



Tech Connect: An Initiative to Support the Windsor-Essex Tech Sector



WEtech Alliance
January 31, 2020

Dr. Victoria Abboud, Tech Talent Strategist
Yvonne Pilon, CEO WEtech Alliance



*The Tech Connect initiative is made possible through the generous support of the
Local Employment Planning Council led by Workforce WindsorEssex.*

EXECUTIVE SUMMARY

The Windsor-Essex region has struggled with attracting and retaining talent in the tech sector. In July 2018, Workforce WindsorEssex published the “Decoding the Information, Communication, and Technology (ICT) Workforce Report” and identified that employers in the ICT sector are concerned about finding the right talent for available positions. The challenge has greater implications for the prosperity of the region.

Over the period July 2019 through January 2020, through the Tech Connect initiative, supported by Workforce WindsorEssex and the Local Employment Planning Council, WEtech Alliance undertook a multi-pronged approach to identify opportunities for employers and prospective talent to connect more effectively. Part of this initiative included reestablishing the ICT Roundtable, conducting a pulse check survey, developing a landing page on the WEtech Alliance website to highlight events, information, and offerings in the Windsor-Essex region, and hosting networking opportunities for employers and prospective talent.

The Tech Connect investigation revealed several findings that have been categorized into themes. In general, there is a gap between employers and prospective talent that is largely due to the seeming stability of the local tech workforce, the different ways that employers and prospective talent seek opportunities and connections, and the lack of reputation of Windsor-Essex as a tech community. More specifically, it has become clear that the region’s stakeholders must come together to develop a tech ecosystem in order for the tech sector in this region to grow further and to thrive.

Fostering a tech ecosystem requires intentional collaboration that brings together multiple sectors, including academia, enabling organizations, government at all levels, tech and non-tech enterprises, and individuals focused on driving inclusion and belonging in the sector.

While there are several examples of organizations and businesses that have been invested in building the regional tech ecosystem, there is still a broader challenge in that the region’s “story” is not yet evident—both for residents of the region and for those from elsewhere. More specifically, the reputation of Windsor-Essex as “makers and growers” and heavy reliance on the automotive and agricultural industries pervades the region and often obfuscates the innovative, progressive, and global tech-enabled and tech-focused work in which many companies and organizations have been engaging for years. The story—the regional identity—has yet to be established and proliferated.

The keys to bridging the tech talent-employer gap include intentional collaboration among industry, education, and community; identifying the evolving skillsets required of talent; supporting companies to create and foster inclusive and professional work environments that engage tech talent effectively, and building strong pathways for tech talent and employers to connect, solve challenges, and innovate together across company and organization boundaries.

TABLE OF CONTENTS

I	BACKGROUND	4-8
	Regional Talent Issues	
II	FRAMEWORK FOR A REGIONAL APPROACH	8-14
	Establishing a Tech Ecosystem	
	Towards a Regional Vision	
III	REGIONAL OPPORTUNITIES BY THEME	15-24
	Diversity, Inclusion, and Belonging	
	A Collaboration Metric: Industry, Education, Community	
	Employability and Evolving Skillsets	
	Building Connections	
IV	CONCLUSIONS AND RECOMMENDATIONS	25-26
V	APPENDIX: THE “TECH CONNECT” STRATEGY	26-27
VI	ACKNOWLEDGMENTS	27
VII	REFERENCES	28-29

BACKGROUND

In July 2019, the Local Employment Planning Council, led by Workforce WindsorEssex, identified WEtech Alliance, specifically the “Tech Connect” initiative, as one of the recipients of Community Labour Market Research and Innovation Project (CLMRIP) funding. This seven-month initiative was developed to create stronger connections among regional employers and tech talent with the goal of reducing the tech talent gap in the Windsor-Essex area. The strategy included a pulse check survey, interviews, reconvening the Information, Communications, and Technology (ICT) Roundtable, and developing a landing page (www.wetech-alliance.com/connect) where WEtech Alliance could advertise regional events and opportunities, establish an online calendar that would collate events, conferences, and speaker series in one place, and offer information and research about issues and ideas relevant for the tech sector.¹

WEtech Alliance released the interim progress report for the Tech Connect initiative in October 2019 to highlight initial findings and insights. The interim report identifies the question of how best to recruit, attract, and retain talent in the broadly defined tech sector and provides some of the key themes articulated through the ICT Roundtable. Given the successes and reputations of Silicon Valley, the Greater Toronto Area (GTA), Ottawa, and “The Corridor” -- the 112 km stretch between Toronto and Waterloo that lauds 15,000 tech companies, 200,000 tech workers, and 5,200 tech startups (Startup Genome Report, 2019) -- Windsor-Essex seems to be moving further into the background of the ever-expanding tech scene.

While common concerns about securing skilled talent for this region and about increasing awareness of this region’s potential as a tech ecosystem are often met with solutions related to pay scales and reiterating the area’s affordability and weather, there are deeper questions and opportunities that have arisen through this exploration.

REGIONAL TALENT ISSUES

Through the previous efforts of Workforce WindsorEssex to identify the key challenges and opportunities for the tech sector in this region, it became clear that employers struggle with recruiting appropriate talent for their business needs (“Decoding the ICT Workforce,” 2018, p. 21-2). The difficulty in securing talent, of course, leads to the inability to grow, and, potentially, to scale businesses in this region and to support Windsor-Essex’s economic growth (p. 24). In fact, according to the Ontario Chamber of Commerce, seventy-seven percent (77%) of Ontario businesses indicate that “access to talent has the largest impact on their competitiveness” (2018).

To clarify the tendencies and patterns of regional talent gain and loss, Workforce WindsorEssex undertook its own broad study, “2019 Workforce Attraction and Retention Survey,” to identify “what motivates the workforce to choose Windsor-Essex as a place to live and work” (“Why Talent Chooses,” 2019).

With nearly a thousand respondents from a variety of populations in this region, results indicate that the most influential reasons for people to relocate to Windsor-Essex include “costs of living and housing, family-friendliness, weather/climate, commute times, and proximity to Detroit” (ibid, 2019).

¹ Additional details about the Tech Connect strategy can be found in the Appendix of this report.

Perhaps not surprisingly, of the occupations deemed to drive economic growth in Windsor-Essex, the Workforce WindsorEssex research indicates that “mechanical engineers, engineering managers, information systems analysts and consultants, and industrial engineering and manufacturing technologists and technicians” are 4 of the top 10 most promising occupations for this region (Villafuerte, 2020, p. 14).²

In the 2019 “Scoring Canadian Tech Talent” report, CBRE Research ranked Windsor as 18th in a list of 20 Canadian cities through their Tech Talent Scorecard (Figure 1). Among the categories, the opportunity for commercial real estate investment, the availability of tech talent, and the quality of tech talent support the findings.³ Significantly, Windsor has experienced 20.4% growth in tech talent from 2013-18, and the city is graded “A-” for its quality of labour. CBRE Research identifies Windsor’s top performing drivers as gross occupancy, real estate cost, and tech and tech-related degrees (p. 33).⁴



Figure 1. Breakdown of metrics and results of CBRE Research assessment of Windsor’s tech talent score. (CBRE Research, “Scoring Canadian Tech Talent,” 2019)

The challenges of attracting talent to the Windsor-Essex region are based on perceptions of the region’s history and current state. One such perspective identifies the area’s reputation as a manufacturing region, of being “makers and growers” in the automotive and agriculture sectors.

²Of course, the research is focused on the workforce overall and does not pinpoint the broadly defined tech sector itself. Therefore, for the Tech Connect study, it is important to use the WFWE results cautiously as they do not necessarily correlate to tech-specific talent questions at this stage.

³CBRE Research ranked cities based on 13 metrics, including “measur[ing] each market’s depth, vitality and attractiveness to tech employers and potential employees. [...] Metrics were weighted to reflect their relative importance to companies seeking tech talent” (p. 11).

⁴CBRE Research focuses on university degrees as a driver and does not account for college credential attainment.

As explained by Susan Anzolin, Executive Director of the Institute for Border Logistics and Security, Windsor-Essex has historically been viewed as a branch plant economy; that is, “the products and the labour required to make these products are a result of the decisions and investments that occur outside of the Windsor-Essex Region. In some cases, the regional market is too small to support a robust research and development (R&D) segment of a company so the innovation happens outside of this area.” And, yet, there are positive signs of companies in this region taking the initiative and making the investment to be more innovative. But, Anzolin adds, many still rely on their reputation as “makers and growers” with a focus on “filling contract requirements” rather than driving innovation.

However, there are several long-standing companies that, according to Larry Koscielski, Vice-President of Process and Technology Development at CenterLine, have been “born on the backs of great families and entrepreneurs and many still do a huge amount of research and development and are an important part of the community. For example, Valiant, CenterLine, AP Plasman, Windsor Mold Group, Atlas Tube, Reko, Brave, Next Dimension, AlphaKOR, and Hiram Walker [now Wiser’s] are all global players that are a success story for the region—they’re companies that started right here.” Telling the story sometimes becomes difficult, according to Koscielski, because, in some cases, the research and development work is confidential: “One other obstacle we have is that the vast majority of what the region does ends up in the B2B [business-to-business] sector and we can’t talk about it or it’s not the kind of story that makes media headlines.”

