

# The Next Frontier of Economic Development in Niagara: From Concierge to Orchestrator of Change

## EXECUTIVE SUMMARY

This report is the final part of a two-year project with a two-fold goal: first, to map the economic history and assets of the Niagara region over the past 150 years; second, to analyze the region's current and emerging economic trends, focusing on industrial strengths and constraints against the backdrop of ever-shifting provincial, national and global trends, opportunities and challenges. These two goals, taken together, mean that the project is partly a narrative of Niagara's socioeconomic history and partly an analysis of the region's current and future trajectory as an economic hub and an innovation ecosystem in a changing world.

The start of this project coincided with the 2022 release of the *Niagara 10-year Economic Development Strategy*. It was, therefore, fitting that the second goal of the project (to analyze the region's current and emerging economic trends) examines the available quantitative and qualitative data on Niagara's industrial strengths and constraints against the backdrop of how the 10-year strategy reflects and responds to these trends. The aim of this report, therefore, is to constructively engage with the strategy, highlight areas of Niagara's economic strengths and weaknesses, and generate recommendations and action steps for how policy actors and economic stakeholders can "foster resilient diversity in our economy through the development of emerging sectors and value-added opportunities while continuing to grow and support our strong industry clusters" (Economic Development Strategy 2022. p.35).

The report is a combination of quantitative and qualitative data collection and analysis. The quantitative element consists of Statistics Canada data on industry and trends.

Using North American Industry Classification System (NAICS) and National Occupation Classification (NOC) codes, we delineate the industries and occupations within each established and emerging sector outlined in Niagara's current 10-year economic development strategy to track continuities and shifts in these sectors over the past 50, 20 and 10 years. This summary of the statistical data serves as a foundation for highlighting core areas of strengths, constraints and opportunities.

The qualitative portion of the study consists of three kinds of data collection and analysis. The first involves content analysis of the Region's strategy to understand the process and rationale by which it arrived at its current assessment of the existing and emerging economic opportunities in Niagara. The second focuses on distilling the global literature on best practices of regional economic development to understand how such places pursue similar opportunities and address barriers and constraints. The third involves semi-structured interviews with 28 economic development stakeholders (public, private and non-profit) in Niagara.

Based on our research findings, we offer eight policy recommendations grouped under two broad themes. The first set of recommendations focuses on spelling out the key components of what we refer to as a "smart industrial specialization approach" to pursuing the next wave of economic development over the next 10 years and beyond. The second set of recommendations addresses the mandate and governance architecture of economic development in Niagara. They are centred on our argument for a shift from the current concierge-style approach to what we term an "orchestrator-style approach" to change management in economic development.

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Our review of the extant literature on global best practices in several industries reveals a distinction between these two approaches. The former connotes passive housekeeping while the latter points to a strategic mobilization of actors and resources within priority industries. The concierge style tends to concentrate on new enterprises and is not selective or strategic in its efforts while the orchestrator style focuses on strategically building innovation support systems centred on enhancing the productivity of local business and the economic competitiveness of the region.

Below is a summary of the recommendations.

- First, adopt the “smart industrial specialization” approach to economic development in Niagara by identifying sets of composite industries within and across sectors that form the most vital economic clusters.
- Second, invest in building industry-led consortia of regional innovation systems for each cluster.
- Third, foster the creation of industrial corridors that leverage scale-economies beyond Niagara.
- Fourth, tap into the federal and provincial governments’ program resources for industry-wide investments aligned with the priority clusters.
- Fifth, leverage key industries in “all-purpose” sectors like information communication technology (ICT), transportation and logistics (T&L), and aerospace as scaffolding for the rest of the economy.
- Sixth, address the perennial mismatch between jobs and labour that plagues most industries and businesses in Niagara.
- Seventh, reconfigure the mandate and governance architecture of economic development from a concierge-style to an orchestrator-style approach.
- Eighth, transition away from conflating the region’s economy with the administrative boundaries of local municipalities.

## INTRODUCTION

This report is the final part of a two-year project with a two-fold goal: First, to map the economic history and assets of the Niagara region over the past 200 years; second, to analyze the region’s current and emerging economic trends, focusing on industrial strengths and constraints against the backdrop of shifting provincial, national and global trends, opportunities and challenges. These two goals, taken together, mean that the project is partly a narrative of Niagara’s socioeconomic history and partly an analysis of the region’s current and future trajectory as an economic hub and an innovation ecosystem in a changing world.

The first goal was accomplished through a combination of papers that shed light on the general economic history of Niagara.<sup>1</sup> The papers focus on development trajectories in a select number of key economic sectors: Agribusiness, Manufacturing, Tourism, Marine Commerce, Electric Power Generation, and Information and Communications Technology (ICT). They shed light on how the region has adapted (to varying degrees of success) to the shifting currents of change, thanks to its border location, natural resources, economic, and institutional assets. Another key feature shared by all the papers is the role of local and regional policymakers who envisaged and invested in the requisite infrastructure as well as deployed a plethora of regulatory instruments, fiscal incentives and other policy levers to shape the trajectory of the sectors at critical crossroads over the past 200 years. Together, the papers present the story of a region that has helped to shape and enrich Canada into the nation we know today.

That historical research laid the foundation for this report which focuses on the second goal stated above. The start of this project coincided with the 2022 release of Niagara’s current 10-year Economic Development Strategy. The strategy identifies several sectors that regional and local stakeholders consider to be the main drivers of the region’s economy. The document divides these economic drivers into established and emerging sectors. Established sectors consist of agribusiness, manufacturing, tourism, and professional services. Emerging sectors are listed as electric vehicles, marine, health care (and the broader life sciences), film, and sport tourism/active economy. The latter are considered “emerging” to the extent that “investments in these sectors have not traditionally been a focus of the Region’s official economic development strategy and therefore will require research to understand the assets and develop actions going forward” (Economic Development Strategy p.40).

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<sup>1</sup> Readers can access the papers on the NCO website, at <https://brocku.ca/nco> and our project website at <https://exhibits.library.brocku.ca/sl/NiagEconHist>



Among the sectors we examined in the previous study, only agribusiness, manufacturing, and tourism are listed as established sectors in the region’s 10-year strategy. Marine Commerce is listed as an “emerging” sector while electric power generation and ICT are excluded. Based on our analysis of decades-long trends in these sectors, we generally agree with the rationale for these decisions. Agribusiness, manufacturing, and tourism continue to serve as the region’s key economic drivers. Electric power generation remains important to the region, but its strategic importance as a major economic driver has waned over the years. We agree with listing marine commerce as “emerging” because after years of decline several industries in the sector have experienced a resurgence in the past decade (as we will discuss below). It should be noted that how the Niagara economic development

strategy conceptualizes some of these “sectors” is peculiar in the sense that some of them are subcomponents of what the extant economic development literature views as traditional sectors. Nevertheless, we choose to work with the Region’s conceptualization in order to empirically and constructively validate and understand their status as “emerging sectors.”

Furthermore, we included ICT in our previous study (and present report) because our goal is to highlight its significance to Niagara’s transition to a knowledge economy in the current digital age. ICT is thus not an economic sector in the conventional sense of the term but rather a set of industries that produce or service the digital tools and platforms that can be leveraged as scaffolding for other industries and sectors of the economy.<sup>2</sup>

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<sup>2</sup> This report does not include “professional services” in its analysis because while the data points to the existence in Niagara of important businesses in finance, technical, professional and scientific services, the sector is not aligned with the report’s focus on key economic drivers to be strategically leveraged and nurtured by the region. Like ICT, it is not an economic sector in the conventional sense of the term but rather a set of industries that serve as scaffolding for other industries and sectors of the economy. However, unlike ICT, industry trends in professional services are not novel phenomena presenting new strategic opportunities. Moreover, they offer no peculiar advantages to Niagara that are not present in most urban areas with any sizeable population density.

We also include two other sectors (transportation and logistics, and aerospace), which our interviews with economic stakeholders in the region and our review of the global literature suggest will provide vital scaffolding supporting the future competitiveness of Niagara's economy. Beyond this choice of sectors, our analysis highlights recent industrial trends and the global best-practice literature to argue for a more nuanced understanding of the key sectors. We then offer a set of recommendations based on this understanding of trends and opportunities.

Given that the project coincided with the release of the region's 10-year strategy, it was fitting that the project's second goal be aligned with the region's endeavour.

This report thus aims to accomplish three objectives: first, to empirically analyze Niagara's established and emerging sectors to ascertain the region's industrial strengths and constraints; second, to examine how the 10-year economic development strategy seeks to build on those strengths and address the constraints; third, to recommend some action steps for Niagara's policy actors and economic stakeholders to fully leverage the region's natural, physical, digital, human and institutional assets to "foster resilient diversity in our economy" (Economic Development Strategy 2022. p.35).

The rest of the report is structured as follows. In the next (second) section, we provide a brief overview of the research method that guided the investigation. The third section provides an overview of our analysis of quantitative (Statistics Canada) data on key industry trends, occupational trends and business counts, building on the sector analysis covered in the first phase of this project and extending to other sectors identified in the region's 10-year economic development strategy. Through this analysis of sector trends, we probe deeper into each sector's nuances to highlight core strengths, opportunities and constraints.

The fourth section generates some recommendations by combining findings from our statistical analysis of industry trends with data from content analysis of the region's 10-year economic development strategy, semi-structured interviews held with regional and local economic stakeholders and a review of the global literature on regional economic development best practices. The report concludes with some reflection on the whole project, highlighting the enduring features of Niagara's economic resilience amidst two centuries of undulating waves of transformation driven by swift changes in technology, ideas, markets, culture, and policies. We conclude on a positive note that given its textured and contoured economic history, and its natural blessings of favourable geography, Niagara has every reason to be optimistic (without being

complacent) about its ability to foster a resilient and diverse economy as it navigates the global whirlpools and domestic rapids of the next decade and beyond.

