

The Regional Municipality of York

Regional Council
Planning and Economic Development
April 27, 2023

Report of the Commissioner of Corporate Services and Chief Planner

ventureLAB 2022 Results

1. Recommendation

The Regional Clerk circulate this report to the Ministry of Economic Development, Job Creation and Trade, Invest Ontario, Toronto Global, ventureLAB and the local municipalities.

2. Summary

This report provides Council with an update on ventureLAB's 2022 activities and results.

Key Points:

- ventureLAB, York Region's Provincially mandated Regional Innovation Centre continued to support economic development and job growth through its services to the entrepreneurial tech community in 2022
- ventureLAB secured an additional \$3.5 million to expand the [Hardware Catalyst Initiative](#) (HCI), which included \$2.5 million from the Ontario Together Fund (OTF) and \$1 million from the Ontario Vehicle Innovation Network (OVIN)
- As part of the HCI expansion, ventureLAB launched its new signature [Canada Catalyst Program](#) (CCP), to attract foreign hardware and semiconductor related companies to York Region
- 2023 is the final year of York Region's five-year core funding agreement with ventureLAB and a new agreement will be drafted for Council approval in early 2024

3. Background

ventureLAB is York Region's Provincially mandated Regional Innovation Centre

Founded in 2011, [ventureLAB](#) is the Region's Provincially mandated Regional Innovation Centre. The service area covered by ventureLAB includes York Region's nine local municipalities, Simcoe County and the District Municipality of Muskoka. Due to its proximity to Toronto and a "no wrong door" practice, ventureLAB also services clients based in the City of Toronto.

ventureLAB is a not-for-profit organization that is part of a collaborative Provincial innovation and entrepreneurship network called the [Ontario Network of Entrepreneurs \(ONE\)](#). The network comprises 17 Regional Innovation Centres and 47 Small Business Centres located across Ontario, including four York Region-based Small Business Centres located in Markham, Newmarket, Richmond Hill and Vaughan. The York Small Business Enterprise Centre in Newmarket is managed by York Region Economic Strategy staff and serves the Region's northern six municipalities.

As part of ONE, ventureLAB is mandated to provide services that advise and support talented entrepreneurs in building world-class, innovative, high-growth companies in Ontario. This is achieved by providing clients access to workspaces, an in-house prototyping and testing hardware lab, support through connections with seasoned industry experts and opportunities to showcase products and technologies with strategically aligned investors. ventureLAB also develops and delivers programs and resources designed to assist technology-based entrepreneurs and small businesses in launching and scaling into enterprises of national and international significance. York Region is a founding member of ventureLAB, provides annual funding for program delivery and holds a seat on the Board of Directors.

With the support of multiple levels of government and private sector partners, ventureLAB has strengthened Canada's semiconductor hardware capacity

In 2019, ventureLAB leveraged [\\$5 million](#) investment by the Government of Canada, through the Federal Economic Development Agency for Southern Ontario (FedDev Ontario), to create the HCI. In 2020, ventureLAB secured several leading equipment, design and manufacturing partners to officially launch Canada's only hardware and silicon focused lab and incubator. This competitive program enables small and medium-sized technology enterprises to accelerate commercialization and growth. In recognition of the importance of building domestic production capacity for critical components like microchips, the Federal government invested an additional [\\$4.73 million](#) in 2021 to further expand the HCI.

The HCI has also garnered interest and support from over 30 private sector partners including global and Canadian industry leaders such as AMD, Dell and Microsoft. These partners recognize the unique opportunity and role for Canada as a valuable player in the global semiconductor supply chain.

In November 2021, Council approved \$1.5 million over five years to further expand ventureLAB's HCI and attract foreign hardware and semiconductor related companies to York Region.