Despite the strong examples of companies that use and develop technology on a daily basis, there is still a pervading perception likely based on the history of this region’s successes (and failures) in manufacturing, automotive, and agriculture. Over 50% of survey respondents declared that they are “not at all” or only “somewhat” familiar with the tech scene in Windsor-Essex and a surprising 21% of respondents remained “neutral.” The lack of familiarity compounds the challenges highlighted by both Anzolin and Koscielski. If the regional story is unfamiliar then the perceptions about innovation and R&D in this region persist.

Furthermore, the language and definitions used in this region seem to be causing issues. CenterLine’s Kelly Wigle, HR Generalist, and Tyler Alexander, Customer Services Manager, suggest that “using the word ‘tech’ clouds what you’re looking for. The local area isn’t labelled as ‘tech’ and, as an example, this organization [CenterLine] wouldn’t be seen as a ‘tech’ organization, but it’s very technical. We’re making equipment ‘smart’ so that it can communicate back to us. Manufacturing isn’t just manufacturing. Locally, there are probably a lot of other organizations that are hiding; they might not have the big profile, but lots of tech work is being done.”



HOW FAMILIAR ARE YOU WITH THE TECH SCENE IN WINDSOR-ESSEX?

-  SOMEWHAT FAMILIAR | **35%**
-  SOMEWHAT UNFAMILIAR | **21%**
-  NEUTRAL | **21%**
-  NOT AT ALL FAMILIAR | **16%**
-  VERY FAMILIAR | **7%**

Figure 2 | Breakdown of 219 responses to question 9 of the Tech Connect survey

The reputation of this region is frequently identified as a challenge for those trying to attract talent to the area, and, interestingly, students who participated in Tech Connect group conversations, and who themselves are studying in technology-focused programs at both the University of Windsor and St. Clair College, largely believe that they will need to leave the region in order to build their careers. For example, although “Windsor-Essex is North America’s manufacturing powerhouse,” according to WindsorEssex Economic Development Corporation, most students and early-career professionals do not identify themselves in a way that leads them to seek “tech” roles in the advanced manufacturing sector.

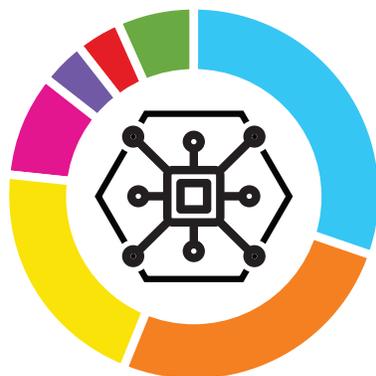
In addition, Canada’s future competitiveness is being compared to what has been referred to as the “intangible economy.” According to Brookfield Institute’s Daniel Munro and Creig Lamb, “a rising share of economic growth and prosperity is being driven by intangible investments and assets such as data, digital services, brands, design, marketing and firm-specific training—and a declining share by tangible investments and assets, such as buildings, machinery, equipment and product inventories” (“Managing the Intangible Shift,” 2019). Despite this perceived shift away from the “tangible” economy, Windsor-Essex manufacturers, growers, and builders have an opportunity to enhance and innovate within and across sectors to advance the region in several ways. Arguably, this region does not have to choose either tech or manufacturing, or agriculture, or automotive because tech-enabled operations are already in place in many “tangible-focused” companies in this region and the ways in which technology is used changes rapidly and frequently. There is an opportunity to engage in a blended approach--both tangible and intangible--for regional prosperity through innovation and a collective responsibility for ensuring region-wide success now and in the future.

It is imperative that the region identify “tech” for its purposes, amplify the work that occurs in the area, and draw upon the collective knowledge and capabilities that can tell a regional story to attract the workforce that is needed now and in the future.

Similarly, in order to market this region to attract tech talent and to highlight the evolution of the local sectors into tech-enabled or tech-enhanced (or even tech-focused) workplaces, language becomes an issue. When the region itself identifies “tech” in myriad ways, it is especially difficult to clarify what types of talent are needed here.

As one St. Clair College student points out, “a company might advertise for a ‘software developer,’ but unless they can tell me which [coding] languages they want me to know, whether they want back-end or full-stack developers, and what kinds of projects I’d be working on, I’m less likely to apply. [The companies] need to know how to ask for our skills so that we know what we’re applying for and so we can figure out if what we know is what they need.”

For example, nearly 31% of survey respondents identified their field as “software development / programming / coding” while nearly 21% labelled their field as “computer and information systems management.” This group reflects over 50% of the total survey respondents and provides a generalized descriptor of their fields, but the nuances and skillsets of the individuals would vary greatly. In order to ensure that companies are attracting the most qualified candidates for open roles, the specifics about types of software, programming languages, and coding abilities, among other details, need to be articulated. Still, some companies do include such details yet they continue to struggle with securing talent.



WHAT FIELD MOST CLOSELY ALIGNS WITH YOUR STUDIES/PROFESSION?

- ◆ SOFTWARE DEV/PROGRAMMING/CODING | 31%
- ◆ OTHER (ENGINEERING, MEDICAL SERVICES, MARKETING, PROJECT MGMT, ETC.) | 26%
- ◆ COMPUTER & INFORMATION SYSTEMS MGMT | 21%
- ◆ COMPUTER SYSTEMS DESIGN & ENGINEERING | 9%
- ◆ INFORMATION SYSTEMS ANALYSIS | 4%
- ◆ TECHNICAL/SCIENTIFIC R&D | 4%
- ◆ 7 OTHER CATEGORIES WITH LESS THAN 2% EACH | 7%

Figure 3 | Breakdown of 219 responses to question 2 of the Tech Connect survey

In effect, if there is no shared understanding of what “tech” is, what skillsets are required to bolster this region, and how to equalize the ways in which the region names the skillsets necessary for the talent pool, then it becomes especially difficult to identify needs, trends, and to forecast demand (Litchfield, 2019).

It is equally important to recognize the distinction between a talent gap and entrepreneurship. While enabling organizations and regional innovation centres (RICs) like WEtech Alliance, MaRS Discovery District, and Communitech are focused on encouraging and urging tech-focused ventures, the Windsor-Essex region should identify its needs relative to the work that occurs through these organizations. The drivers and initiatives that support and nurture entrepreneurship are different than those that would name the region as an important locale for tech talent. While the two categories may include overlapping interests and goals, the motivating factors to attract a tech talent pool and those to encourage individuals to embrace entrepreneurship differ greatly. It is vital to differentiate the two.

FRAMEWORK FOR A REGIONAL APPROACH

Participants in Tech Connect interviews, the pulse check survey, and the ICT Roundtable have identified the need for a collaborative approach to establish the region as a tech ecosystem. As has been made clear, regional businesses and organizations are largely tech-enabled even if they are not focused on producing technology or software, for example. However, in order to establish a region as a tech ecosystem, the effort must come from a collective push to advance the culture, community, and commitment to establishing the ecosystem in this way. An ecosystem cannot be built, nor can it be sustained, by 1-2 organizations, companies, or individuals.

“ *Innovative practices are the first step for a company to become innovative and to start building and creating innovative products.* ”

Susan Anzolin

Executive Director, Institute for Border Logistics & Security

ESTABLISHING A TECH ECOSYSTEM

When asked whether they identify Windsor-Essex as a “tech hub,” students in the University of Windsor and St. Clair College focus groups responded with a resounding “no.” Similarly, of the survey respondents, only 9% “strongly agree” and 32% “somewhat agree” that Windsor is a strong tech hub, with an additional 37% remaining “neutral.” Twenty-two percent (23%) “somewhat disagree” or “strongly disagree.” The region is not currently known for its tech capabilities despite there being globally successful companies creating innovative tech in this region. Wildly successful models of tech ecosystems include The Corridor (imagine Communitech and its far-reaching reputation) and the GTA, arguably with MaRS Discovery District at the helm. While Silicon Valley is certainly always one of the first examples named in a discussion about tech, the Windsor-Essex region is building from a particularly Canadian, border-city perspective, and none of the others has such an advantage.

Although the well-recognized tech ecosystems are enticing and often there is a hope that this region could become the next Corridor, it is important to recognize the distinctions, the variability, and the particular value that Windsor-Essex and Chatham-Kent bring before trying to duplicate another regional model. So, while establishing a tech ecosystem has been done successfully before, and it is useful to learn from others’ successes and challenges, it will be imperative to identify how this region can be differentiated rather than duplicating other models. The key to establishing any ecosystem is to work with the unique characteristics of the system and to ensure that the elements and characteristics are relevant for the stakeholders and participants in that system. In the case of Windsor-Essex, as has been identified previously, the international opportunities, diverse population, and long-standing strength in “making and growing” are only three of the many ways the region might identify its unique offerings.