## RESEARCH METHOD

As the introduction above notes, this report is based on a blend of quantitative and qualitative data. The quantitative portion focuses on a set of industries and occupations listed under the four-digit North American Industry Classification System (NAICS) and National Occupation Classification (NOC) codes, respectively. Using NAICS and NOC codes, we delineate the industries and occupations within established and emerging sectors outlined in Niagara's current 10-year economic development strategy to track continuities and shifts in these sectors over the past 50, 20 and 10 years.

The 50-year lens helps us see broad trajectories of change in each sector as Niagara's economy was ushered into the golden age of mid-20th-century industrial growth in Western liberal market economies. It also happens to coincide with the incorporation of the Regional Municipality of Niagara (Niagara Region or "the Region"). The 20-year lens highlights currents of economic change since the great industrial meltdown brought on by globalization around the turn of the 21st century, decimating the manufacturing and other traditional sectors in Western economies. The 10-year lens enables our research team to closely examine the sectoral and industrial contours of economic reinvention and resurgence over the past decade brought on by recent waves of digital revolution and other technological changes that are giving new leases of life to Western economies.

### *Quantitative Analysis*

The quantitative section analyzes data on key industry and occupational trends in the following sectors: agribusiness, manufacturing, tourism, electric vehicles, marine, health care, film, sport tourism/active economy, information and communication technology (ICT), transportation and logistics (T&L), and aerospace. As noted in the introduction, the last three sectors were not included in Niagara's 10-year economic development strategy, but our interviews with economic stakeholders in the region and our review of the global literature suggest they will provide vital support for the future competitiveness of Niagara's economy. We call them "all-purpose" sectors.

The data was generated by Statistics Canada but sourced from Lightcast's Labor Market Analytics. It consists of two distinct sets of data that serve as prisms for analyzing trends in the respective sectors: jobs by industry, and jobs

by occupation. While the distribution of jobs by industry (represented in NAICS codes) gives us a good picture of trends across Niagara's key sectors, another lens through which we can view such trends is the distribution of jobs by occupation (represented in NOC codes).

The "occupation" lens is important because it sheds light on the human and talent dimensions of the sectors and provides insights into the nature of the skillsets or expertise in each sector. NOC codes can help track changes in the types of jobs required within a sector or industry that NAICS cannot. They supply a framework to understand the composition, skill requirements, labour market trends, and other characteristics of economic sectors. The NOC codes facilitate the identification of emerging job sectors and the decline of traditional occupations. This information, in turn, allows us to make inferences about the region's existing talent pool and its implications for innovation, adaptability, and resilience of each sector, thus allowing for effective policy responses.

The data for this component of the study also includes the national location quotients for the industries that make up each sector. The value of the location quotients is that they indicate a region's level of specialization in each industry. Specifically, they allow us to compare Niagara's job concentration in a given sector relative to the job concentration in the sector at the national level. An LQ greater than (less than) 1.0 shows a level of concentration above (below) the standardized national average. A score of 1.5 or higher shows a high degree of specialization. Based on these standardized scores, we can compare Niagara's economic sectors with other places in Canada.

To analyze industry trends comparatively, we focus on data from the Census Metropolitan Area (CMA; does not include Grimsby or West Lincoln), which allows us to juxtapose Niagara with other midsized regions, namely, Hamilton, London, Windsor, and Greater Sudbury. These regions were identified for each sector partly because they have demographic characteristics of a midsized population similar to Niagara and also because they identify the respective sectors in their economic development strategies as part of their lead economic drivers. We also undertake an analysis of business counts (sourced from Statistics Canada) to highlight the size and employment configuration of businesses within each sector. To analyze the business counts, we focus on the Census Division level data (which does include Grimsby and West Lincoln) to have a complete picture of the composition of businesses in the key sectors for all of Niagara.

The business counts data enable us to determine the configuration of small, medium and large businesses within

a given sector. We define small businesses as having fewer than 50 employees, medium-sized enterprises as employing between 50 and 99 workers and large businesses as those with 100 employees or more. This information is critical because a few large businesses often serve as anchor firms within a given sector and the broader economy:

*“ An anchor firm is a dominant company with considerable market share, brand recognition, and sustained success. To maintain this position, firms invest heavily in R&D; they have a high capacity to develop, absorb and apply innovative knowledge. ”*  
—Lewis 2023

Anchor firms are understood to deliver wider economic advantages to their regions as they act as hubs in supply chains, manifest a greater tendency than smaller firms to be active in global trade, and invest more in research and development (Spencer 2013). The complementary effects of their greater productivity tend to spill over to other firms that exist in the sector and region.

Worldwide, regional economies dominated by small-to medium-sized enterprises (SMEs) face considerable challenges of sustained job creation, economic growth and socioeconomic prosperity in the face of shifting global markets and technologies (OECD 2012). Midsized regions in Canada have particularly endured these longstanding predicaments of economic competitiveness and resilience (IMD 2017). At the heart of their challenge is a productivity-gap problem plaguing SMEs. Some of the top productivity issues facing SMEs in Canadian midsized regions include penetrating export markets beyond North America, bringing new products to market (domestic or foreign), adopting new technologies, adapting to ever-changing global economic conditions, navigating the growing cost of raw materials and dealing with compliance costs (Chowdhury 2016).

However, the above productivity challenges are not insurmountable. Some of the most nimble and adaptive industrial ecosystems are known for the prevalence of SMEs (Asheim et al 2019). Businesses in such regions manage to overcome their productivity challenges, scale up their enterprises and navigate the currents of technological and market changes. However, regions dominated by SMEs require a set of strategic activities to turn systemic weakness into strength. The business counts data on key sectors in Niagara will shed light on the configuration of business sizes in the region and thus serve as an empirical basis for recommending action steps to exploit the opportunities and address the challenges of the next 10 years and beyond.

## Qualitative Analysis

The qualitative portion of this study consists of three types of data collection and analysis. The first involves content analysis of Niagara's current 10-year economic development strategy to understand the process and rationale by which the Region arrived at its current assessment of the existing and emerging economic opportunities in Niagara. The second focuses on distilling the global literature on best practices of regional economic development to understand how such places pursue similar opportunities and address barriers and constraints.

The third involves semi-structured interviews with 28 economic development stakeholders (public, private and non-profit) in Niagara. We asked for their perspectives on the region's current economic strengths and weaknesses, recent changes to the economy or a particular sector or industry, economic opportunities and barriers, and how they view Niagara's assets and challenges compared to other regions. We also asked about their perspective on the 10-year strategy and their assessment of prospects and challenges associated with its implementation.<sup>3</sup>

The next section provides an overview of our analysis of quantitative (Statistics Canada) data on key industry and occupational trends, and business counts. As noted above, it builds on the work done in analyzing sectors covered in the first phase of this project<sup>4</sup> and extends to other sectors identified in the Region's 10-year economic development strategy. Based on this analysis, the final section will generate some recommendations by combining findings from our statistical analysis of industry trends with findings from the qualitative data.

## ANALYSIS OF INDUSTRY AND OCCUPATIONAL TRENDS AND BUSINESS COUNTS<sup>5</sup>

As noted in the introductory and methods section above, previous reports for this project tracked sectors that have served as Niagara's economic drivers over the past

50 and 20 years, respectively. The papers also compared the sectors against Ontario and Canada-wide trends and against select midsized regions in Ontario.<sup>6</sup> Limited space would not permit a repeat discussion of those papers.

The analysis in this section builds on the findings from those papers while engaging closely with the sectors outlined in Niagara's 10-year economic development strategy. The aim is to validate the empirical grounding of the Region's strategic choices by probing general trends in each sector. More importantly, the analysis probes the component industries within each sector to shed light on the industrial composites that comprise the ecosystem assets and strengths of each sector.

Such a deeper understanding of the cluster dynamics of each sector thus serves as a basis for recommendations on taking more focused and strategic policy measures to build ecosystem assets, industrial competitiveness and business productivity in Niagara as the Region navigates the next 10 years and beyond. Before proceeding to such discussions in the recommendation section, the rest of this section focuses on analyzing sector-wide and industry-specific trends in each of the sectors, juxtaposing Niagara with provincial and national trends and those of comparator regions.

## Agribusiness

This study's previous reports on the positive agribusiness trends over the past 50 and 20 years,<sup>7</sup> respectively, confirmed the empirical validity of the sector's inclusion in the Region's 10-year economic development strategy as one of Niagara's established and growing sectors. Our analysis also confirms that the sector compares favourably to provincial and national trends and those of other midsized regions. However, for a deeper probe into the sector's specific areas of opportunities and constraints, we reinforce the previous reports by analyzing trends in the past decade (2013 to 2023).<sup>8</sup>

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<sup>3</sup> While this report's recommendations draw from the interviews, a second report (within The Wilson Foundation-funded project) spearheaded by Nathan Olmstead delves deeper into the interview data to generate complementary recommendations aligned with those in this report but leaning more heavily on the interview data.

<sup>4</sup> See the project's website for these papers.

<sup>5</sup> To manage the length of the report, we removed Niagara's industries and occupations with negative change rates (below zero per cent) and LQs below 1.0 (unless such figures are vital to a complete understanding of trends in the sector) to focus the discussion on areas of strength.

<sup>6</sup> We recommend readers review the past reports to understand broader sector and industry trends on which the current analysis builds. The papers can be accessed on the project's website.

