

The Toronto-Waterloo Innovation Corridor today:



4 Urban centres



15,000 +
High-tech
companies



205,000 +
Tech workers



17% + Contribution to
Canadian GDP

Toronto-Waterloo Corridor is now home to more tech start-ups than any other location outside Silicon Valley. Communitech is an industry-led innovation centre that supports, fosters and celebrates a community of nearly 1,000 tech companies. "Tech North" Toronto-Waterloo Innovation Corridor initiative image

There's no App for That: Creating a Supercluster is a Recipe

Iain Klugman

First, there was Silicon Valley. Then came London-Cambridge, Berlin, Singapore and Tel Aviv-Haifa. In Canada, Waterloo Region now has the highest density of tech start-ups outside Silicon Valley. As CEO of Communitech, a non-profit start-up incubator that offers services to more than 1,000 firms each year, Iain Klugman knows there's no such thing as a pop-up supercluster. And, it takes more than money.

As home to one of Canada's most dynamic tech communities, Waterloo Region attracts thousands of curious visitors each year, each looking to find out what's behind the incredible growth we've seen in recent years.

As they tour key locations such as the University of Waterloo, with its ever-expanding engineering facilities and the Institute for Quantum Computing; the Perimeter Institute for Theoretical Physics; and the Com-

munitech Hub, first-time visitors are invariably struck by the energy coursing through the community and the sheer volume of innovation-related activity. And repeat visitors typically note the changes they see, from the growth of our university campuses, to the cranes in the sky and new businesses downtown, to the construction of a new light rail transit system.

These changes have coincided with a surge in local entrepreneurial activity that has given Waterloo Region—with a population of just over 500,000—the highest density of tech startups outside of Silicon Valley, with an average of 440 new tech companies appearing each year for the last five years. Not surprisingly, we're often asked to share the blueprint for our vibrant and diverse innovation ecosystem, which implies that any community can simply pluck the right materials off a shelf and build their own.

Instead, we encourage people to think of it as a recipe, because if the past 20 years since Communitech was founded have taught us anything, it's this: Building a vibrant tech community is messy, unpredictable and highly dependent on the quality and availability of ingredients, and these vary from place to place.

Building a national innovation economy for Canada, then, will depend on how successful its regional innovation economies—places like the Toronto-Waterloo Corridor, Vancouver, Ottawa, Montreal and Halifax—can be at executing on their own unique recipes. That means assessing and assembling their own ingredients, experimenting continually to get the right mix and, hopefully, creating a feast of opportunity for entrepreneurs—especially for those who have moved beyond the startup stage and have the potential to achieve global scale, as companies like BlackBerry and Nortel once did.

So, what's in the recipe? Here are what we consider to be foundational

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ingredients for a well-functioning regional innovation economy:

Small, medium and large tech companies:

It might sound obvious, but if there are no technology entrepreneurs already present and building companies in a community, it's going to be incredibly difficult and take an inordinate amount of time to build an innovation economy there. The healthiest tech ecosystems have a balanced mix of companies, from homegrown enterprises young, old, small, medium and large; hardware and software companies; and foreign multinationals. Doubling down on established tech regions that already have diversity and momentum offers the fastest route to national success.

Sources of capital:

Whether it comes from local angel investors, previously successful entrepreneurs, large corporations, government funds or venture capital firms from Canada and beyond, risk capital is essential to fuel the rapid growth necessary for tech companies with demonstrably marketable and scalable products.

Strong academic institutions:

It's no secret that innovation runs on brain power. Post-secondary institutions that deliver of-the-moment instruction combined with relevant and rewarding work opportunities, such as those offered through the University of Waterloo's celebrated co-op program, are crucial suppliers of talent to regional innovation clusters.