WINDSOR-ESSEX IS A STRONG TECH HUB

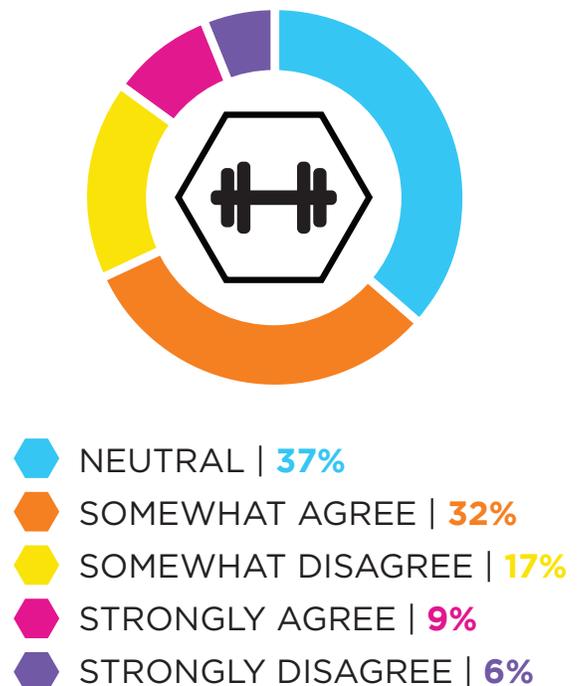


Figure 4 | Breakdown of 213 responses to question 16 of the Tech Connect survey

Further, the components and stakeholders identified above require a fertile environment in which to operate, collaborate, and learn together. While each will have its own set of drivers and perspectives, and there may even be competitive relationships among them, the focus of such collaborative engagements becomes the system itself—the region—and individual needs become part and parcel of diversity rather than the factors that stop the entire system from being established. Diversity of opinion and perspectives, as has been identified in many publications in the last few years (eg. “Tech for All: Breaking Barriers in Toronto’s Innovation Community,” 2018) is a driver for innovation.

The five (5) core elements of a tech ecosystem, as identified through the Communitech convening, are culture, connection, capability, capital, and community (Figure 6, below).

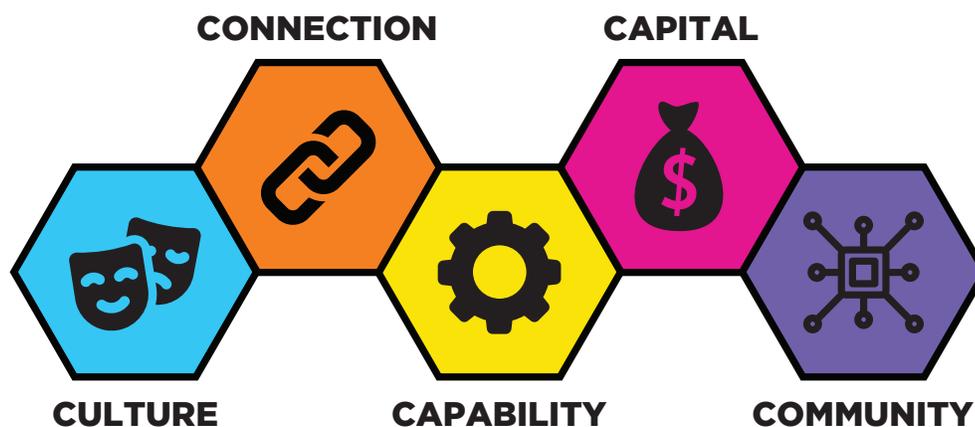


Figure 6 | Core Elements of Tech Ecosystems. Adapted from Communitech (2010).

The successes of regions like the GTA and The Corridor are largely due to the investment and contributions of a varied and strong collective of individuals, organizations, government agencies, and communities. No ecosystem exists in a vacuum, so the success of the Windsor-Essex region’s tech ecosystem relies on the interplay and interconnections of as many participants as possible. One of the key elements is “community,” and building a community requires identification and belonging – “people need to feel [that] they’re part of something larger; part of an industry/cluster as well as a company” (Communitech, 2010, p.8).

NERD OLYMPICS is an annual competition that brings 16 local tech companies together in a series of Olympic-style events over a 3-month period. Nerd Olympics builds camaraderie within and between tech companies, helping to grow a close knit tech community.

DID YOU KNOW? Teams donate thousands of dollars in cash and supplies to local charities annually through the Community Challenge.



While the concept of building a tech ecosystem is effective and a useful frame with which to position this region, the question then becomes, “What does this look like on the ground? What are the practical steps to making this happen?” One example of an effective ecosystem is the Autonomous Vehicle Innovation Network (AVIN), a provincial network that “builds upon Ontario’s position as a world-leading automotive manufacturing and supply

jurisdiction in addition to the large cluster of information and communication technology companies operating in the province” (AVIN, 2020). Through collaboration and a shared vision for the province, AVIN exemplifies how the reputation and history of the region has evolved into a future-focused ecosystem that is urging innovation forward. By generating collective engagement through research and development, talent development, technical supports, and demonstration grounds (among other opportunities), “AVIN provides a competitive advantage to Ontario-based connected and autonomous vehicle (C/AV) companies,” and this further reinforces the province as a “North American leader in transformative automotive technologies as well as transportation and infrastructure systems” (ibid, 2020).⁵

Consider, then, that the Windsor-Essex region “boasts one of the largest automation sectors in Canada” and that “most of the auto industry’s original equipment manufacturers’ engineering and design offices are located within one hour’s drive of Windsor-Essex” (WE EDC, 2020). Imagine the possibilities with a local collective focused on the future vision of becoming the global innovation capital of automation and autonomous vehicles: research and development, business acumen, innovative operations, strategic planning, and education work in concert. In effect, the core industry itself becomes stationed in this region and Windsor-Essex becomes known as the global leader in the industry.⁶

This future vision is not far, according to WindsorEssex Economic Development Corporation: “Windsor-Essex has a rich history in the development and production of the automobile for over a hundred years. The region is now looking towards the future trends of the automotive industry including the development and production of connected and autonomous vehicles [and is part of AVIN provincially]. This will require the creation of new technologies and require the collaboration of private industry, government and [post-secondary education] to deliver and adopt these future systems of mobility” (WE EDC, 2020).

In addition, the perceptions of what automotive or manufacturing look like is different in 2020. One example, noted by Tyler Alexander, is that “people probably have a very jaded view of what manufacturing is: smoke on the walls, working on the line. They come here [to CenterLine] and they see a very different view of what manufacturing can be, but it’s limited to the people who get exposed to it. Not a lot of people know what we’re doing. They don’t understand that we were a major contributor to the lines that support Tesla!”

To change perceptions of both local citizens and the industries we’re trying to attract, the challenge that emerges is identification of the region as one that innovates traditional industries through technological engagement and advancement and one that then tells that story widely. A shift in culture, community, and connection (3 of the core elements of building a tech ecosystem) requires wide-spread effort and contribution from multiple stakeholders.



Photo: Windsor-Essex Virtual Reality Cave promo flyer (2019)

⁵ Planet M is a similar collective approach based in Michigan that focuses on the state’s mobility ecosystem.

⁶ WindsorEssex Economic Development website (www.choosewindsorsex.com/manufacturing) provides information about automation and other sector innovations in this region.

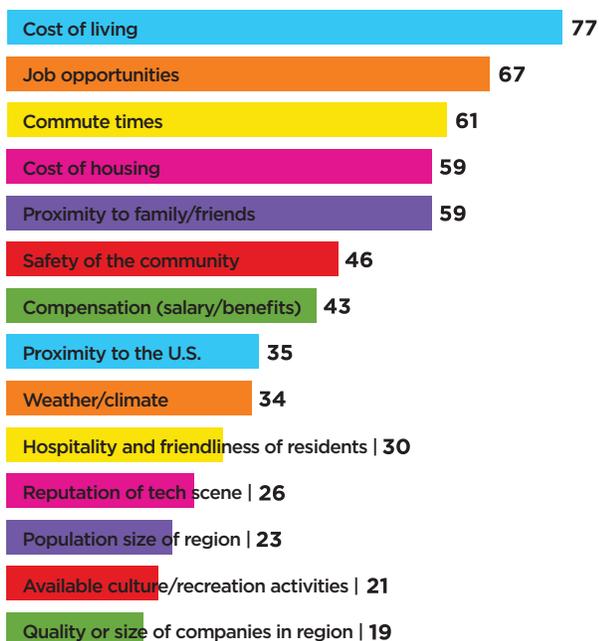
TOWARDS A REGIONAL VISION

As was outlined in the Tech Connect interim progress report, the Windsor-Essex region has a reputation for manufacturing and agriculture. There is not yet a strong enough identity to label it as a tech region. In fact, twenty percent (20%) of this region (18,000 people or 10% of the total labour force) is based in manufacturing (Anzolin, 2019). Tech is not the core of this region and rates of entrepreneurship have been relatively low in this area as well (Pilon, 2019).

Given the previously identified concerns about the reputation (or lack thereof) of the local tech scene, a group’s perceived familiarity with the local tech scene may be an indicator of the strength of the tech community and its ability to attract and retain talent. When survey respondents were asked about their familiarity with the Windsor-Essex tech scene, thirty-five percent (35%) indicate that they are “somewhat familiar” with it while nearly 22% indicate they are “somewhat unfamiliar” with it, and nearly 21% and 16% offer that they are “neutral” or “not at all familiar” with it, respectively. Subsequently, when asked to name three of the local tech companies, the same names appear: AlphaKOR, Brave Controls, Next Dimension, and Coulter Software, to name a few. Interestingly, the Big 3 – Chrysler/FCA, Ford, and GM – also make the list of “tech” companies in this region. Even so, fewer than 59% of respondents were able to identify three tech companies in the region.