<sup>7</sup> See project website

Since 2013, Niagara has registered the highest overall percentage employment growth for the agribusiness sector, reporting an increase of 22 per cent compared to Ontario’s modest two-per-cent increase and a general stagnation for all of Canada (Appendix, Table AG 1). Breaking down this sector into its component industries, we found that Niagara’s exponential job growth of 484 per cent in the NAICS category Animal food manufacturing, for example, substantially outpaced the Ontario growth rate of seven per cent and the national rate of 13 per cent (Table AG 2). We saw similar trends in Farm product merchant wholesalers, where Niagara’s 72-per-cent growth rate outshines growth rates for Ontario (34 per cent) and Canada (19 per cent). This trend is repeated in Meat product manufacturing (Niagara: 46 per cent; Ont: 22 per cent; Canada: 12 per cent), and Other food manufacturing (Niagara: 36 per cent; Ont: eight per cent; Canada: 35 per cent). In Farms, Niagara’s job growth of 17 per cent is in stark contrast to the contractions in Ontario (-17 per cent) and Canada (-16 per cent). Furthermore, Niagara reports substantial growth in Beverage manufacturing (45 per cent) and Dairy product manufacturing (21 per cent).

The above composite of industries are indicators of what could be considered key elements of Niagara’s economic cluster within the agribusiness sector. They are vital elements of the region’s specialized strengths within the sector’s value chain. Judging by these industry job figures, Niagara has not only maintained the resilience displayed over the past five decades but has reinforced those strengths over the past decade, with notable performance in agrifood manufacturing industries. However, the general decline in Support activities for farms<sup>9</sup> in Niagara (-33 per cent), Ontario (-32 per cent), and Canada (-21 per cent) raises fundamental questions since a sector’s productivity and competitiveness often rest on ancillary and support activities as signs of backward-forward solid linkages and industry complementarities. However, given that this decline is not unique to Niagara, it is a trend that points to broader structural shifts in the sector rather than any peculiar vulnerabilities in Niagara.



**Table BC-AG 1**

Sector	Businesses without employees	Businesses with employees	Number of Employees							
			1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
Agribusiness	960	565	166	98	108	113	49	25	6	0

<sup>8</sup> See the appendix at the end of this report for all the tables and figures tracking trends over the past decade.

<sup>9</sup> Examples of support services for farms can be found on this site: <https://bit.ly/475gWMC>

Among comparator regions (Table AG 3), Niagara's 22-per-cent employment-growth rate over the past decade is on par with its most immediate neighbour, Hamilton. Both trail behind London's 27 per cent but perform better than Windsor's 15-per-cent growth rate. Niagara's overall performance outpacing Windsor is noteworthy because, in the agribusiness sector, the two regions share similar assets and are often juxtaposed. Niagara has steadily held and improved its employment numbers relative to other midsized regions in Ontario.

To understand the region's agribusiness cluster, the talent or occupation pool is one critical metric of an ecosystem's assets. The top agribusiness occupation categories in Niagara in 2023 are Nursery and greenhouse labourers (1,042 jobs), Managers in agriculture (1,002 jobs), Process control and machine operators—food and beverage processing (770 jobs), Harvesting labourers (550 jobs), and Livestock labourers (534 jobs) (Table AG 4). Among these, the occupations that have registered the highest job growth over the past decade are Livestock labourers (54 per cent), Harvesting labourers (42 per cent), Process control and machine operators—food and beverage processing (19 per cent), Managers in agriculture (13 per cent), and Nursery and greenhouse labourers (12 per cent) (Table AG 5). One encouraging sign with these growth trends is that they are not just concentrated in manual or highly skilled occupations but distributed across both ends of the spectrum.

Another vital lens for understanding a region's economic cluster and ecosystem strengths within a given sector is the composite of industries with the highest employment concentration. While there are other markers of a sector's contribution to regional economic prosperity, industries with the highest job concentration translate into the most significant contribution to a region's socioeconomic well-being. They represent industries with more potential for unleashing human creativity in the knowledge economy by virtue of the greater density of people working there (Asheim et al 2019). Niagara reports the highest employment concentration (judged by LQ scores) in the following industries: Farm product merchant wholesalers (4.55), Grain and oilseed milling (4.50), Beverage manufacturing (3.42), Cannabis product manufacturing (3.13), and Farms (1.72) (Table AG 6).

A further lens for determining the character and vitality of a sector is the number of enterprises and the employee configuration of such businesses. Table BC-AG 1 provides

business counts for the agribusiness sector, offering a comparative snapshot of businesses with and without employees as well as the frequency distribution of business counts from small, medium to large enterprises.<sup>10</sup> As the table shows, among a total of 1,525 businesses, there are 565 businesses with employees and 960 businesses without employees. The latter almost doubles the former. Moreover, as the table indicates, among businesses with employees, most of them are small (485 in total, or 86 per cent). There are 49 medium-sized businesses and 31 businesses (about five per cent) employing more than 100 people each. The sector has no businesses reporting more than 500 workers.

It is a well-established fact that agribusiness industries in Niagara form one of the region's key economic drivers, endowed with natural competitive advantages of favourable soils and microclimates, a talent asset of experienced entrepreneurs and specialized operators, a world-class pool of researchers and research facilities that together make the region a credible node with a broader regional and international value chain (Conteh 2019). The agribusiness value chain in Niagara runs the full spectrum of the sector, from basic operations to high-end, value-added industrial processes and products—spanning a range from the globally renowned viticulture to cash crops, dairy farms, and greenhouses—including flowers, fruit, vegetables and the more recent developments in cannabis growth.

## **Manufacturing**

In the manufacturing sector, Niagara registered a 19-per-cent increase in employment, 2013 to 2023, compared to a modest increase of five per cent in both Ontario and Canada (Appendix, Table MN 1). While our earlier studies of trends revealed a lacklustre performance over the past 50 and 20 years, Niagara's manufacturing sector compares favourably to provincial and national trends over the past decade. Among comparator regions (Table MN 3), Niagara's 19-per-cent job growth rate leads the pack, outpacing its next-door neighbour, Hamilton (13 per cent), as well as London (18 per cent) and Windsor (six per cent).

In breaking down the sector's component industries (Table MN 2), Niagara registered strong growth trends in a wide range of manufacturing industries, with jobs more than doubling in the following: Animal food manufacturing (484 per cent), Industrial machinery manufacturing (290 per cent), Household and institutional furniture and

<sup>10</sup> Readers may recall that we define small businesses as having fewer than 50 employees, medium-sized enterprises (SMEs) as employing between 50 and 99 workers and large businesses as those with 100 or more employees.



**Table BC-MN 1**

Sector	Businesses without employees	Businesses with employees	Number of Employees							
			1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
Manufacturing	512	659	207	120	107	119	63	33	9	1

kitchen cabinet manufacturing (225 per cent), Paint, coating and adhesive manufacturing (198 per cent), Engine, turbine and power transmission equipment manufacturing (197 per cent), Electric lighting equipment manufacturing (193 per cent), Converted paper product manufacturing (174 per cent), Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing (132 per cent), Railroad rolling stock manufacturing (128 per cent), Commercial and service industry machinery manufacturing (120 per cent), Forging and stamping (119 per cent), Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing (107 per cent), and Medical equipment and supplies manufacturing (107 per cent).

The above composite of industries are indicators of what could be considered promising elements of Niagara’s economic cluster within the manufacturing sector. However, discussions about the future of manufacturing in Niagara cannot ignore the troubling job decline in two vital industries, namely Motor vehicle manufacturing (-10 per cent) and Motor vehicle parts manufacturing (-7 per cent). Addressing the underlying vulnerabilities will ensure that the resurgence of manufacturing jobs presents a complete picture of the region’s global competitiveness and talent pool as the race for the next frontier of auto manufacturing continues.

*OPHARDT Hygiene Technologies Inc. in Beamsville.  
Photo courtesy Niagara Economic Development.*



Another noteworthy trend with positive implications for one of the emerging sectors identified in the region’s economic development strategy—Life Sciences—is the job growth numbers in industries like Medical equipment and supplies manufacturing, and Pharmaceutical and medicine manufacturing. Similarly, we see the consolidation and fusion of competencies between manufacturing and agribusiness in the strong growth trends of a cluster of industries such as Animal food manufacturing, Meat product manufacturing, Beverage manufacturing, Other food manufacturing, Dairy product manufacturing, and Pesticide, fertilizer and other agricultural chemical manufacturing. Finally, the substantial growth in Railroad rolling stock manufacturing means that Niagara’s transportation and logistics sector has a strong base of talent from which to build its multimodal transportation strategies.

To further understand the region’s manufacturing cluster, we look at the talent or occupation pool. The top manufacturing occupations in Niagara in 2023 are Motor vehicle assemblers, inspectors and testers; Process control and machine operators—food and beverage processing; Manufacturing managers; Construction millwrights and industrial mechanics; and Machinists and machining and tooling inspectors (Table MN 4). Among these, three of them have seen job growth over the past decade, namely Process control and machine operators—food and beverage processing (27 per cent), Construction millwrights and industrial mechanics (25 per cent), and Manufacturing managers (nine per cent). However, we saw declining trends in Machinists and machining and tooling inspectors (-8 per cent) and Motor vehicle assemblers, inspectors and testers (-9 per cent) (Table MN 5).

For a deeper dive into Niagara’s manufacturing sector to highlight its core economic cluster and ecosystem strengths, we use the LQ scores measuring employment concentration within component industries (Table MN 6). Niagara reports its highest LQs (above a score of 4.0) in the following industries: Forging and stamping (6.55), Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing (5.94), Steel product manufacturing from purchased steel (4.69), Grain and oilseed milling (4.50), and Clay product and refractory manufacturing (4.00). However, even more significant

are the healthy employment concentrations in industries like Engine, turbine and power transmission equipment manufacturing (3.43), Motor vehicle manufacturing (2.96), Electric lighting equipment manufacturing (2.19), and Other general-purpose machinery manufacturing (2.21). Similar observations can be made for strong LQs in Beverage manufacturing (3.42) and Cannabis product manufacturing (3.13). As we will discuss in the next section, these industries are critical to emergent and future economic opportunities in Niagara.