4. Analysis

ventureLAB continues to add value to the York Region economy with an increased number of companies accessing ventureLAB services in 2022

Since 2011, ventureLAB has helped 3,500 businesses create over 5,000 jobs across all service areas. In 2022, ventureLAB clients generated \$42 million in revenue, with just under

40% (\$16 million) generated by York Region-based companies. These companies also raised \$69.5 million in both public and private funding, with \$5 million of the total raised by York Region-based companies. The ventureLAB programming highlights for 2022 are found in Appendix A.

The number of companies taking advantage of ventureLAB services has been increasing. The total number of new registered clients increased from 216 in 2021 to 247 in 2022 as shown in Table 1.

Table 1
Total New Registered Clients: 2019 to 2022

Year	2019	2020	2021	2022
TOTAL	194	138	216	247

This reflects the increase in new registered clients from other regions such as Toronto, Vancouver, Montreal, Ottawa and Kitchener-Waterloo as the HCI, Accelerate AI and CIP programs continue to attract clients from across Canada and internationally.

Increased engagement throughout the Region has led to more strategic collaborations

ventureLAB has continued to expand its presence, and programming across the Region through deeper strategic engagement with municipal partners and increased outreach to the small and medium-sized enterprises and start-up community. These efforts are driving innovation capacity and help elevate the ventureLAB and York Region brands. Some examples of collaboration include:

- **Renewed Agreement with City of Vaughan:** strengthen the competitiveness of Vaughan’s economy by further developing the Health and Advanced Manufacturing clusters
- **Collaboration with City of Markham:** hosted several foreign direct investment-focused meetings/tours for global software and hardware companies, building a pipeline for the Canada Catalyst Program
- **Opportunities with Town of Aurora:** discussions with the Town of Aurora on automotive sector collaboration between HCI, Magna and the Lassonde School of Engineering at York University
- **Talent Development with Seneca College:** continued work with Seneca’s School of Electronics & Mechanical Engineering Technology (SEMET) to develop and execute a Capstone Program that would grow the skill sets of students and connect them to industry partners

- **Collision Conference Presence:** participated in this leading global tech conference with a booth at the event and leveraged the York Region stage to deliver key announcements including the new HCI MedTech funding and lab, in collaboration with Sterling Industries, and participated on a Vaughan Healthcare Precinct panel with partners from the City of Vaughan, Mackenzie Health and York University
- **Participation in Monthly N6 EDO Meetings:** participated in monthly meetings with York Region Economic Strategy staff and Economic Development Officers from Aurora, East Gwillimbury, Georgina, King Township, Newmarket and Whitchurch-Stouffville. These meetings provided opportunities to share information regarding programs and events and to develop and distribute marketing materials for municipalities to share with the local business communities

Eleven organizations were supported through the Entrepreneurship and Innovation Fund in 2022

The [Entrepreneurship and Innovation Fund](#) is administered by ventureLAB on behalf of York Region. The fund was first launched in the fall of 2019 with an annual commitment of \$100,000. Since its launch, a total of \$400,000 has been awarded to recipients with 435 applications received, nine community partners served, and 32 companies supported.

The fund continues to drive innovation and entrepreneurship throughout the Region by supporting high potential initiatives from early-stage start-ups, accelerators, incubators and community partners. In 2022, a record 123 applications were received, and 11 organizations moved forward to receive funding. ventureLAB also secured an additional \$40,000 from SAMTEC, Sterling Industries, AMD and BDC which increased the funding awarded to the Pitch Competition winners. A full list of funding recipients for 2022 is found in Appendix B.

The Hardware Catalyst Initiative continues to expand and has led to positive outcomes in the community

ventureLAB's HCI is Canada's only lab and incubator for hardware and semiconductor-focused companies. Since 2020, the program has accelerated 44 start-ups through HCI and incubated 15 start-ups through the complementary Hardware Stream, for a total of 59 companies.