Nearly 36% of survey respondents indicate that they are “very likely” while 14% are “somewhat likely” to apply for employment in the Windsor-Essex region, and, perhaps not surprising given the relative reputation of Windsor-Essex as a tech hub compared to Silicon Valley and the Corridor, nearly 29% indicate that they are “neutral” when considering the likelihood that they would apply for employment in Windsor-Essex.

WHAT FACTORS WOULD ENCOURAGE YOU TO SEEK EMPLOYMENT IN WINDSOR-ESSEX?



WHAT ARE THE MAIN REASONS YOU WOULD *NOT* CONSIDER EMPLOYMENT IN WINDSOR-ESSEX?

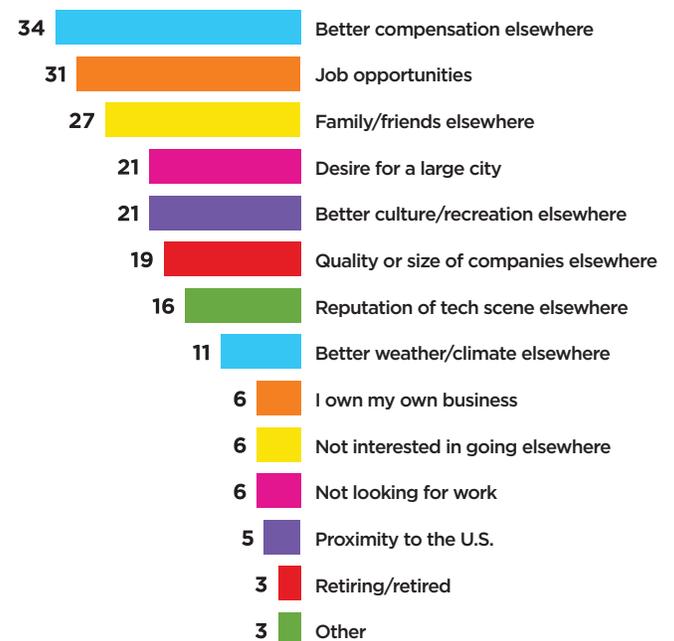


Figure 7 | Breakdown of 109 responses to questions 14 & 15 of the Tech Connect survey. Respondents were directed to check all that apply.

The main reasons that respondents would not seek employment in this region vary with over 31% citing “better compensation elsewhere” and “job opportunities” (28%) as the top two factors that entice prospective talent to go outside of the region for employment. The draw of family and friends living elsewhere entices 25% of respondents to leave the area while the desire for a larger city and the perceived “better” cultural and/or recreational activities tie for the 4th driver that encourages talent to leave the region.

Conversely, and equally interesting, is that the top driver to encourage tech talent to stay in this region is the cost of living (76%) while “job opportunities” – the 2nd most common driver to encourage talent to leave the area – is also the 2nd driver to encourage talent to stay in the area.⁷

Overall, respondents are “neutral” about the Windsor-Essex tech scene in that over 37% have ambivalent feelings about Windsor as a strong tech hub. Nearly 32% only “somewhat agree” with the statement: “Windsor-Essex is a strong tech hub.” Of the responses related to Windsor-Essex’s reputation of having strong networking opportunities and the draw of the region’s reputation as a good place to live, respondents are largely “neutral” (37% for both) with a slight difference for “somewhat agree” (39 and 30%, respectively). With these levels of near-ambivalence, it will be important to engage in changing such perceptions. Collaborative visioning and the collective drive to build the tech ecosystem in this region could generate more influential opportunities to draw or retain talent in the area.

If the region is to shift into a tech ecosystem and to amplify the tech sector to attract talent, there are a number of considerations that can support the establishment of a shared vision. Below are suggestions based on interviews with local leaders:



We need to start building more of a tech community. Studies show [that] the #1 thing that tech talent wants is a thriving tech community when they’re deciding to go somewhere. If there’s not a thriving tech community it’s difficult to convince this person to come to this community.

| Bill Johnson, Scribendi



Windsor can’t forever be the automotive spot; automotive is turning more technology-based.

| Melissa Ventura, New Canadians’ Centre of Excellence Inc.



Compensation is a problem. We just don’t do a good job of maximizing the revenue of tech workers.

| Doug Sartori, Parallel 42 Systems



We need more storytelling. We need to sell the non-believers. We need a voice.

| Frank Abbruzzese, AlphaKOR

⁷ Further investigation would be necessary to identify the particular perceptions that lead to such rankings, but such an inquiry is outside the scope of the current study.

Certainly, there are initiatives and strategies to draw attention to the region through publications like Perspective™ Windsor-Essex, blogs, podcasts like Tech in the City and Innovation Alchemy, and social media outlets that celebrate regional successes. In addition, raising the regional profile is one of the reasons that WindsorEssex Economic Development Corporation is “selling Windsor” at a consumer electronics show in Las Vegas: “[One] thing that Windsor hasn’t done well, and [. . .] that we’re going to change, is that we don’t bang on our chest loud enough,” according to Ryan Donally (CBC News, January 17). However, despite the efforts to amplify the regional potential for tech, we have not yet reached the tipping point where Windsor-Essex is “on the map” as a tech destination. As highlighted previously, fewer than 59% of survey respondents were able to identify three tech companies in the region. Clearly, amplification of this region’s work is of paramount importance.

In addition, the region is labelled as “next door” to a big city rather than being identified as a destination unto itself. In fact, over 32% of survey respondents indicated that “proximity to the United States” is one of the factors that would draw them to seek employment in Windsor-Essex. The cross-border connection in this region may well be a key feature that would attract talent to the area, but it is also important to articulate how the region wants to identify and differentiate itself then to develop that shared vision into a clear story. In order to attract skilled talent and to encourage the region as the place of choice, prospective workers need to know to what they’re being attracted. What is this region and where might talent fit?

When asked how they envision this region in ten years’ time and what they’d like to be able to say about the region, the ICT Roundtable identified the following attributes:

- ◆ There will be more offerings for supplemental training and development for second-career individuals, newcomers, and scaling companies
- ◆ Companies will be able to recruit top talent, benefit from wage subsidies for new graduates, select talent from a robust talent pipeline, and new graduates will be hired into local emerging or established companies
- ◆ Companies outside of this region will earn incentives to establish satellite offices in the Windsor-Essex region and this will create a diverse set of businesses and sectors locally

Overall, there are strong (sometimes bold) ideas about how this region can evolve. In all cases, shared vision, commitment, language, and collective effort are necessary.

REGIONAL OPPORTUNITIES BY THEME

Throughout the Tech Connect initiative, four (4) key themes have emerged as priorities. In all cases, the themes are interconnected and inextricably bound to each other. For a fulsome and robust vision that leads to strong storytelling and broad-scale system-wide engagement of stakeholders, it will be important to ensure that all four themes inform strategic planning, resource investment, stakeholder consultations, and any other efforts to create connections among talent and employers within this region.

EQUITY, DIVERSITY, INCLUSION (EDI)... AND BELONGING

Equity, diversity, and inclusion (EDI) are commonly identified as the keys to ensure broad-scale representation in the tech sector. While equity ensures fair and appropriate distribution of resources to individuals, diversity ensures that any workforce, region, or population reflects the varied experiences, backgrounds, cultures, ethnicities, etc. of a region. Inclusion is a way to ensure that all voices are “at the table,” but belonging is actually the most

well-rounded approach to human interaction. When a person feels that s/he/they *belong* in a community, they feel confident sharing differing perspectives and beliefs; their voice is not only heard and acknowledged, but also involved in making decisions.

Commonly, the themes of diversity, inclusion, and belonging refer to cultural, ethnic, and gender variations in a population. However, there are several ways that diversity is expressed (eg. different physical and intellectual abilities, sexual orientation, etc.) and engaging the broadest representation of the region’s citizens to develop the vision, storytelling, and inclusive practices in the tech sector in this area can only heighten the Windsor-Essex reputation as a forward-focused and inclusive region in which to work and live.

Generally, the tech sector is known for its lack of inclusion and belonging although several individuals and organizations are consistently fighting to #movethedial on inclusive workplaces. Several think-tanks and organizations have begun identifying how to engage organizations to improve workplace cultures and to ensure that inclusion and belonging are part of the very fabric of their practices. Not only are diversity, inclusion, and belonging important for ethical business practices, they are being lauded as ways to enhance productivity, mitigate risk, and innovate.

In 2019, the Government of Canada committed \$692,000 over four (4) years to support women entrepreneurs in the Windsor-Essex Region. Led by WindsorEssex Economic Development Corporation (WE EDC) and including several local organizations (WEtech Alliance, WindsorEssex Small Business Centre, Windsor Essex Capital Angel Network, Workforce WindsorEssex, EPICentre, and Build a Dream), the “Windsor-Essex Women Emerge Initiative” aims to enhance data and knowledge, to encourage women entrepreneurship and help women-owned businesses to grow, and to increase representation of women in emerging technologies⁸ businesses (“Windsor-Essex Women Emerge Initiative,” 2019).



Photo: Members of the inaugural EPIC VentureWomen program cohort (2020)

Locally, there are several examples of organizations and individuals striving for greater inclusion and belonging in STEM fields, entrepreneurship, and in the workforce more generally. For example, Build A Dream, a local organization that now has national reach, was founded by a diverse collective, including organizations, industry, and the education sector. The organization “spotlights exciting career opportunities [for women and girls] that fall under five pillars: skilled trades, STEM, emergency response, entrepreneurship, and advancing women in society.” As well, Assisted Living Southwestern Ontario (ALSO), the DiscoverAbility Network (DAN), and the LGBTQ+STEM Conference have all been voicing the vital importance of fulsome inclusion.