Table BC-MN 1 provides business counts for the manufacturing sector, offering a comparative snapshot of businesses with and without employees as well as the frequency distribution of business counts from small, medium to large enterprises. As the table shows, among the total of 1,171 businesses, there are 659 businesses with employees and 512 businesses without employees. Moreover, as the table indicates, among businesses with employees, 553 (84 per cent) of them are small, 63 are medium-sized, and 43 (or seven per cent) of businesses in the sector reported employing more than 100 people each. The sector has only one business reporting more than 500 workers.

As with agribusiness, several manufacturing industries in Niagara form some of the key drivers of the region’s economy. The sector has a long legacy in the region dating back to the 1970s, and the physical assets of this legacy, such as the remains of what used to be major auto production sites, continue to position the region favourably for the next wave of manufacturing as new technologies shift the global market landscape. However, leveraging these assets in the 21st century requires some strategic decisions that we will discuss in the recommendations section.

**Tourism**

In the tourism sector, Niagara’s trajectory over the past decade revealed a troubling trend, registering a job decline of 14 per cent, which compares unfavourably with increases in both Ontario (12 per cent) and Canada (eight per cent) (Appendix, Table TR 1). Similarly, among comparator regions, Niagara is the only region whose tourism sector has declined over the past decade.

**Table BC-TR 1**

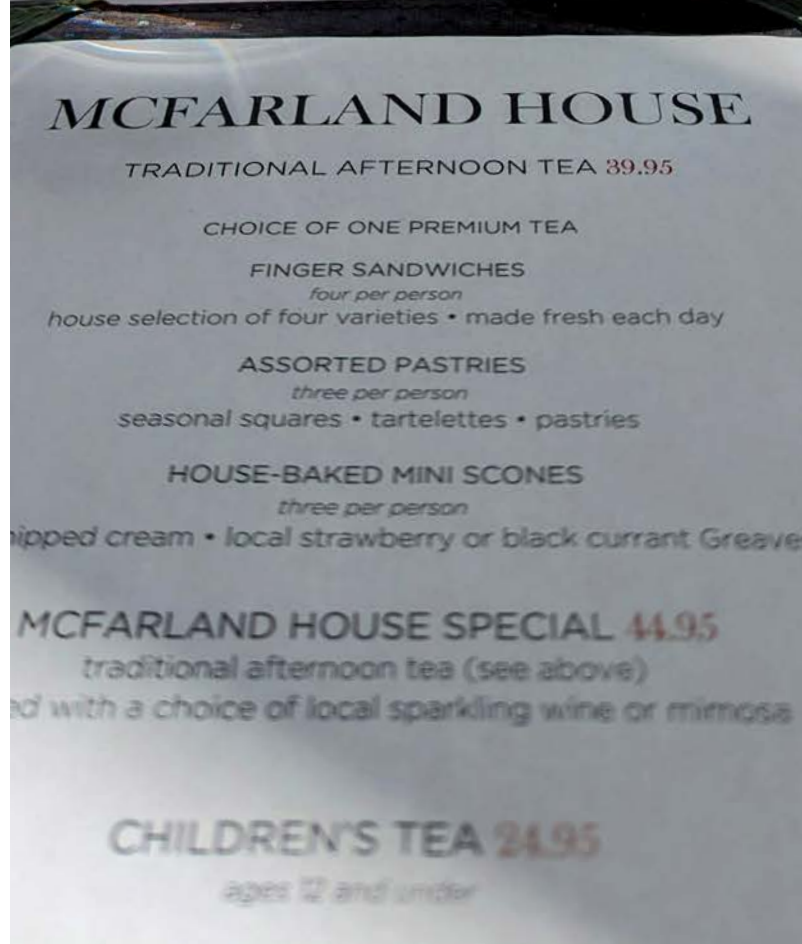
Sector	Businesses without employees	Businesses with employees	Number of Employees							
			1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
Tourism	1,638	1,429	376	303	270	269	141	55	12	3

Hamilton, London, Windsor and Greater Sudbury all registered positive growth trends (Table TR 3). Before rushing to cynical conclusions, it is essential to note that this overall decline can be explained by trends in specific industries within the sector, namely Drinking places (alcoholic beverages); Scenic and sightseeing transportation, land; and Gambling industries.

Breaking down this disturbing trend in the sector into its component industries (Table TR 2) gives us a clearer picture of a more nuanced story. Within the tourism sector, Niagara has areas of impressive industrial job growth relative to the broader trends in Ontario and Canada. The region's strongest job performances are in Scenic and sightseeing transportation, water, which reports a 305-per cent increase, outpacing Ontario's increase of 89 per cent and Canada's decline of seven per cent. The region registers a similar strength in Recreational vehicle (RV) parks and recreational camps, where its job growth of 187 per cent outshines the province's growth of 20 per cent and the country's modest growth of seven per cent.

Of particular note is Niagara's stellar job-growth numbers in Promoters (presenters) of performing arts, sports and similar events, with an increase of 124 per cent that dwarfs Ontario's 11 per cent and Canada's 22 per cent. Similarly, in Independent artists, writers and performers, Niagara saw a 59-per-cent increase in the face of the province's four-per-cent decline and Canada's modest four-per-cent increase. These two industries are vital to the human assets within the tourism sector as they represent its creative talent pool. Other industries of job-growth strength in Niagara's tourism sector are Amusement parks and arcades (45 per cent), Special food services (19 per cent), Performing arts companies (18 per cent), Charter bus industry (16 per cent), Full-service restaurants and limited-service eating places (13 per cent), and Taxi and limousine service (12 per cent). The above composite of industries constitutes some of the most promising within the tourism economic cluster.

To further understand the region's tourism cluster, we look at the talent or occupation pool. Niagara's top tourism occupations are Food counter attendants, kitchen helpers and related support occupations; Food and beverage servers; Cooks; Restaurant and food service managers; and Cashiers (Table TR 4). In terms of occupation growth change over the past decade, the only top occupation category with a positive growth trend is Food counter attendants, kitchen helpers and related support occupations (eight per cent). The others (Restaurant and food service managers; Cooks; Food and beverage servers; and Cashiers) declined over the same period (Table TR 5).



For a deeper dive into Niagara’s tourism sector to highlight its core economic cluster and ecosystem strengths, we turn to the LQ scores measuring employment concentration within component industries (Table TR 6) Niagara reports its most significant LQ (above the national threshold of 1.0) in Scenic and sightseeing transportation, water, with a whopping 26.29 LQ score, a figure that should not be surprising to any close observer of the region’s tourism sector. Healthy jobs concentration is also found in Scenic and sightseeing transportation, land (6.53), Amusement parks and arcades (3.22), Performing arts companies (2.61), Charter bus industry (2.21), Traveller accommodation (2.16), Recreational vehicle (RV) parks and recreational camps (2.05), Gambling industries (1.87), Spectator sports (1.74), and Heritage institutions (1.59), all of which reports LQ scores above the 1.5 threshold. Close to that threshold is Promoters (presenters) of performing arts, sports and similar events with an LQ score of 1.37. This all indicates a healthy concentration of creative human assets in the region’s tourism sector. Combining the Promoters industry LQ with the healthy LQ of Performing arts companies (2.61) indicates a critical mass of talents and businesses in that subset of industries most vital for the cultural and creative energy of a region’s tourism sector.

Table BC-TR 1 provides business counts for the tourism sector, offering a comparative snapshot of businesses with and without employees as well as the frequency distribution of business counts from small, medium, to large enterprises. As the table shows, among a total of 3,067 businesses, there are 1,429 businesses with employees and 1,638 businesses without employees. Moreover, as the table indicates, among businesses with employees, 1,218 (or 85 percent) of them are small. There are 141 medium-sized businesses while 70 (five per cent) of businesses in the sector reported employing more than 100 people each. The sector has three businesses reporting more than 500 workers.

Tourism is an indisputable driver of Niagara’s economy. It is also more than an economic sector as it represents the embodiment of Niagara’s global iconic brand. The natural wonders and spectacular beauty that make up the sector’s core assets remain fixtures that will stand the test of time. However, these enduring assets might also be the curse of the sector as they may generate a sense of complacency that fails to utilize the full economic potential of key industries, including emerging ones. As we will discuss in the recommendations section, fully leveraging these assets in the 21st century requires some strategic decisions by industry stakeholders and economic development officials.

## EMERGING SECTORS

The remainder of the discussion now focuses on sets of industries that the Region’s current 10-year economic development strategy identifies as emerging sectors. These are considered “emerging” to the extent that “investments in these sectors have not traditionally been a focus of the Region’s official economic development strategy and therefore will require research to understand the assets and develop actions going forward” (Economic Development Strategy 2022, p.40).

As noted in the introduction, our previous study of economic trends over the past 50 and 20 years did not cover some of these sectors since they were not part of the local discourse over those time periods. However, it should be noted that how the economic development strategy conceptualizes some of these “sectors” is peculiar in the sense that some of them are subcomponents of what the extant economic development literature views as traditional sectors. Nevertheless, we choose to work with the Region’s conceptualization in order to empirically and constructively validate and understand their status as “emerging sectors.” We approach the analysis through the lens of what the data reveals about the prospects of these emerging sectors to “foster resilient diversity in our economy...” (Economic Development Strategy 2022, p.35).

### *Electric Vehicle*

The emergence of the electric vehicle sector has been one of the most talked-about economic trends of the past decade, and for good reasons. It represents one of the most robust frontiers of advanced manufacturing, and regional winners of the innovation race in this sector will stand to dominate the global market for the foreseeable future. However, it is worth noting the caveat that there are data limitations in EV trends reported below due to the fact that it is a new phenomenon that statistical systems like NAICS have not yet accurately captured. Therefore, what is presented below as EV does not differentiate traditional internal combustion engine (ICE) vehicle and parts manufacturing from EV parts manufacturing.