Supportive and engaged public sector partners:

Municipal, provincial and federal

governments all have critical roles to play in fostering the conditions in which innovative entrepreneurs can thrive. Useful public sector contributions include everything from financial support for fledgling tech companies to investments in innovation hubs, to streamlined immigration policies, to infrastructure projects that make communities more livable for and attractive to world-class talent. In Waterloo Region's case, the City of Kitchener's \$110-million economic development investment fund has helped spark the ongoing transformation of the city's post-industrial downtown into a hive of knowledge-economy activity that includes academic institutions, the Communitech Hub, dozens of tech companies and new residential development.

Supportive and engaged private sector partners:

It really does take a village to raise a thriving tech community. Banks, law firms, accountants, intellectual property experts and insurance companies all have valuable contributions to make to the growth of local innovation economies, and all should be able to recognize they have a vested interest in doing so.

Physical spaces to bring people together:

As much as the internet has enabled people to work and build companies from wherever they happen to be, humans are social animals who are at their best when they can gather in a place where they feel they belong. Not every community has an old tannery waiting to be turned into a tech hub, but when we opened ours in 2010, we had no idea how quickly it would grow

and evolve into the centre of gravity that it has since become. Whether it's an old factory, a church basement or a hotel banquet hall, physical spaces and lively events matter when trying to build a strong sense of community in an innovation economy.

Great amenities:

The smartest people in the world can work wherever they want. If we want to attract them to Canada, we need to make sure our communities not only offer challenging work with great employers, but efficient, modern public transit, easy connectivity to international airports, abundant arts, cultural, culinary and recreational offerings, affordable housing and diverse employment opportunities beyond tech.

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Collaborative culture:

Like a pinch of saffron in a fragrant biryani, this ingredient is hard to find and worth more than its weight in gold, but, as we've learned in Waterloo, there is no substitute for a strong, homegrown culture of collaboration across all sectors of the local economy. The only reason Communitech exists is that, 20 years ago, a group of tech entrepreneurs set aside competing local agendas and recognized they could all achieve more for themselves, their companies and the region by pulling together. It wasn't long before the rest of the commu-

nity rallied around the cause, and today, few would dispute the results that effort has produced, not just for Waterloo Region, but for Canada.

Of course, executing on a great recipe also depends on clear understanding of who the chef is—and in this case, it can only be one person: the entrepreneur. As important as the rest of us might be in supporting the process, it is essential that we all recognize that without entrepreneurs—risk-takers with the big ideas, ambition and ability to build things people want—there can be no innovation economy. The emergence of a new generation of entrepreneurs through the boom in startup activity has been encouraging, but if Canada aims to become a globally significant innovation nation, we need far more of our startups to grow into world-leading businesses with annual revenues north of \$100 million.

Fortunately, over the past decade, we've seen several such high-growth companies emerge from our startup communities, including Shopify, Hootsuite and Kik, with several more poised to follow in their path. At the same time, though, we've learned that scaling companies face specific challenges that early-stage startups don't necessarily face, specifically in securing the top talent and growth capital they need. To that end, we've been making strides that will be bolstered by measures announced in the recent federal budget. These include the Global Skills Strategy to streamline immigration to Canada for highly skilled workers; the \$400-million Venture Capital Catalyst Initiative; increased funding for superclusters; and the new Innovative Solutions Canada fund to spur government procurement of technology from Canadian entrepreneurs.

Still, there is much work to do. If Canada is to succeed, we need to become the location of choice for the world's smartest and most ambitious people, whether they were born and raised here or are seeking new oppor-

tunity from abroad. To keep up the pace of startup creation, for example, we need to do more to encourage entrepreneurship and STEM-related careers in our young people, regardless of their gender, ethnic and economic backgrounds. To help our companies scale, we need to recruit and develop business professionals who know how to take companies from \$10 to \$100 million in revenue, and then keep growing. And to develop the next generation of technologies, we need to keep investing in technologies like quantum computing and artificial intelligence, where we have a chance to lead the world.

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Thankfully, Canada—with its stable and open democracy, strong global brand and diverse, well-educated population—has never been in a better position to grow a world-leading innovation economy.

We have the ingredients. What we need to do now—all of us, together—is execute on the recipe. **P**

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