Considering that, according to Statistics Canada, nearly 1 in 5 Canadians over the age of 15 has a disability (Canadian Survey on Disability, 2017), it is important to recognize that these 6.2 million people represent a significant untapped talent pool. Although only a subset of this population may be interested in tech-sector

⁸The organizations that collaborate on the Windsor-Essex Women Emerge Initiative define “emerging technologies” as new technologies that are currently developing or will be developed over the next 5-10 years and that will substantially alter the business and social environment in Windsor-Essex (“Windsor-Essex Women Emerge Initiative,” 2019).

employment, it will be important to recognize that companies may need guidance and support on how to recruit potential talent especially since disabilities come in many forms. Further, it behooves the sector to consider how to increase access and inclusion for people with disabilities.

Similarly, Lynn Calder, Executive Director of Assisted Living Southwestern Ontario, suggests that “tech can literally open the doors to people with physical disabilities. Until we see people in the workplace using tech, leveraging tech, and that becomes part of what’s normal, until there’s a change in our culture, people will remain uneasy about disability.” Interestingly, tech could be the “great equalizer” for traditionally excluded individuals to become full participants in the regional economy – as workers, as business owners, and as citizens. In this vein, Calder urges that creating inclusive workplaces in the tech sector can be “an opportunity for [this region] to be a showcase for accessibility, diversity, and technology. We can get the players together and we’d all be playing for the same goal” of increasing opportunities in the tech sector in this region.

Two examples of regional leadership in the drive for inclusion are the DiscoverAbility Network (DAN) and the LGBTQ+STEM Conference:

- DAN was created to close the gap to help people with disabilities to become employed. Windsor-Essex is the first hub in Ontario and Kevin McShan is the regional spokesperson for the program. In an interview with CBC News (June 2019), McShan and Louie DiPalma, Vice President of SME Programs for the Ontario Chamber of Commerce, explained that DAN was put in place nearly 10 years ago to help businesses better understand accommodations and hiring, especially since all businesses must be in accordance with the Accessibility for Ontarians with Disabilities Act (AODA) by 2025.
- Fall 2019 was the launch of the first LGBTQ+STEM Conference in Canada at the University of Windsor. Co-organizer Dr. Tricia Carmichael highlighted that LGBTQ+ communities have “historically been ‘shut-out’ of Science, Technology, Engineering, and Mathematics (STEM) disciplines. Many individuals who identify as LGBTQ+ have experienced discrimination.” The motivation for a conference of this caliber that welcomed speakers from multiple provinces and institutions is that it helps to break down historical barriers and to open the region to inclusive opportunities (CBC News, October 2019).

There is regional movement towards inclusion, and there are more opportunities to continue the effort. With student groups, conferences, events, and significant federal resource investment, it is clear that building a tech ecosystem in this region requires equity, diversity, inclusion, and belonging to be at the forefront of any design and implementation of initiatives and efforts. As businesses and community organizations strive for positive growth and impact in this community, creating intentionally inclusive practices is imperative.

A COLLABORATION MATRIX: INDUSTRY, EDUCATION, COMMUNITY

In the previous section on “Establishing a Tech Ecosystem,” the interconnectedness of stakeholders was identified as a key consideration to addressing the perceived talent gap. There is not one institution, individual, or organization that can exist as an island to solve the tech talent challenge in the Windsor-Essex region.

While relationships among industry, education, and the regional community have historically been strong, interviewees and the ICT Roundtable have identified that there is more opportunity that previously has been untapped.

Through collaborative efforts, the talent pipeline can move from high school, to post-secondary education, to industry and community such that matching programs, collective problem-solving, and regional initiatives can increase overall regional capacity and achievement: “It can be difficult for smaller companies to invest in new resources that focus on strategy or focus on innovation. One of the things we can do,” suggests Susan Anzolin, “is to seek opportunities to build strength, research and development, and innovation capacities within our local companies, help support the creation of new companies and/or help attract innovative companies from elsewhere.”

Consider the offerings in the GTA or Waterloo, for example. According to Bill Johnson, Head of IT and Software Engineering at Scribendi in Chatham, “you could just name a programming language, a technology paradigm, or a framework, and you’ll find workshops, meet-ups, get-togethers, events, seminars, all of these things for any of these topics at any given time.” While groups like Women in CyberSecurity (WiCyS) and the Google Developers Club (GDG) at the University of Windsor are bringing speakers and industry to campus, BlackBerry itself has secured a campus ambassador on-site at the university. Students are being drawn away from the region by larger companies with bold incentives and co-op opportunities, but all is not lost according to Dr. Ziad Kobti, Director of the School of Computer Science at the University of Windsor: “BlackBerry came to UW as a first-choice for co-op students. We know we’re doing something right at the education level.”

WINDSOR-ESSEX FIRST ROBOTICS is an organization dedicated to growing FIRST robotics programs in Windsor-Essex and Chatham-Kent. Close to 80 local schools now have a FIRST team and Windsor-Essex is home to the Windsor-Essex Great Lakes District Event each year.

DID YOU KNOW? Windsor-Essex and Chatham-Kent are home to one of Canada’s fastest growing FIRST Robotics communities.



Regional collaboration to engage young people and professionals is a vital piece of the ecosystem puzzle. One example of a fully successful collaboration matrix is the Windsor-Essex FIRST Robotics Competition (FRC). Based on the global FRC model where participants are “mentored by professional engineers, programmers, and entrepreneurs, teams compete with up-to-120-pound robots in an arena – combining the excitement of the sport with the rigors of science and technology” (FIRST Robotics Canada, 2019), the Windsor-Essex and Chatham-Kent region launched Windsor-Essex FIRST locally with one (1) FIRST Robotics Competition (FRC) high school team. The growth since then has been astounding. In fact, the 2020 global FRC launch, “Infinite Recharge,” now boasts seventeen (17) local teams and FIRST alumni are entering and/or graduating from local post-secondary schools in STEM. These alumni are building their careers and share their learning by mentoring the teams of which they were once part. And, perhaps “the icing on the cake, FIRST alumni are now entering their careers through the same companies that once supported them as young participants” (Pilon, 2020).

With successful examples like Windsor-Essex FIRST, it is fully possible for this region to drive talent here and to engage in collaboration matrices that bridge the gaps among industry, education, and community. It is equally possible to encourage companies to set-up their operations in this region and to build innovation from within this area. Integrations of research, education, practical and experiential learning, and strong industry and community relationships are what build the tech ecosystem.

“ We have a philosophy that if someone is good enough, we’ll hire them whether we have a position for them right now or not.

Bill Johnson
 Head of IT and Software Engineering, Scribendi

EMPLOYABILITY AND EVOLVING SKILLSETS

A tech talent pipeline for this region would entail a seamless cycle that includes education, industry, and community working as a collective to ensure that talent needs are consistently addressed, met, and predicted such that the ecosystem has access to ready, skilled talent at all levels and career stages.

Of the survey respondents, nearly 34.9% indicate that they have been in the workforce more than 10 years, 17.4% identify as undergraduate students, and 13.8% indicate that they have been in the workforce for 5-10 years. The remaining categories include early-career workers (11.4% have been in the workforce fewer than 5 years), employers (6.4%), and graduate students (4.6%). Ninety-three percent (93%) of respondents currently identify Windsor-Essex as their current home region while the next largest populations identify London (2.8%) and Chatham-Kent (1.8%) as home.

Overall, only 31% of survey respondents feel “very prepared” for their careers. When asked which top five (5) skills helped them feel prepared for their career, respondents identified the following: ability to learn quickly (67%), technical skills (66%), communication (64%), teamwork/collaboration (62%), and the ability to adapt quickly to different circumstances/needs (60%).⁹

WHICH CATEGORY BEST DESCRIBES YOUR CURRENT SITUATION?

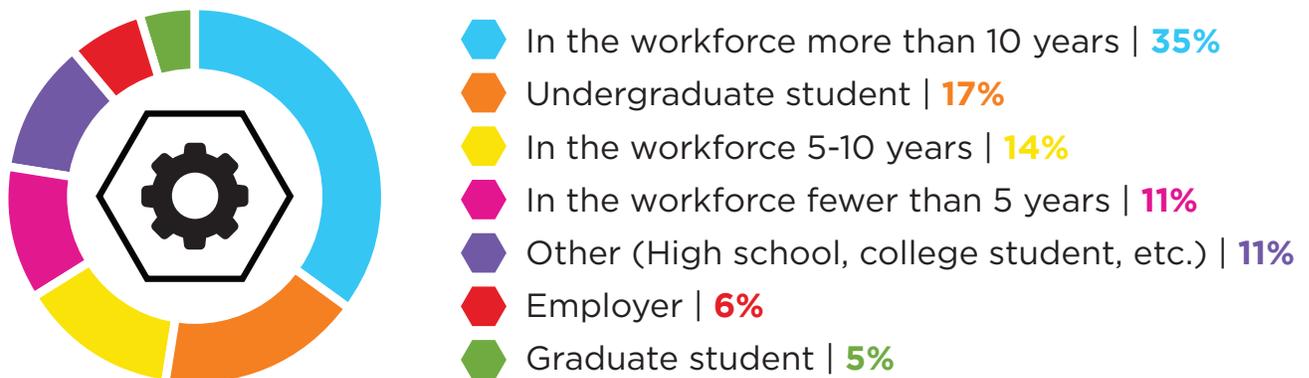


Figure 8 | Breakdown of 219 responses to question 1 of the Tech Connect survey

⁹ Respondents were asked to select up to five skills.