Over the past decade, Niagara’s general trend for industries critical to the EV sector registers a job decline of six per cent, which compares unfavourably to Ontario’s positive two-per-cent change and Canada’s four-per-cent change (Appendix, Table EV 1). Among comparator regions in Ontario (Table EV 3), Niagara’s six-per-cent job decline over the past decade sits uneasily with Hamilton’s increase of 20 per cent and London’s 13-per-cent growth rate. However, its sister regions with long traditions of auto

**Table BC-EV 1**

Sector	Businesses without employees	Businesses with employees	Number of Employees							
			1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
EV	146	186	57	31	28	36	20	10	3	1

manufacturing fare much worse, with Windsor registering a decline of 27 per cent and Oshawa reporting a disturbing 67-per-cent meltdown.

As our earlier study of trends over the past 50 and 20 years revealed, readers who have followed the auto industry over the past few decades will not be overly perturbed by the above trends as they will recall the decimation that the manufacturing sector experienced during the height of globalization and industrial dislocations in North America. Regions like Niagara, Windsor and Oshawa—Ontario’s erstwhile auto powerhouses—have a deep hole from which to climb. However, the automotive sector is seeing a way forward towards resurgence (owing to advances in new EV technologies) that has positioned the U.S. and Canada—and by extension, Niagara—to regain their positions in the sector. How sustainable this resurgence proves to be in the face of fierce Chinese competition, and whether this rising tide will last long enough to reverse the dismal employment trends in auto manufacturing is an open question and a topic for strategic deliberations.

Disaggregating the overall downward trend in the EV sector into its component industries (Table EV 2) shows a rather different and mixed picture for Niagara. The region’s Engine, turbine and power transmission equipment manufacturing industry, for example, registers an impressive job growth of 197 per cent. The Motor vehicle body and trailer manufacturing industry reports an increase of 61 per cent, and Motor vehicle merchant wholesalers an 18-per cent increase. However, the vulnerable industries are Motor vehicle parts manufacturing, which saw a seven-per-cent decline; Motor vehicle manufacturing, which decreased by 10 per cent; and New motor vehicle parts and accessories merchant wholesalers, which saw the most significant employment decimation of 43 per cent over the past decade.

To further understand the assets of Niagara’s EV cluster, we look at the talent or occupation pool. Among the top occupations that can support the EV sector in Niagara are Motor vehicle assemblers, inspectors and testers; Supervisors, motor vehicle assembling; Material handlers; and Mechanical assemblers and inspectors (Table EV 4). Among these, Supervisors, motor vehicle assembling, has

seen the most significant growth over the past decade at 20 per cent, followed by Mechanical assemblers and inspectors at three per cent (Table EV 5). These occupations often require higher levels of education and are thus indicators of a higher talent pool in the cluster.

Even more noteworthy is that Niagara’s Engine, turbine and power transmission equipment manufacturing industry registers an LQ score of 3.43 while Motor vehicle manufacturing has a score of 2.96 (despite negative job growth). Both scores are well above the national average of 1.0 and the industry specialization threshold of 1.5 (Table EV 6). These areas point to the region’s industrial and ecosystem strengths as measured by employment concentration.

Table BC-EV 1 provides business counts for industries related to the EV sector, offering a comparative snapshot of businesses with and without employees as well as the frequency distribution of business counts from small, medium, to large enterprises. As the table shows, among a total of 332 businesses, there are 186 businesses with employees and 146 businesses without employees. Moreover, as the table indicates, among businesses with employees, 152 (or 82 per cent) of them are small. There are 20 medium-sized businesses and 14 (or eight per cent) of businesses in the sector employing more than 100 people each. The sector has one business reporting more than 500 workers.

From the above, keeping in mind the data limitations in tracking EV trends, readers can see that overall, the numbers present a mixed story of component industry strengths and weaknesses that should position the Region to examine areas needing reinforcing as it builds the scaffolding of its EV sector in the global race to the new frontier of the auto sector. In addition to drawing from the region’s long history of auto manufacturing, Niagara’s economic stakeholders can point to trends in the Engine, turbine and power transmission equipment manufacturing industry as potent signs of a region with critical assets to support new investments and businesses in the sector.

Coincidentally, Niagara has recently received a boost from the federal and provincial governments as the region seeks

to leverage advances in EV technologies. For example, federal governments invested \$300,000 in the region to support the growth of the local EV industry.<sup>11</sup>

Niagara Region is using the investment to develop an EV strategy that focuses on building partnerships, developing the infrastructure needed, connecting industry leaders and post-secondary institutions, and enabling an effective representation of Niagara at industry events. However, Niagara is not the only beneficiary of such strategic investments by senior levels of government. The federal government announced a \$200,000-investment in Windsor-Essex and a \$300,000-investment in London to support similar long-term growth of the EV industry in those regions.

More broadly, since 2015, the federal government has invested more than \$41.5 million in 12 EV projects in Ontario. Some of these investments are different from the industry-wide capacity ventures cited above for places like Niagara, Windsor and London. For instance, in Niagara (and other parts of Ontario), individual companies like Asahi Kasei, Linamar, EVSX, and FBT have received millions of dollars of federal and provincial government investments as an integral part of the country’s strategic adaptation to emerging technologies in the auto industry. Similarly, the Niagara 10-Year Economic Development Strategy reports that the province has committed \$1.8 billion for EV batteries to be produced at Oakville’s assembly complex (p.44). A central plank of Canada’s and Ontario’s successful transformation of the auto industry is to position not only new businesses but also traditional ICE vehicle and parts manufacturers to pivot to emerging EV market opportunities. In the recommendation section of the report, we will discuss ways that Niagara can further mobilize more of such investments to build the region’s EV industry and other emerging economic clusters.

With much auto manufacturing still located within Niagara, the region possesses key assets, and its historic dominance provides an opportunity to pivot to EV technology.

Companies such as GM have already begun to invest in the production of EVs, which signals support not only for the continued development and support of the automotive sector but a shift to EVs (GM Press Room, 2023).

### Marine Commerce

Niagara saw the highest overall job percentage growth in the marine commerce sector over the past decade, registering a 40-per-cent increase compared to Ontario’s 30-per-cent increase and Canada at 12 per cent (Appendix, Table MR 1). Compared to similar regions in Ontario, Niagara’s growth is sandwiched between increases in both Hamilton (82 per cent) and Windsor (25 per cent) (Table MR 3).

This sector is unique among the emerging sectors because, as our previous reports indicate, it (along with electric power generation) is one of the region’s traditional important sectors that supported the rise of other sectors and much of Niagara’s early economic development over the past 200 years. However, as those reports reveal (see the project’s website to access the papers), marine commerce declined over the past 50 years as other modes of cargo transportation, such as trains and trucks, crowded out the sector. In recent years, however, we have seen a resurgence in marine transportation, and the data from our 10-year trend reveals that Niagara is riding the currents of this new wave.

Breaking down the region’s marine commerce into its component industries shows specific areas of strength for Niagara (Table MR 2). Scenic and sightseeing transportation, water has seen the most significant job increase, with a growth of 305 per cent over the past decade. This is followed by Deep sea, coastal and Great Lakes water transportation, with an increase of 152 per cent and Freight transportation arrangement, with modest two-per-cent growth. However, we see a significant decline in Ship and boat building (-69 per cent) over the same period and a modest decrease in Support activities for water transportation (-3 per cent). The above composite of industries constitutes Niagara’s economic cluster within the marine commerce sector.

**Table BC-MR 1**

Sector	Businesses without employees	Businesses with employees	Number of Employees							
			1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
Marine Commerce	598	584	258	105	89	65	46	15	4	2

<sup>11</sup> Government of Canada. 2023. "Government of Canada supports electric vehicle (EV) sector in Niagara Region." <https://bit.ly/473VEz8>

To further understand the region's marine commerce cluster, we look at the talent or occupation pool. The top marine occupations in Niagara in 2023 are Sales and account representatives—wholesale trade (non-technical); Customs, ship and other brokers; Managers in transportation; Material handlers; and Transport truck drivers (Table MR 4). Among these, Sales and account representatives—wholesale trade (non-technical) has witnessed 49-per-cent growth over the past 10 years, followed by Managers in transportation (42 per cent), and Material handlers (28 per cent) (Table MR 5). Meanwhile, the occupation category of Customs, ship and other brokers has suffered a decline of 16 per cent over the same period.

To explore Niagara's marine commerce sector more deeply and highlight its core economic cluster and ecosystem strengths, we turn to the LQ scores measuring employment concentration within component industries (Table MR 6). Niagara reports its highest LQs in the following industries: Scenic and sightseeing transportation, water (26.29) which is also a component industry of tourism; Deep sea, coastal and Great Lakes water transportation (5.63); and Freight transportation arrangement (1.82) (Table MR 6).

Table BC-MR 1 provides business counts for the marine commerce sector, offering a comparative snapshot of businesses with and without employees as well as the frequency distribution of business counts from small, medium, to large enterprises. As the table shows, among a total of 1,182 businesses, there are 584 businesses with employees and 598 businesses without employees. Moreover, as the table indicates, among businesses with employees, most of them are small (517 in total or 89 per cent). There are 46 medium-sized businesses. Only 21 businesses (four per cent) in the sector reported employing more than 100 people each. Only two businesses report having 500 or more workers.

Niagara's maritime institutional and structural assets are clear and well-known. Niagara enjoys the benefit of the Welland Canal and St. Lawrence Seaway systems, which have been dominant assets for other sectors of the Niagara economy, including agriculture and manufacturing. In fact, given its strategic centrality to Niagara's locational assets, marine commerce continues to provide substantial potential for the region as it continues to carve its niche in a changing global economy with shifting markets. The designation of Niagara as a Foreign Trade Zone provides further economic incentives and leverage to industries within the marine commerce sector.