The HCI has had significant economic impact:

- 287 jobs created since 2020, with 111 jobs in 2022, the HCI has exceeded its 5-year FedDev Ontario target for new job creation
- Since 2020, HCI has commercialized 74 new products, more than triple the 5-year FedDev Ontario goal of 23
- Since 2020, HCI companies have already generated \$17.7 million in revenue and is on track to deliver the five-year program revenue FedDev Ontario target of \$24.9 million

In 2022 ventureLAB received funding to expand the HCI including:

- \$2.5 million from the Government of Ontario through the Ontario Together Fund (OTF) to expand the HCI to the MedTech sector
- \$1 million through the Ontario Vehicle Innovation Network (OVIN) to develop an HCI automobility stream as part of OVIN's Regional Technology Development Site (RTDS) program

With funding received from the Region, HCI was able to attract interest from stronger start-ups from across Canada and internationally, drawing more hardware companies into the Region. Highlighted HCI success stories are found in Appendix C.

In 2022 ventureLAB launched the Canada Catalyst Program to enable attraction of foreign-based technology companies into York Region

In the fall of 2022, ventureLAB leveraged the first installment of \$341,469 from the Region's \$1.5 million investment over five years to launch its new signature Canada Catalyst Program (CCP) to attract foreign hardware and semiconductor related companies to York Region.

As part of the HCI, this soft-landing program supports hardware/semiconductor and enterprise software companies with an AI or MedTech focus, from outside Canada, enabling international companies to expand and scale their businesses in York Region. ventureLAB supports these companies by providing them with tangible resources of up to \$20,000 in value, including a workspace, immigration assistance, mentorship, investor/partner connections, and introductions to talent.

ventureLAB has engaged in various outreach activities including attending the Web Summit in Portugal from November 1 to November 4, 2022. On March 10, 2023, ventureLAB hosted Innovate UK and their delegation of 10 automobility companies looking to apply to the Canada Catalyst Program to help set up businesses and/or suppliers based in Canada. From March 28 to April 1, 2023, ventureLAB also attended the Smart City Summit and Expo in Taiwan to promote the Canada Catalyst Program to potential participants.

To support the initiatives under the Canada Catalyst Program, ventureLAB is completing an application for the Start-up Visa designation to the National Angel Capital Organization (NACO). The Start-up Visa program enables investments from immigrant entrepreneurs with the skills and potential to build businesses in Canada that are innovative, can create jobs for Canadians, and compete on a global scale. Designated organizations are approved business groups to invest in or support possible start-ups through the Start-up Visa Program.

5. Financial

York Region provides ventureLAB \$250,000 annually; \$150,000 to deliver core services and \$100,000 for the Entrepreneurship and Innovation Fund. Starting in 2022, ventureLAB received the first tranche of \$341,469 from the Innovation Investment Fund to support the expansion of the HCI. In 2023, the second installment of \$376,469, will be provided as per

the York Region Hardware Catalyst Innovation Support Agreement. A total of five annual payments will be made through 2026.

2023 is also the final year of York Region's five-year core funding agreement with ventureLAB. A new agreement will be drafted for Council approval in early 2024.

6. Local Impact

ventureLAB serves as an innovation and commercialization hub for technology companies in York Region across all nine local municipalities. ventureLAB delivers services and activities to businesses to promote economic success and growth of enterprises looking to commercialize products and services. These services complement the work of local economic development teams and support overall network development which includes the four Small Business Enterprise Centres, innovation hubs and business accelerators across the Region.

7. Conclusion

Regional Innovation Centres across the Province, like ventureLAB, continue to support development and delivery of programs and services that target technology-based entrepreneurs seeking to start or grow a business. ventureLAB is a key delivery partner with the Region and plays a critical role with innovation initiatives that will help drive Regional economic growth and job creation. The successful outcomes highlight the importance of continuing this strong partnership to build innovation capacity in York Region and across Canada.

For more information on this report, please contact Jonathan Wheatle, Director, Economic Strategy at 1-877-464-9675 ext. 71503. Accessible formats or communication supports are available upon request.