When questioned about skillsets and perceptions of employability, several interviewees provided additional clarity about their organization’s perspectives on what makes tech talent particularly “employable” as desirable additions to their teams. While technical skills are clearly necessary for any named “tech” roles, every person interviewed identified the necessity for skills that are outside the technical fields. More like capabilities or tendencies, leaders consistently seek individuals at all career levels and stages who have “professional personality” (Fortin and Renaud, 2019) and who understand project management, resourcing, and how to get the job done” (Carmichael, 2019). Additional skills identified through leader interviews include:

- ◆ Critical ability
- ◆ Problem identification and problem-solving
- ◆ Extrapolating theoretical knowledge into applications
- ◆ Synthesizing knowledge to develop solutions for business challenges

A common denominator to attain or improve all the skills identified is self-learning: the ongoing commitment to growth, to the craft, and to participating in the organization’s development over time. A strong belief in team contribution has been identified as a key attribute of professionals who excel in the tech sector and this, in turn, correlates more broadly to the core elements of building a tech ecosystem. Individual value as an employee is amplified and rewarded when the individual uses his/her/their skillset to support the engagement and advancement of the entire collective.

Students themselves from both St. Clair College and the University of Windsor recognize that the skills and education they gain during their programs are only the beginning of their broader education: “My education is just beginning. It’s really going to be after the program. School is a ‘jump-start’ to gain a reasonable base of knowledge to decide how I can go forward in my career. Tech is just one of the tools.”

While the phrase “soft skills” is commonly used to represent the abilities that lead to successful workplace interaction—writing, speaking, professional communication, etc.—there is a strong leaning towards “teamwork” as being perhaps the most important skill in the tech sector. Interestingly, of the small percentage (10%) of respondents who did not feel fully prepared for their careers, nearly 60% of them identified “ability to learn quickly” as a skill that would help them feel more prepared. This group also identifies communication (55%) and the ability to learn on their own (50%) as two other key skills that would help them.

Of the survey respondents who identify as students or early-career professionals (fewer than 5 years in their career), seventy-four percent (74%) cite their technical skills as having helped them feel prepared for their careers. Nearly 68% focus on their ability to learn quickly while communication and teamwork/collaboration earned equal importance (both 61%) and the ability to adapt quickly to different circumstances/needs (54%) is fifth in the top five.

WHAT ARE THE TOP 5 SKILLS/ABILITIES THAT WOULD MAKE YOU FEEL MORE PREPARED FOR YOUR CAREER?



Figure 9 | Breakdown of 22 responses to question 19 of the Tech Connect survey.



How do we use tech to be better tomorrow than we are today?

Dan Circelli

Director of Marketing, Connecting Windsor-Essex

Technical skills are expected. They represent an entry ticket to employment in tech roles. But the additional professional abilities like leadership, communication, collegiality, and teamwork are what build careers. The ability to adapt to changing workplaces, technical requirements, and the increasing influence and impact of “tech” in everyday life requires additional abilities to question and critique human experiences in the tech-enabled world. According to Maggie Wrobel, not everyone needs to code, but “we must understand how these technologies work and influence our lives. Seeing into the future is crucial to adapting to it” (“Life’s Lessons,” p. 49).

The education sector often highlights the technical abilities that students gain through various programs, and, typically, students gain additional attributes such as engaged citizenship, critical thinking, and “excellence” (in whichever way an institution defines it) by participating in the school environment. However, students and leaders have indicated that there is still more learning and growth that occurs in the workplace. Doug Sartori offers that “we need to mentor. A quality candidate can become a quality worker [with mentorship], so we need to hire for potential and build them from the ground up.” While formal education programs may end after several semesters of study and practice, learning continues throughout a career. Employers are focusing more and more on development, training, and coaching their teams. It’s simply good business.

When attracting talent from outside the region, there is one key population (and prospective talent pool) that has yet to be explored: internationally trained professionals (ITPs). According to Melissa Ventura, Labour Market Access Manager at New Canadians’ Centre of Excellence Inc. (NCCE Inc.), ITPs typically have “fewer hurdles to overcome and less training to undertake [through NCCE Inc.] because the computer languages they use are universal. In addition, they’ve travelled a lot to different countries, so it tends to be relatively easy for them to adapt to local companies. In some cases, their [general English] literacy level is lower, but because they’re in tech they’re able to function well in the workplace – the gap is narrower.”

Employability and evolving skillsets are as much about the talent as they are about the prospective employers. As organizations and companies that strive to attract and retain highly skilled talent—talent that is being enticed to work and live elsewhere—it is important to ensure that the work environment is equally supportive of talent needs. In addition to creating inclusive work environments where all members of the community feel that they belong, ensuring that talent have all the resources they need to adapt, learn, and grow with the company is key. In 2000, Joel Spolsky, a software developer in New York City, created a now-famous blog about how employers can support talent to create better code.¹⁰ In his explanation, Spolsky identifies 12 steps—addressed as questions—that software teams, and, by extension, employers, can explore to assess whether they are operating in a peak performance environment. The questions are focused on software development, but can be extrapolated or adjusted for nearly any work environment. For example, questioning whether employees (Spolsky refers to “programmers”) have quiet working conditions and whether candidates are asked to demonstrate their skills (Spolsky’s test suggests having programmers write code) can yield important information for creating productive, inclusive, and engaged work environments where talent can thrive.

¹⁰ Now known as “The Joel Test,” an updated version was created by Doug Sartori through Hackforge (2015) and again written about and published by Swetha Amaresan (HubSpot, 2019).

Overall, professionalization and the requisite professionalism demonstrated in an inclusive work environment have been identified as key markers of tech-sector employability in this region. Whether the skills and aptitudes are gained through post-secondary credentials, training, coaching, or mentoring, the value of gaining experience over time and of creating work environments conducive to talent development, inclusion, and growth cannot be understated. As part of this region’s effort to build its tech ecosystem, then, support for the employers who are trying to attract and develop their teams and to improve their companies’ professional environments, and opportunities for tech talent to develop, lead, and thrive will be necessary elements of a regional tech strategy.

BUILDING CONNECTIONS

Generating stronger connections among talent and employers is a key objective of the entire Tech Connect initiative. While the current initiative has resulted in additional events, research, connections, and opportunities, a broader connection effort is needed in the Windsor-Essex region to find innovative ways to engage all levels of the talent-employer continuum.

As evidenced previously in Figure 1, a tech ecosystem requires a multitude of stakeholders to invest time, effort, and resources to develop a collective approach to the regional concerns about attracting and retaining skilled, ready tech talent.



I have some of the best [tech] conversations riding in the elevator.

Don Ward

Senior Software Engineer, Data Science Team, Quicken Loans

Locally, there have been successful programs that have created direct links between talent and employers. Namely, New Canadians’ Centre of Excellence Inc. facilitates programming where employers connect directly with clients or students. The employers participate as trainers and coaches to help orient clients to interview practices, workplace culture, and employer expectations. NCCE Inc. also hosts a “mentor match” for the IT sector where employers meet for two hours with newcomers who are interested in that industry.

In October 2019, the Windsor Learning Centre of the Southwestern Ontario YMCA launched its tech platform that enhances the ability to assess the experience, needs, and goals of newcomers through its Settlement and Integration Services initiatives. The data collected, according to Hugo Vega, Regional Manager of Settlement and Integration Services, “creates real-time data that can support local companies to find talent—it’s a capacity-focused assessment that creates intentional bridges.” Through this type of platform, strategic skill-building, networking, and professionalization would support the region in tapping into a “statistically under-utilized population.”

Similarly, both St. Clair College and the University of Windsor invest significant resources in career development, co-op/internship opportunities, and experiential learning.

For example, the University of Windsor offers a Job Shadow Experience through its Career Development and Experiential Learning initiatives. One or two students are hosted by an employer, alumni, or professional to “participate in informational interviews, have a tour of the company/organization, and observe some work in action,” all with the intention of supporting students’ understanding of “potential career options” and to “learn how to apply their education, training, and experience in the workplace,” among other opportunities (University of Windsor, 2020).

And Frank Abbruzzese of AlphaKOR offered the following as options for experiential programming: “give [students] workforce experience outside of the traditional internship model. Bring the students into the organization, pay them and have them work on real projects that generate revenue while supervising them and mentoring them like employees.” With this model, students gain experience with real-world applications of their learning and the organization gains a project-specific team to tackle a particular challenge.

One of the challenges of recruiting talent in this region, according to employers interviewed, is that there are discrepancies among where employers are seeking talent and where the talent is seeking employment. The most common platforms for employers to seek talent include job fairs (for pre- and early-career workers) and online services such as Indeed or posting open roles on the company’s website and sites like the WEtech Alliance job board. Prospective workers identify online job boards, social media (LinkedIn, Facebook, etc), and company websites as the top ways they seek employment. Professional networks and “word of mouth” are also significant in that nearly three-quarters (74.3%) of survey respondents identify both (after online job boards and social media or company websites) as their platforms of choice.