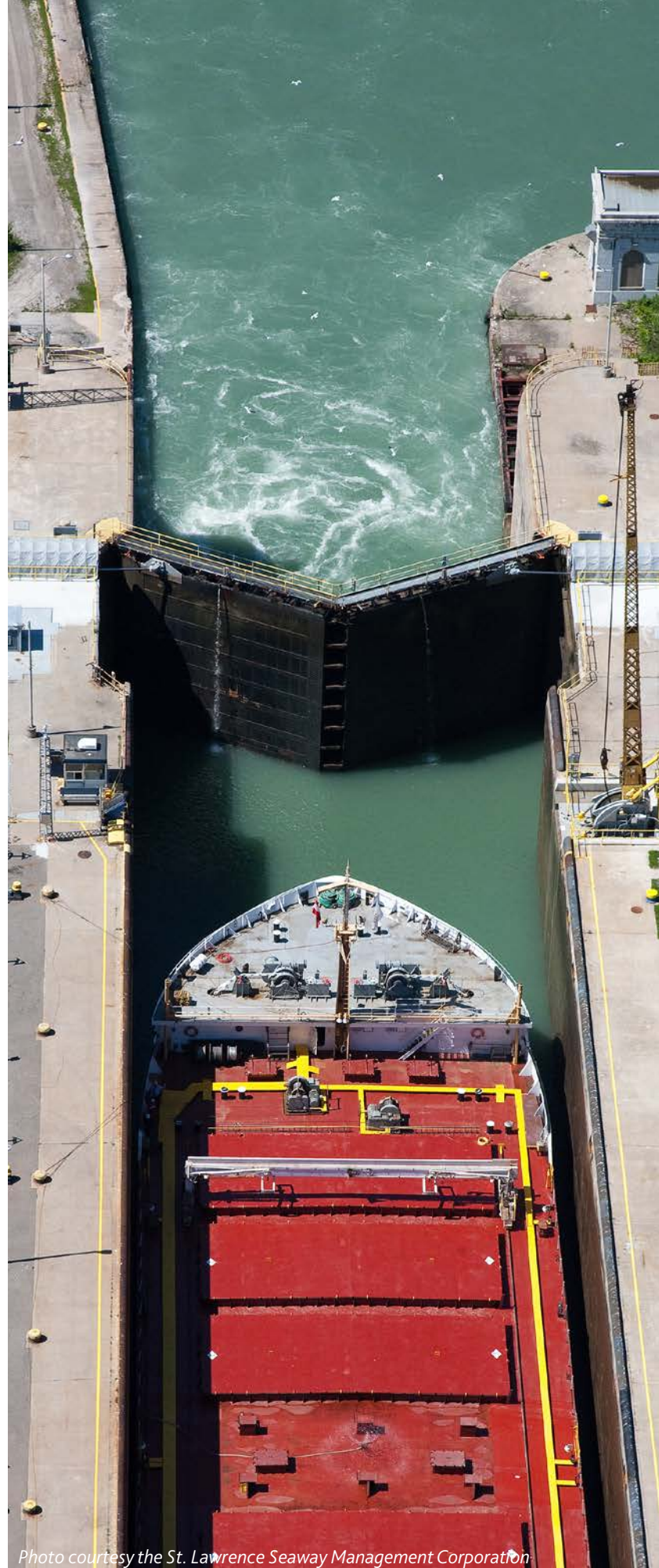


Photo courtesy the St. Lawrence Seaway Management Corporation



Photo courtesy Hockey Canada.

## **Sports Tourism/Active Economy**

Niagara's sports tourism/active economy sector registered an overall job decline of 21 per cent over the past decade, which compares unfavourably to Ontario's increase of 17 per cent and Canada's 12-per cent increase over same period (Appendix, Table ST 1). Only Niagara registered a decline over the past 10 years, compared to positive trends in comparator regions like Hamilton (24 per cent), Windsor (23 per cent), London (21 per cent), and Greater Sudbury (11 per cent) (Table ST 3). This trend raises eye-popping curiosity to the observant reader who is familiar with Niagara's growing physical assets in the sector.

Several industries in the sector, however, registered positive growth trends over the past decade (Table ST2). These include Recreational vehicle (RV) parks and recreational camps (187 per cent), and Promoters (presenters) of performing arts, sports and similar events (124 per cent).

Industries registering declines include Sporting goods, hobby and musical instrument stores (-10 per cent) and Spectator sports (-13 per cent).

Most significantly, one of Niagara's top occupations in the sector that can be a vital element in any vibrant active economy ecosystem—Program leaders and instructors in recreation, sport and fitness—saw a growth rate of 26 per cent (Table ST 5).

Continuing with the region's core economic cluster and ecosystem strengths, several industries register relatively high employment concentrations, pointing to a critical mass of talents and activities (Table ST 6). These include Personal goods merchant wholesalers (3.04); Recreational vehicle (RV) parks and recreational camps (2.05); Spectator sports (1.74); and Promoters (presenters) of performing arts, sports and similar events (1.37). It should be noted that several of these also constitute component industries of the tourism sector.<sup>12</sup>

<sup>12</sup> A noteworthy caveat is that not all of these industries fit comfortably within what could be ordinarily construed as the "active economy." However, we are limited by Statistics Canada's industry classification system which groups broadly related economic activities under a specific industry. Nevertheless, the aim of the analysis is to highlight component industries within the sector that could inform strategic discussions among cluster stakeholders.



**Table BC-ST 1**

Sector	Businesses without employees	Businesses with employees	Number of Employees							
			1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
Sport Tourism & Active Economy	3,766	2,990	1,164	698	486	379	184	59	16	4

These scores above the national average lend modest credence to the sector as an emerging ecosystem in the region. Furthermore, behind these scores is a rich legacy of sports infrastructure that includes the new Canada Games Park and Walker Sports and Abilities Centre located adjacent to Brock University, Niagara-on-the-Lake Tennis Club, the new Neil Campbell Rowing Centre located on the venerable Henley Rowing Course, as well as the Meridian Centre in downtown St. Catharines, and the Welland International Flatwater Centre (Tourism Partnership of Niagara, n.d.). The region also boasts a robust supporting institutional milieu cultivated in recent years with academic programs such as Sport Management at Brock University and Niagara College.

Table BC-ST 1 provides business counts for industries related to the sport tourism and active economy sector, offering a comparative snapshot of businesses with and without employees as well as the frequency distribution of business counts from small, medium, to large enterprises. As the table shows, among a total of 6,756 businesses, there are 2,990 businesses with employees and the majority (3,766 businesses) are without employees. Moreover, as the table indicates, among businesses with employees, 2,727 (91 per cent) of them are small and 184 of them are medium-sized businesses. Some 79 businesses in the sector (three per cent) reported employing more than 100 people each. The sector has four businesses reporting more than 500 workers.

### **Health Care and Life Sciences**

In the health care and life sciences sector, Niagara’s 10-per-cent job growth is below Ontario’s (17 per cent) and Canada’s (12 per cent), respectively (Appendix, Table HC 1). Among select regions in Ontario, Niagara’s growth rate over

the past 10 years is lower on the spectrum, with Hamilton registering the highest job growth at 37 per cent, followed by Windsor at 19 per cent, and London at 18 per cent. Only Greater Sudbury trails Niagara with a growth rate of nine per cent. (Table HC 3).

Beyond the broad 10-per-cent increase, several industries have registered impressive positive growth over the past decade (HC 2). These include Medical equipment and supplies manufacturing (107 per cent); Pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers (88 per cent); Scientific research and development services (65 per cent); Pharmaceutical and medicine manufacturing (63 per cent); Architectural, engineering and related services (20 per cent); and Medical and diagnostic laboratories (17 per cent).

The sector’s top occupations in 2023 are in the category Pharmacy technical assistants and pharmacy assistants (Table HC 4). That category also reports the highest growth over the past decade, with an impressive 90-per-cent increase in Niagara (Table HC 5).

However, only three industries in the sector register an LQ score at or above the national average in terms of employment concentration (Table HC 6). These are: Other machinery, equipment and supplies merchant wholesalers (1.20); Health and personal care stores (1.14); and Medical and diagnostic laboratories (1.00).

Table BC-HC 1 provides business counts for the health and life sciences sector, offering a comparative snapshot of businesses with and without employees as well as the frequency distribution of business counts from small, medium, to large enterprises. As the table shows, among a total of 3,502 businesses, there are 1,740 businesses with employees and

**Table BC-HC 1**

Sector	Businesses without employees	Businesses with employees	Number of Employees							
			1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
Health & Life Sciences	1,762	1,740	948	354	237	124	45	20	10	2

the majority (1,762 businesses) are without employees. Moreover, as the table indicates, among businesses with employees, 1,663 (or 96 per cent) of them are small. There are 45 medium-sized businesses. Only 32 businesses in the sector reported employing more than 100 people each. The sector has two businesses reporting more than 500 workers.

Notwithstanding the mixed numbers, Niagara boasts a collection of physical and institutional assets that lend credibility to its ambitions to carve a niche within the sector. For example, Niagara Health houses eight hospitals comprised of large community hospitals, rural, specialty, and rehabilitation centres (Niagara Health, “About Niagara Health”). These hospitals are supported by intermediaries that often collaborate with hospitals to research and develop new innovations, such as the Niagara Falls Ryerson Innovation Hub partnering with Niagara Health, and the I-EQUIP program that links Brock University and McMaster University students with the Niagara Health System. Furthermore, the cluster’s ecosystem has a robust institutional scaffolding for driving, encouraging, and supporting innovation. Among these is the Niagara Health Knowledge Institute (NHKI), a recently established facility that provides institutional support for clinical research activities to provide Niagara Health patients access to state-of-the-art, novel therapies through participation in multi-centre clinical research studies (Niagara Health).<sup>13</sup>

## Film

In the film sector, Niagara’s 53-per-cent job increase over the past decade is higher than Ontario’s 46-per-cent increase and all of Canada’s 40-per-cent growth (Appendix, Table FM 1). This positive growth seems to be part of a larger tide that has boosted the growth trajectory of similar regions in Ontario. Niagara’s growth is relatively on par with Hamilton (57 per cent) and London (56 per cent), all of which outshine modest growth in similar-sized places like Greater Sudbury (19 per cent) and Windsor (five per cent) (Table FM 3).