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Appendix A – 2022 ventureLAB Programming Highlights
Appendix B – 2022 Entrepreneurship & Innovation Funding Recipients
Appendix C – 2022 ventureLAB HCI Success Stories

2022 ventureLAB Programming Highlights

2022 Highlights of the ventureLAB programming include:

- [Capital Investment Program \(CIP\)](#): This program works with scale-ready companies to establish a long-term capital strategy by providing them with guidance and expertise through the entire fundraising process. From refining investment pitches to connecting founders with strategically aligned investors, the CIP enables long-term success and business sustainability. In 2022, CIP companies successfully raised \$58.8 million in public and private funds and 169 jobs were created
- [HardTech Conference](#): The second annual HardTech Conference brought together innovators, leaders and hardware enthusiasts to help put Canada on the map for hardware and semiconductor innovation. The full-day hybrid event had 290 attendees and featured 11 sessions and 17 speakers, participating in MedTech, automobility and talent panels. The Pitch Competition featured seven judges and eight Canadian hardware companies, with \$50,000 in cash prizes awarded
- [Tech Undivided \(TU\)](#): This program bridges inclusivity gaps by creating gender-balanced networks with diverse representation. It is a program for women founders with the vision of creating an equitable and inclusive tech ecosystem. In 2022, TU companies, including program alumni, have collectively generated \$1.7 million in revenue, raised \$2.1 million in capital, and created 76 jobs
- [Accelerate AI Program](#): ventureLAB's Accelerate AI program supports growing and scaling AI start-ups working at the intersection of hardware and AI, offering intelligent solutions and applications in the supply chain industry. The Accelerate AI program has delivered one cohort of 5 companies and is now serving 11 companies through its second cohort. Accelerate AI companies have generated total revenues of \$4.1 million and have created 31 jobs. These companies have created three IPs and raised \$7.5 million of dilutive and non-dilutive funding

2022 Entrepreneurship & Innovation Funding Recipients

Stream 1: Community Partners

Business Name	Project Description	Funding Received	Business Location
YEDi (York Entrepreneurship Development Institute)	<p>Intensive 16-week program, including formal academic lectures by YEDI instructors, workshop-based training in entrepreneurship, and mentorship by key industry leaders. At the end of the incubator, entrepreneurs will have a professionally developed business plan, an executive summary, and a proper business model that is ready to pitch and potentially bring to the market. Upon successful program completion, participants receive a formal certification from YEDI</p>	\$10,000	Toronto**
Ontario Musicians Co-operative	<p>Canadian Musicians Co-operative assists independent artists in building strong, successful, and sustainable careers. They provide support enabling independent artists to overcome barriers, build strong networks, and succeed in building a self-directed artistic practice, which empowers them to continue to control their intellectual property, their image and likeness, and digital assets</p>	\$10,000	Barrie**

Stream 2: Small Business & Entrepreneurs

Business Name	Project Description	Funding Received	Business Location
Tasteport	Tech Platform Ecosystem helps specialty grocers give fully loaded e-grocery experiences, so that consumers can get the 1000s of fresh diverse products they can't find at big box stores, with fresh same-day delivery	\$10,000	Markham
Cyberworks Robotics	Developing an autonomous self-driving technology platform that adds full self-driving capabilities to any manually operated off-road vehicle or equipment	\$10,000	Markham
Cheelcare	Innovating and developing assistive mobility devices. Manufacturing revolutionary mobility products to improve quality of life and independence for people with disabilities	\$10,000	Richmond Hill
HUEX	Focused on bringing Voice AI technologies to brick and mortar businesses to help combat the labor crisis, while providing conversational insights into their thousands of daily transactions	\$10,000	Vaughan
Apricotton	E-commerce bra brand, designing the only bras globally that "grow" as tweens grow, helping the 84% of tween girls who suffer decreased self-esteem during puberty	\$10,000	Toronto**
MapleWiz	YoPets allows customers to track their pets in real time, anywhere, anytime. With advanced ecosystem-independent-features including unlimited range, and instant alerts when a pet leaves the safe area &	\$10,000	Markham

