence along with their second global centre focused on cybersecurity, known as the Critical Infrastructure Defense Center, for example, are both located in New Brunswick’s innovation capital, Fredericton. They provide the perfect mid-sized build-test-launch market for smart grid technologies.

Indeed, Shaw says, “Data is the currency of the future and nowhere is that more evident than in our own backyard. The University of

New Brunswick’s Engineering and Computer Science faculties are critical partners in the Siemens initiatives, as well as a number of private-sector partners.”

In fact, cybersecurity is one of the world’s fastest-growing industries. The sector now employs over 700 people in Fredericton, with \$55 million in direct payroll. Knowledge Park’s Cyber Centre is a \$37 million facility with 142,000 square feet of space that comes online as Canada’s first privately-owned, purpose-built digital/cybersecurity infrastructure building. “There is significant opportunity for Fredericton and New Brunswick, and cybersecurity should still remain as one of the top priorities for the province of New Brunswick,” Shaw says.

The city’s growing cluster of cybersecurity companies—and institutions like the University of New Brunswick (UNB), which hosts a Canada Research Chair in Cybersecurity and the Canadian Institute for Cybersecurity (CIC), and the NB Power Cybersecurity Research Chair—works alongside other innovators to safeguard some

of the world’s most critical infrastructure.

Says Dr. MaGee: “UNB’s extensive cybersecurity expertise and leadership, including the first-of-its-kind Canadian Institute for Cybersecurity, a Tier 1 Canada Research Chair, industry research chairs and many more researchers in fields from computer science to law, is a point of pride for us, as are the strong and impactful collaborations with our partners in industry and government.”

Richard Wunderlich, Head of the Siemens Canada Cyber Research and Development located at the Cyber Centre notes: “The Cyber Centre at Knowledge Park is quite literally becoming part of Canada’s Critical Infrastructure Protection fabric, enabling in its design not only a state-of-the-art building, but also providing the ingredients for a security eco-system to evolve and grow.”

He adds: “As an anchor tenant of the Cyber Centre and with our own Critical Infrastructure Defence Centre Inauguration on March 31, we believe another milestone has



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been achieved in NB for Canada and export. While innovation is critical to society, securing the innovation has become a foundational requirement in the Fredericton eco-system. The cluster contains Knowledge Park, the Cyber Centre, UNB and the CIC—all are enablers to the future success of participating organizations.”

As the first 5G city in Atlantic Canada, powered by Rogers 5G, Fredericton is opening the door for initiatives such as the collaboration between the City of Fredericton and the bi-annual BOOST prototype camp, an ideation and prototype camp focused on creating innovative solutions to the real challenges facing the Fredericton community.

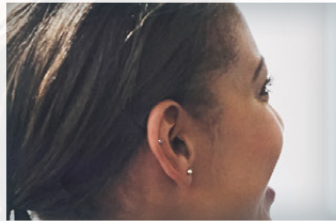
Kognitiv Spark is another company that has benefitted from Shaw’s vision of easily accessible Strategic Innovation Support. Starting out in 2017 with a footprint in Planet Hatch, the team took full advantage of the integrated approach that has become the bedrock of success for numerous digital and cybersecurity start-ups in Fredericton.



Kognitiv Spark (Submitted photo)

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For Duncan McSporrán, co-founder and CTO of Kognitiv Spark, Knowledge Park has provided that support directly and indirectly, and its open framework and location have been catalysts for the growth and success of the company. “Looking back, what is amazing is the proximity at Knowledge Park between the strategic enabling capabilities at the UNB and NBCC, the vision of NBIF and the team at NRC-IRAP, and customers such as the Department of National Defence at Canadian Forces Base Gagetown,” he says.

McSporrán notes that the alignment could not have been more impactful for the growth of the company’s capabilities and team. “From the very start of our journey, the ability to access a talented workforce in close proximity to thought leaders who understood the potential impacts of our technology has been critical to our success and the pace at which we have been able to grow,” he says. “In that sense the framework that has been created in Fredericton to support the growth of companies such as Kognitiv Spark embodies the whole concept of Strategic Innovation Support.”

Ultimately, economic development is a complex matrix of weaving a business case that demonstrates return on investment while encouraging businesses to start, grow, and locate in a region.

Or, as Shaw says, “There is no perfect economic development model. After all, economic development is more like a marathon, rather than a sprint. We must play to our strengths by investing in the sectors that we can lead and build upon our inherent advantages. We can build competitive advantage by leaning into opportunities that leverage our unique values and maximize our key assets. By doing this, we can access and create opportunities that are well beyond the scope of any one region, city, or community in the province.”

For Fredericton, clustering knowledge sector organizations, researchers, and entrepreneurs enables inventive, productive and often constructive disruptions to take place. And that drives innovation. It may not be immediately apparent to the naked eye, but look beneath the surface, and the map of the future is plain to see in this smart city. •

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