A closer look at the sector’s component industries reinforces the message of strong job increases in Niagara over the past decade. Promoters (presenters) of performing arts, sports and similar events, increased by 124 per cent, and Independent artists, writers and performers, increased 59 per cent. Job numbers in the Motion picture and video industries category grew 11 per cent over 10 years but that was far below the Ontario and Canada growth rates. The biggest loss is in the Sound recording industry, which suffered a 100-per-cent decline over the same period. While the overall picture may be positive, considering that a growing talent pool of artists, writers, performers and promoters may sustain the sector’s emergence, a closer inspection of the individual industries and their respective job numbers suggests that it would be a conceptual stretch to claim an emergent film cluster in Niagara.

Nevertheless, there may be signs of a nascent ecosystem when viewed through another lens. People are at the heart of any sector’s vitality, but it is especially true for the Arts. Niagara’s growth trends point to a noticeable critical mass that provides a legitimate basis for deeper explorations into investment in the sector. Among the top occupations in Niagara’s film sector are Producers, directors, choreographers and related occupations; Authors and writers (except technical); Graphic designers and illustrators; and Audio and video recording technicians (Table FM 4). These skillsets provide Niagara with a rather modest scaffolding of human assets from which to explore further opportunities in growing the sector. The operative word in this preceding sentence is “modest” because while faintly related to the film sector, these occupations do not readily translate to essential assets in the competitive sense of the term. Among these occupations, Graphic designers and illustrators lead the growth trend with a 98-per-cent increase over the past decade, followed by Painters, sculptors and other visual artists (60 per cent); Producers, directors, choreographers and related occupations (59 per cent); and Authors and writers (except technical) (24 per cent) (Table FM 5). Given that not all of these occupations

**Table BC-FM 1**

Sector	Businesses without employees	Businesses with employees	Number of Employees							
			1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
Film	347	65	46	9	6	3	1	0	0	0

<sup>13</sup> The NHKI was established in 2023 to “improve patient care and experience by embedding research into clinical practice.” Its mission is to build research capacity and transform healthcare through leading community hospital-based research. Some of its clinical trials include cardiology, critical care medicine, hematology/transfusion medicine, neurology and oncology. <https://www.niagarahealth.on.ca/site/knowledge-institute>.

are tangential to what could be ordinarily construed as the film sector, stakeholders should take a more careful and candid assessment of claims of film being an emerging sector in Niagara.

Table BC-FM 1 provides business counts for industries related to the film sector, offering a comparative snapshot of businesses with and without employees as well as the frequency distribution of business counts from small, medium, to large enterprises. As the table shows, among a total of 412 businesses, there are only 65 businesses with employees and 347 businesses without employees.

This large figure for businesses without employees is a testament to the disproportionate number of self-employed artists that register their practice as small businesses. Moreover, as the table indicates, among businesses with employees, 64 (or 98 per cent) of them are small. There is only one medium-sized business and zero large businesses in the sector.

In terms of ecosystem assets and strengths (Table FM 6), the region has two industries that command a sufficient degree of employment concentration above the national average: Promoters (presenters) of performing arts, sports and similar events (1.37) and Independent artists, writers and performers (1.08). Although these industries are not focused exclusively on Film,<sup>14</sup> it is worth pointing out that Niagara is home to a variety of art and film institutions, as well as courses in more specific aspects of film and other media production. Some examples of dedicated schools for the arts include Brock University's Marilyn I. Walker School of Fine and Performing Arts in downtown St. Catharines, the Niagara Arts Academy in St. Catharines, and the Niagara Institute of Music and Arts in Niagara Falls. In addition to schools, courses for various aspects of film and production can be found within Niagara, including Niagara College's Art and Foundation Program, and Brock University's various courses within its Visual Arts program, which includes Digital Media and Design, Studio Art, and the History of Art and Visual Culture courses. These institutions allow for the development and training of new

labour, which provides the region with a vibrant pool of students ready to enter the field.

Granted, the institutions listed above are not strictly dedicated to film per se. However, they are an integral part of any film cluster's broader ecosystem assets of talent development. More importantly, there is room for cluster stakeholders to build on Niagara's current assets by engaging in strategic discussions with film production companies about what they might need locally and then setting up a plan to support those specific industries. Furthermore, it would also make sense for the region to brand itself by accentuating its human assets in live performance production that exist, for example, through the Shaw Festival, the OLG Theatre in Niagara Falls, and Brock's School of Fine and Performing Arts. This would be in addition to the region's spectacular natural beauty and stock of heritage buildings, landscapes and related sites.

## ALL-PURPOSE SECTORS

The sectors above were included in the region's 10-year economic development strategy and thus formed the basis for their inclusion in our analysis. However, our research team decided to include three other sectors that we consider central scaffolding supporting the national or global competitiveness of a region's economy. These are information communication technology (ICT), transportation and logistics (T&L),<sup>15</sup> and aerospace. The latter two form the multimodal arteries (road, rail, water and air) through which Niagara is connected to global markets while ICT industries provide the digital platforms and conduits for adapting the region's economy to changes in global technologies.

Not surprisingly, they feature prominently in our interviews with economic stakeholders who consider the future of these sectors of particular importance to Niagara as the region's economy adapts to the imperatives of the 21st century. The analysis below examines the trends in these sectors over the past decade to validate their prospects and analyze implications for the region's current and future economic development.<sup>16</sup>

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<sup>14</sup> It is worth reiterating the caveat we made about sport tourism/activity economy; that not all of these industries fit comfortably within what could be ordinarily construed as the film sector. However, we are limited by Statistics Canada's industry classification system, which groups broadly related activities under a specific industry. Once again, the aim of the analysis is to highlight component industries within the sector that could inform strategic discussions among cluster stakeholders.

<sup>15</sup> Industries listed under Marine Commerce also fall within T&L and thus the former can be viewed as an all-purpose sector. However, it has already been listed in the 10-year strategy as one of the "emerging sectors" and thus analyzed in this report accordingly.

<sup>16</sup> Given that our aim in analyzing these all-purpose sectors is to highlight their role as support systems for the rest of the economy, we did not include their business counts in the analysis. Our focus is merely to illuminate industry trends in these all-purpose sectors and suggest opportunities to consolidate Niagara's multimodal arteries and digital platforms as the region continues its transition to a knowledge-intensive economy and aspires to carve a greater niche in global markets.

## ***Information Communication Technology (ICT)***

Niagara's ICT sector job growth rate of 83 per cent over the past decade leads the Ontario and Canada rates of 59 per cent, respectively (Appendix, Table IT 1). Among comparator mid-sized regions, Niagara's growth rate is on par with Hamilton's 94 per cent, Windsor's 78 per cent, and London's 82 per cent (Table IT 3). As the 20-year trend report of our previous study in this project reveals (see project website), these robust growth trends in mid-sized regions reflect the fact that they have been catching up to larger urban centres, where the digital revolution was concentrated as the sector consolidated. The mushrooming of the ICT sector to mid-sized regions has profound implications for their competitiveness and productivity in the knowledge economy of the 21st century.

Probing further into the component industries of the ICT sector (Table IT 2), those with the leading growth rates for Niagara are: Communications equipment manufacturing (186 per cent); Other telecommunications (140 per cent); Computer systems design and related services (130 per cent); Software publishers (118 per cent); and Data processing, hosting, and related services (112 per cent).

The top occupations in the region's ICT sector by job numbers are Information systems specialists; Software developers and programmers; Computer and information systems managers; and Computer systems developers and programmers (Table IT 4). The fastest growing ICT occupations in the region are Software developers and programmers (148 per cent); Computer and information systems managers (117 per cent); Computer systems developers and programmers (61 per cent); and Information systems specialists (55 per cent) (Table IT 5).

However, it is worth noting that the employment concentration figures register no industry with an LQ above the national average (Table IT 6). This should not be surprising given that even though mid-sized regions have been catching up in recent years to larger urban centres, the digital revolution was concentrated in the latter owing to the size of their critical mass of digital, physical, institutional and human assets. Mid-sized regions like Niagara are relatively new actors on the scene and their competitiveness as a function of employment concentration still has some way to go. Nevertheless, Niagara is heading in the right direction, strengthening the support systems of its digital innovation ecosystem as an all-purpose sector supporting other sectors of its increasingly knowledge-intensive economy of the 21st century.

## ***Transportation & Logistics***

Over the past decade, Niagara's transportation and logistics (T&L) sector has registered a job growth rate of 22 per cent, which trails Ontario's 25-per-cent increase but is better than all of Canada's 18-per-cent growth (Appendix, Table TL 1). Among similar mid-sized regions in Ontario, Niagara's growth rate is only second to Hamilton's 34 per cent, leading other places like Windsor (11 per cent), London (21 per cent), and Greater Sudbury (17 per cent) (Table TL 3).

The growth trend in the component industries of the region's T&L sector presents a complex and positive picture of ecosystem strengths (Table TL 2). High growth industries include Local messengers and local delivery (538 per cent); Scenic and sightseeing transportation, water (305 per cent); Other support activities for transportation (199 per cent); Support activities for air transportation (177 per cent); Deep sea, coastal and Great Lakes water transportation (152 per cent); and Support activities for road transportation (105 per cent). Other industries with positive growth and particular significance to the sector are Warehousing and storage (57 per cent); General freight trucking (five per cent), and Freight transportation arrangement (two per cent).

Unfortunately, there is insufficient data to track the 10-year growth of three important Niagara T&L industries: Scheduled air transportation; Support activities for rail transportation; and Inland water transportation. A few industries germane to the sector and yet reporting a decline in jobs should raise concerns and questions about their future in the region. These include Non-scheduled air transportation (-2 per cent); Support activities for water transportation (-3 per cent); Urban transit systems (-4 per cent); Rail transportation (-27 per cent); Other transit and ground passenger transportation (-30 per cent); Specialized freight trucking (-42 per cent).