HOW DO YOU CONNECT WITH LOCAL TECH COMPANIES AND TECH ORGANIZATIONS WHEN SEEKING EMPLOYMENT??

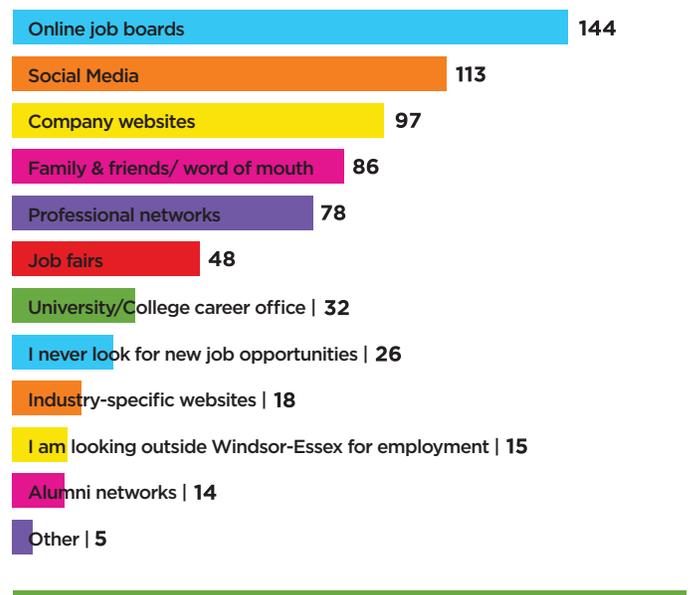


Figure 10 | Breakdown of 219 responses to question 4 of the Tech Connect survey. Respondents were directed to check all that apply.

HOW MANY TECH-RELATED EVENTS HAVE YOU ATTENDED IN THE LAST 3 MONTHS?

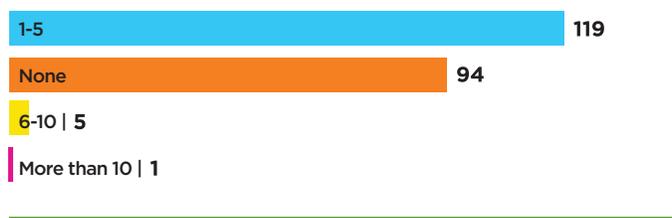


Figure 11 | Breakdown of 219 responses to question 6 of the Tech Connect survey.

Networking and participation in tech-related events are two ways that the tech community in this region engages. Nearly 79% of employers surveyed have attended between 1 and 5 tech-related events in the previous three months¹¹ while an additional 7% participated in 6-10 such events. Graduate students, early-career workers and more seasoned workers (5-10 years and 10+ years) participate in tech-community events at about the same rate (60%, 56%, 63%, and 61%, respectively). The most common events include networking and competitions (eg. hackathons).

¹¹The pulse check survey data for the “Tech Connect” initiative was captured in December 2019. Respondents could be referring to any time between April and October 2019. The survey currently remains open as part of WEtech Alliance’s ongoing research.

Conversely, 43% of respondents did not participate in any events or programming over the last 3 months.

In addition, the value of organic connections cannot be understated. The physical space at MaRS Discovery District (Toronto) was designed to encourage chance encounters. Open areas where researchers, educators, government, businesses, and the public mingle create additional opportunities for networking and collaboration that could not typically be orchestrated. Events like Windsor-Essex DevFest, Nerd Olympics, and Tech Week YQG optimize the use of local businesses and spaces that might otherwise not be engaged while undertaking daily tech-specific work.

Given the plethora of avenues through which organizations might meet and secure talent, it becomes especially difficult, as highlighted by Jack Litchfield of JobJunxion, “for smaller companies with limited HR capacities to tackle all of the avenues.” Essentially, to build a robust talent pipeline, all stakeholders in the ecosystem need to be willing, able, and available to innovate opportunities for connection. In addition, DataRealm identifies that “there aren’t necessarily as many resources to market [the company] to intermediate and senior talent. Those roles are mostly secure—salary may progress, but the career won’t because of the stability of the local market.”¹² For those who are employers or seasoned in their careers, there may not be an impetus to find alternative employment. In some cases, this may be an early indication that the 93% who identify Windsor-Essex as home are not interested in changing their employment situations and this may lead to suggestions for seeking talent outside of the Windsor-Essex region. However, such a conclusion would require additional inquiry beyond the scope of this initial Tech Connect exploration.



Photo: The Brave Control Solutions Nerd Olympics team shows off their Spirit Award at the Mechanical Bull Riding event. (2019)

Generating suggestions for how the tech community might better connect with prospective talent requires consideration for individual needs and preferences. However, to gather a generalized sense of how tech companies might better reach prospective talent, we asked respondents how they believe tech companies could connect with them. Most answers focus on social media outlets like LinkedIn, Instagram, and Facebook. However, some respondents suggest that community organizations like WEtech Alliance could offer networking events, multi-day conferences or trade shows, competitions, and even weekend open houses where prospective talent could interact with companies, learn more about the current work, and make decisions about applying for roles.

Another opportunity would be to create a community space for convenings, networking events, and organic collisions to occur. Much like the models of MaRS Discovery District and Communitech, proximity to individuals and organizations invested in and focused on tech work amplifies the opportunities for collaborations, engagement, and a shared tech identity.

¹² Interestingly, when asked how often the respondents seek employment, 50.5% indicate “on occasion or rarely” and nearly 23% indicate “never” – while this could indicate relative stability among those currently employed, further investigation would be needed to determine why this is the case, but that is beyond the scope of the current study.

CONCLUSIONS AND RECOMMENDATIONS

As an initiative, Tech Connect has increased opportunities and outreach among talent and employers in the tech community here in Windsor-Essex. The interviews, surveys, and events have highlighted the collective responsibility to move the tech community forward.

At this stage, the key areas that are emerging relate to increased opportunities for visibility – both for companies to amplify their work and for the region to improve its reputation for significant contributions to the tech sector. As was highlighted in the Tech Connect Interim Progress Report (October 2019), “instead of questioning how the region recruits and retains talent, the more pointed question becomes: ‘How do we tell the story of what is possible in this region?’” (Pilon and Abboud, 1).



I need to know that I can achieve things here.

Student
University of Windsor

In order to generate a stronger identity as a tech ecosystem, and to begin filling the tech talent gap in this region, the following recommendations articulate options for a collective strategy. The recommendations are identified by scope, “Long-Term, Regional Vision” and “Local-Level Initiatives,” and reflect the culmination of the full Tech Connect initiative. Ideas and suggestions have been collated from the entirety of the investigation, including interviews, the pulse check survey, the ICT Roundtable, responses and reactions to the Tech Connect website, and additional research as identified throughout the report.

RECOMMENDATIONS FOR REGIONAL TECH STRATEGY

Long-Term, Regional Vision

- Encourage shared responsibility and effort among multiple sectors, stakeholders, and communities for system-wide impact
- Create shared understanding and language: “What is ‘tech’ for Windsor-Essex?”
- Consider overlapping (“doubling down”) on strategic initiatives
- Encourage small and large companies to work together
- Connect to tech super cities
- Develop proximal space for organic collisions (eg. Communitech and MaRS Discovery District model)
- Champion and amplify the positive regional story
- Create learning and training opportunities to advance diversity, inclusion, and belonging in the tech ecosystem

¹³ Recommendations may be addressed in any order and would, ideally, be clarified and prioritized through a collaborative regional effort.

Local-Level Initiatives

- ◆ Create “Windsor-Essex (WE) Open Doors” events to generate interest in regional tech: facilities tours, highlights of innovations, etc.
- ◆ Establish training opportunities for smaller companies to increase internal capacity for leadership development, professionalization of talent, etc. (eg. “train the trainer” programs)
- ◆ Generate cluster training opportunities that include mid- and senior-level employees to engage with those in other career stages (and students) to gain leadership, management, and professional skills (eg. in-house shadow programs that match employees within a business)
- ◆ Collaborate to propose collective funding opportunities
- ◆ Host problem-solving collectives: industry sets the challenge and multi-sector collaboration helps to solve it
- ◆ Support companies to identify areas for improvement with respect to workplace environments, inclusion, and growth initiatives

APPENDIX: THE “TECH CONNECT” STRATEGY

During the Tech Connect initiative, Dr. Victoria Abboud interviewed 23 leaders from industry, education, and community that all bring different perspectives about the talent challenges in this region. She held two focus groups where 30 students from the University of Windsor and St. Clair College shared their perspectives about this region and its opportunities for tech sector employment. In addition, Dr. Abboud designed and deployed the Tech Connect pulse check survey (246 respondents) to learn more about individual perceptions of the regional tech landscape, to uncover the perceived gaps in this region that hinder talent and employers from finding each other, to identify the types of skills that prospective talent and employers are seeking, and to explore the key concerns of the tech community.