Business Name	Project Description	Funding Received	Business Location
	route with playback history so pet owners will not lose their pet		
Fairly AI	An enterprise SaaS platform for end-to-end AI oversight. Their patent-pending Smart Control System connects AIs to structured policies housed in a software platform through a new class of Application Programming Interface (API), allowing non-tech and tech people to interact with policies in a common language so they can build trustworthy AI together	\$10,000	Kitchener*

Stream 3: Pitch Competition

Business Name	Project Description	Funding Received	Business Location
Argentum Electronics	Technology company that is conserving energy & emissions for buildings through modular direct current power distribution systems, sensor fusion, and intelligent building automation software	\$35,000***	Markham
Daanaa Resolution	Daanaa's chip-based power transaction technology transfers energy and data freely, safely, and efficiently and eliminates the need for transformers, copper wires and connectors, to transfer power at high efficiency in DC\DC, DC\AC, AC\AC modalities, using bi-directional action in wired, wireless or using structures	\$15,000***	Vancouver, BC*

*Must be committed to co-locate to York Region or ventureLAB’s innovation hub for at least six months upon accepting the prize

**Outside of York Region but within ventureLAB catchment area

***Additional funds leveraged from SAMTEC, Sterling Industries, AMD and BDC

2022 ventureLAB HCI Success Stories

Blumind (Markham)

Blumind is a fabless semiconductor software applying unique analog concepts to machine learning inferencing to dramatically lower power consumption and latency.

Part of the first HCI graduating cohort, Blumind is housed at ventureLAB and has continued its huge growth trajectory and success. CEO Niraj Mathur announced their chip tape-out at Collision 2022 on the York Region stage in record time (their tape-out occurred two years after joining HCI vs. a market average of 4-5 years). As part of this success, they were featured in [The Logic](#).

This achievement validates the goal of the HCI program - to fast track and accelerate the path to market and global commercialization for hardware companies.

Applied Brain Research (Waterloo)

Applied Brain Research has developed new kinds of AI that exploit temporal neural networks. They have developed a software platform, Nengo, that flexibly combines conventional and unconventional algorithms and hardware to deliver the lowest power, fastest speeds and highest accuracy.

This start-up joined HCI's 4th cohort and with the support of ventureLAB's advisors and mentors, they have created over four new jobs, signed a Letter of Intent for chips and software from a Major European Automobile Manufacturer and reached \$2.1 million in annual revenue.

Applied Brain Research has been accepted into Silicon Catalyst in Q4 2022.

Aqsense Inc. (North York)

Aqsense Inc. has developed a patented smart sensor system which can, through a combination of unique algorithms and machine learning, passively sense, acquire and deliver actionable data and insights about presence & human physiology in real world environments.

Since joining HCI's 4th cohort, HCI has supported testing, research and development, and has helped them achieve great results. Aqsense Inc. raised \$800 thousand (US) seed investment and secured valuable partners in property technology real estate such as Splunk and Ecobee.

Lemurian Labs (Oakville)

Lemurian Labs develops disruptive, ultra low-powered inner-product architecture to make deep learning and computer vision applications sustainable by reducing energy consumption, and decreasing heat generated through chip processing.

With help from advisors, Lemurian raised a \$3 million Seed Round led by Oval Park Capital. They have also signed four Letter of Intents with large customers to fix industrial robots, mobile autonomous robots and drones. ventureLAB also facilitated introductions with key ecosystem partners such as [MNP](#) and Caravel Law.

[Eneritics](#) (Milton)

Eneritics provides an early health monitoring, diagnostics and predictive maintenance solution of electrical assets, used by industrial and utility customers, with a goal to maximize their life and to minimize the unplanned downtime and associated costs.

Since joining Cohort 2, Eneritics has secured \$2 million of OEM sales for 2022 and expanded partnerships with manufacturing and process industry and equipment suppliers.