Further, Dr. Abboud collaborated with Julian Villafuerte, Project Coordinator and Researcher of Workforce WindsorEssex, to continue the ICT Roundtable that was last convened in April 2018. Over the course of the seven-month Tech Connect initiative, they brought together 30+ representatives from businesses, education, and community organizations to move the ICT discussion forward. Through the 4 core meetings, the Roundtable identified the key thematic areas to explore as a collective, and the group engaged in “deeper dives” of the themes to determine the next steps that will aid in addressing the talent challenges in this region.

The themes identified include:

- ◆ Women in STEM
- ◆ Internationally-trained professionals (ITPs) / newcomers
- ◆ Telling the regional story / identifying the regional vision
- ◆ Securing funding and investments in this region
- ◆ Creating opportunities for cross-collaboration with post-secondary education and industry
- ◆ Creating opportunities for innovation (eg. information exchanges, increasing industry involvement in the talent question)

After exploring these themes, the ICT Roundtable determined to meet again for a 5th session on February 18, 2020 to identify action steps based on the final Tech Connect report.

WEtech Alliance developed a landing page for the Tech Connect initiative that identifies five categories: Tech Talent, Tech News, Tech Events, Tech Community, and Tech Acceleration. In all categories, visitors can discover (or search) different aspects of each. For example, under Tech Talent, website visitors can search for jobs, learn about tech scholarships, and seek information about women in tech, among other topics. Similarly, Tech Events offers a full community calendar that highlights events and opportunities in the region, including talks, conferences, competitions, expos, and local learning experiences.

As of January 31, 2020, the Tech Connect landing page resulted in 890 page views and 732 unique visits, with visitors spending an average of 2 minutes 31 seconds on the page. Social media activity has included 64 posts, 66,361 impressions, and 1,759 engagements since July 01, 2019.

Through interviews, the pulse check survey, and the ICT Roundtable, 44 companies and organizations and 452+ individuals have been directly engaged. The Tech Connect landing page aggregated 84 programs, initiatives, and events (PIEs) since July 25, 2019.

ACKNOWLEDGMENTS

WEtech Alliance would like to thank Workforce WindsorEssex and the Local Employment Planning Council for the generous support of the Tech Connect initiative.

There are numerous individuals from community organizations, businesses, and institutions who have generously shared their time and perspectives in support of this research. While the following list identifies many of the interviewees and organizers of meetings, there are numerous others not named here individually, such as the WEtech Alliance and Workforce WindsorEssex teams, who have supported the Tech Connect initiative since its inception.

Thank you to everyone for your engagement and your contribution in support of our region!

Frank Abbruzzese, Mariam Al-Ansary, Tyler Alexander, Susan Anzolin, Srinivas Athreya, Johanna Beneteau, Erica Boismier, Krysta Brosseau, Lynn Calder, Noah Campbell, Dr. Tricia Carmichael, Adam Castle, Dan Circelli, Jay Coulter, Shawn Daichendt, Chris DaSilva, Monique Diotte, Louie DiPalma, Jacob Duhaime, Hassan Farhat, Dr. Blandine Fongué Lesage, Dave Fortin, Stephen Hill, Dr. Ziad Kobti, Larry Koscielski, Dr. Irek Kusmierczyk, Aislyn Lewis-Laurent, Jack Litchfield, Manuel Lolarga, Wilson Luo, Lee McGrath, Daniel Parent, Kevin McShan, Katie Renaud, Matthew Renaud, Melissa Robinet, Dr. Sherif Saad, Doug Sartori, Sandhya Shanker, Brandon Stanley, Steve Suntres, Jeff Szusz, Hugo Vega, Melissa Ventura, Julian Villafuerte, and Kelly Wigle.

For more information:

Dr. Victoria Abboud

Tech Talent Strategist, WEtech Alliance

Email: vabboud@wetech-alliance.com

REFERENCES

- Abbruzzese, Frank. Personal Interview. August 02, 2019.
- Alexander, Tyler. Personal Interview. October 16, 2019.
- Amaresan, Swetha. (2019). "The 2020 Guide to The Joel Test for Programming." HubSpot. <https://blog.hubspot.com/service/joel-test>
- Anzolin, Susan. Phone Interview. November 04, 2019.
- Autonomous Vehicle Innovation Network (AVIN). 2020. Website. <https://www.avinhub.ca/>
- Build A Dream. (2020). Website. <https://www.webuildadream.com/>
- Calder, Lynn. Personal Interview. August 16, 2019.
- Carmichael, Tricia. Personal Interview. October 25, 2019.
- CBC News. (2020, January 17). "Tech and Auto: Betting on Windsor at Large Consumer Electronics Show in Vegas." <https://www.cbc.ca/news/canada/windsor/windsor-in-vegas-1.5430263>
- . (2019, October 05). "First-of-Its-Kind Conference Celebrates LGBT in STEM." <https://www.cbc.ca/news/canada/windsor/lgbt-stem-uwindsor-1.5308971>
- . (2019, June 20). "This Program Matches Employers with People with Disabilities. Does It Work?" <https://www.cbc.ca/news/canada/windsor/how-a-program-in-windsor-matches-employers-employees-1.5182095>
- CBRE Research. (2019). "Scoring Canadian Tech Talent." <https://www.cbre.ca/en/research-and-reports/Canada-Scoring-Tech-Talent-2019>
- Communitech. (2010, March 23-24). Enable U. Get Your Tech Ecosystem MBA.
- "Decoding the Information, Communication, and Technology Workforce in Windsor-Essex." 2018. Workforce WindsorEssex.
- DiPalma, Louie. Phone Interview. August 28, 2019.
- FIRST Robotics Canada. 2019. "FRC Districts." <http://www.windsorsexfirst.org/>
- Fortin, Dave. Personal Interview. September 11, 2019.
- Johnson, Bill. Personal Interview. November 28, 2019.
- Kobti, Ziad. Personal Interview. October 07, 2019.
- Koscielski, Larry. Email Communication. January 20, 2020.
- Litchfield, Jack. Phone Interview. August 27, 2019.
- Tech for All: Breaking Barrier's in Toronto's Innovation Community. (2018, 27 September). MaRS Discovery District.

- McShan, Kevin. Personal Interview. August 16, 2019.
- Munro, Daniel and Lamb, Creig. (2019, December 04). "Managing the Intangible Shift: Positioning Canada to Compete in an Intangible Economy." Brookfield Institute for Innovation and Entrepreneurship.
- Ontario Chamber of Commerce. (2018, May 24). "Access to Talent Required to Keep Ontario Competitive." <https://occ.ca/mediareleases/access-to-talent-required-for-competitiveness/>
- Pilon, Yvonne. (2020, January 04). "#TechintheCity." LinkedIn post. <https://www.linkedin.com/feed/update/urn:li:activity:6619389066788036608>.
- . (2019, November 26). "Tech Entrepreneurship in Windsor-Essex." ICT Roundtable Presentation.
- and Victoria Abboud. (2019, October 31). "Tech Connect Interim Progress Report." WEtech Alliance.
- Planet M. (2020). Website. <https://www.planetm.com/>
- Renaud, Katie. Personal Interview. September 11, 2019.
- Sartori, Doug. Personal Interview. August 07, 2019.
- . (2015). "Dodging a Career Bullet: Workshopping The Joel Test for 2015." Hackforge Presentation.
- Spolsky, Joel. (2000, August 09). "The Joel Test: 12 Steps to Better Code." Blog. Joel on Software. <https://www.joelonsoftware.com/2000/08/09/the-joel-test-12-steps-to-better-code/>
- Startup Genome Report. (2019). <https://startupgenome.com/ecosystems/toronto-waterloo>
- Statistics Canada. (2018). Canadian Survey on Disability, 2017. (English version). <https://www150.statcan.gc.ca/n1/daily-quotidien/181128/dq181128a-eng.htm>
- University of Windsor. (2020). "Job Shadow Program." Career Development and Experiential Learning. <http://www.uwindsor.ca/career-development-experiential/613/job-shadow-program>
- Vega, Hugo. Phone Interview. January 17, 2020.
- Ventura, Melissa. Personal Interview. September 04, 2019.
- Villafuerte, Julian. (2020). "Attracting and Retaining Talent in Windsor-Essex: An Essential Guide." Workforce WindsorEssex. <https://www.workforcewindsor-essex.com/attracting-and-retaining-talent-in-windsor-essex-an-essential-guide/>
- "Why Talent Chooses Windsor-Essex." (2019, December 11). Workforce WindsorEssex. <https://www.workforcewindsor-essex.com/startyqg-survey-results/>
- Wigle, Kelly. Personal Interview. October 16, 2019.
- WindsorEssex Economic Development Corporation. 2020. Website. <http://choosewindsor-essex.com/>
- Windsor-Essex Women Emerge Initiative. (2019). "An Initiative to Encourage Women Entrepreneurs to Start and Grow Emerging Technology Businesses." Proposal.
- Wrobel, Maggie. (2020). "Life's Lessons: Technology Can Take Learning to New Heights." The Re:port, Issue 75.



PLUGGING YOU INTO THE **WINDSOR-ESSEX TECH SCENE**

TECHTALENT | **TECHNEWS** | **TECHEVENTS**
TECHCOMMUNITY | **TECHACCELERATION**

[WETECH-ALLIANCE.COM/CONNECT](https://wetech-alliance.com/connect)

CREATE • INNOVATE • ACCELERATE
WE CAN HELP
WETECH-ALLIANCE.COM

WE.tech
ALLIANCE