The top two occupations in Niagara within the sector are Transport truck drivers, and Bus drivers, and other transit operators (Table TL 4). However, both occupations have declined over the past decade, with the number of Transport truck drivers falling by 15 per cent and Bus drivers and other transit operators dropping by 23 per cent (Table TL 5). In terms of ecosystem assets and strengths (Table TL 6), the region reports the highest employment concentration in Scenic and sightseeing transportation, water (26.29); Scenic and sightseeing transportation, land (6.53); Deep sea, coastal and Great Lakes water transportation (5.63); Charter bus industry (2.21); Other transit and ground passenger transportation (2.09); Freight transportation arrangement (1.82); Support activities for

road transportation (1.52); Local messengers and local delivery (1.52); Non-scheduled air transportation (1.07); and Taxi and limousine service (1.01).

Niagara's low LQ scores (below the national average) in some industries critical to the sector are concerning and worthy of further discussion. These include Other support activities for transportation (0.94); Support activities for water transportation (0.94); General freight trucking (0.58); Specialized freight trucking (0.53); Warehousing and storage (0.41); Support activities for air transportation (0.36); Rail transportation (0.25); and Scheduled air transportation (0.06). The region registers insufficient data (which usually indicates very low numbers) in both Inland water transportation and Support activities for rail transportation, which seems highly curious for a region that boasts a long history of water, rail, and road transportation by virtue of its strategic location as a border region at the centre of one of North America's vibrant binational industrial corridors.

## Aerospace

In the aerospace sector, Niagara's 53-per-cent job increase over the past decade is far above Ontario's modest increase of three per cent and Canada's decline of three per cent (Appendix, Table AS 1). Niagara's growth rate over the same period outpaces Hamilton (40 per cent), Windsor (41 per cent), and London (eight per cent). Only Greater Sudbury, with a whopping 190-per-cent growth, outperforms Niagara (Table AS 3).

Broken down into its component industries, Niagara's aerospace sector saw a job increase of 177 per cent in Support activities for air transportation (which substantially outpaced 28 per cent in Ontario and 10 per cent in Canada) (Table AS 2). We see a similar trend in Aerospace product and parts manufacturing, where Niagara had job growth of 58 per cent, compared to Ontario's decline of two per cent and Canada's stagnation (zero per cent) over the same period.

*Pantos Logistics warehouse. Photo courtesy  
Niagara Economic Development.*



The top occupations in Niagara's sector by job numbers are Air pilots, flight engineers and flying instructors; Aircraft assemblers and aircraft assembly inspectors; Supervisors, other mechanical and metal products manufacturing; Aircraft mechanics and aircraft inspectors; and Purser and flight attendants (Table AS 4). While the numbers are small, more importantly, they reveal that Niagara possesses some human assets in the sector. Therefore, talks about energizing the sector, though tenuous, cannot be dismissed as pipedreams. The region saw positive growth in top occupations like Supervisors, other mechanical and metal products manufacturing (105 per cent); Air pilots, flight engineers and flying instructors (47 per cent); Aircraft mechanics and aircraft inspectors (27 per cent); and Aircraft assemblers and aircraft assembly inspectors (two per cent) (Table AS 5). However, in terms of ecosystem assets and strengths, only one industry in the region—Non-scheduled air transportation—with an LQ score of 1.07—registered employment concentration above the national average of 1.0 (Table AS 6).

## RECOMMENDATIONS

This section draws from the statistical analysis of industry and occupation trends in the preceding section and combines it with findings from the content analysis of Niagara's current 10-year economic development strategy, a review of the global literature on best practices of regional economic development, and semi-structured interviews<sup>17</sup> with economic development stakeholders in Niagara to offer some policy recommendations. The recommendations are grouped under two broad themes. The first set of recommendations focuses on spelling out the key components of what we refer to as a "smart industrial specialization approach" to pursuing the next wave of economic development over the coming 10 years and beyond. The second set of recommendations addresses the mandate and governance architecture of economic development in Niagara, centred on our argument for a shift from the current concierge-style approach to what we term an "orchestrator-style approach". The former connotes passive housekeeping while the latter points to a strategic mobilization of actors and resources within priority industries.

The concierge style tends to concentrate on new enterprises and is not selective or strategic in its efforts while the orchestrator style focuses on strategically building innovation support systems centred on enhancing the productivity of local business and the economic competitiveness of the region. Transitioning to an orchestrator role is a prerequisite for smart industrial specialization. However, we thought it best first to spell out the logic and imperatives of smart industrial specialization to clearly articulate the rationale for the proposed shift from a concierge-style to an orchestrator-style approach to economic development.

Economic development as a concept and practice has seen several waves over the past several decades. Without dwelling on the details of these waves,<sup>18</sup> it suffices to say that key milestones have shaped conventional practices over the decades. These include the era of 'smokestack chasing' between the 1930s and 1960s, the focus on business retention through generous business grants, cheap loans and tax holidays in the 1970s and 1980s, and the more recent plethora of business attraction, retention and expansion programs through regional marketing and branding and administrative support services aimed at assisting small businesses.

However, the emergent approach of recent years is shifting towards viewing regions as innovation hubs and ecosystems for building economic competitiveness and supporting business productivity in the face of breakneck global shifts in technologies and markets. Thus, over decades, economic development practice has transitioned from the traditional 'shoot anything that flies, claim anything that falls' approach to the current focus on strategically building innovation support systems centred on enhancing the productivity of local businesses and the economic competitiveness of the region. With that in mind, here are our recommendations:

- 1. Adopt the "smart industrial specialization" approach to economic development in Niagara by identifying sets of component industries within and across sectors that form the most vital clusters.**

<sup>17</sup> While this report's recommendations draw from the interviews, a second report (within The Wilson Foundation-funded project) spearheaded by Nathan Olmstead delves deeper into the interview data to generate complementary recommendations aligned with those in this report but leaning more heavily on the interview data.

<sup>18</sup> For more on waves of economic development approaches, see Arku, G., & Oosterbaan, C. (2015). Evidence of inter-territorial collaborative economic development strategies in Ontario, Canada. *GeoJournal*, 80(3), 361–374. <https://doi.org/10.1007/s10708-014-9554-x>.

One popular concept for contemporary practice among leading regions is “smart industrial specialization.”<sup>19</sup> It has its roots in Europe but has been adopted worldwide as a concept and practice of economic development by which regions pursue growth and prosperity by identifying and focusing on their industrial strengths (OECD 2019). It enables them to pursue specialization in areas of existing or potential competitive advantage that differentiates them from others (Breznitz 2021; Asheim et al 2019).

In the case of Niagara, the notion of “smart” means a precise, selective and tailored understanding of the composites of industries within a given sector that offer the greatest promise within the context of fast-changing technology and markets. “Smart” also means that these industries are not restricted to a particular sector such as agriculture, manufacturing or tourism. They can transcend multiple sectors, such as agritourism or agrifood manufacturing. They can be subsections of a sector, such as electric vehicles within auto manufacturing.

In short, smart industrial specialization in Niagara requires thinking about subsectors rather than whole sectors. No region, not even larger ones in Canada like Toronto, Montreal and Vancouver, can claim competencies in all aspects of manufacturing, for example. Smart specialization means focusing on core assets within a sector and investing in them. Within the vast spectrum of the manufacturing sector (or any sector), it is essential to pay close attention to those industries that register high employment growth rates and high concentrations of jobs while aligning with the region’s strategic direction. Understanding and appreciating these connections across the industries then provides the foundation for a smart and focused industrial specialization in which the region deploys its investments into building critical assets in the specific industries that constitute an economic cluster.

An economic cluster is a geographic concentration of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in particular fields that compete but also cooperate (Porter 1990). The core elements of economic clusters are interlinked companies within a given sector’s value chain whose complementary activities create competitive synergies for individual businesses within the cluster. It is important not to confuse these sets of component industries with a whole sector.

Niagara’s strategic directions have outlined plans for sector development and support for established sectors (such as agriculture, manufacturing and tourism) and several emerging sectors. **However, a careful examination of the data in the preceding section reveals that it is best to think and strategize in terms of sets of component industries within and across sectors rather than as chunks of sectors.** Based on the nuances of industrial growth trends, it would be misleading to determine the trajectory of Niagara’s future opportunities based on general sector trends in manufacturing, agriculture, tourism or the like. Beyond the general trends in each sector (where some sectors might appear to be trailing the national trend) are component industries where Niagara’s growth outpaces the Ontario and Canadian rates and outperforms comparator regions. These growth trends point to specific areas of momentum that a region must identify and leverage.

For instance, one peculiar feature of Niagara’s industrial resurgence over the past decade is **the fusion manufacturing and agriculture** (two distinct sectors) through strong growth trends and higher-than-national-average job concentrations in a cluster of industries such as Animal food manufacturing, Meat product manufacturing, Beverage manufacturing, Other food manufacturing, Dairy product manufacturing, and Pesticide, fertilizer and other agricultural chemical manufacturing.

Similarly, the data in the preceding section also point to fusions and complementarities between **agribusiness and tourism**, with strong growth numbers in industries related to agrifood tourism. Understanding and strategizing along the lines of these trans-sectoral fusions of industries (such as between agriculture, manufacturing and tourism) are the necessary elements of smart industrialization. Opportunities in agritourism are some of the most underutilized economic potentials in peripheral and midsized regions (UNIDO 2017).

Our interviews with stakeholders in Niagara confirm the extant literature. The region’s vast sprawl of wineries and its global brand means that available low-hanging fruits can be exploited by taking a more thorough inventory of assets and synergies between wine, food, and tourism. As some of our interviewees pointed out, the region’s vast assets present a massive potential for linkages and synergies among agrifood, tourism and creative industries that could match or exceed places like the much-celebrated Napa Valley and Okanagan Valley. While nature has blessed Niagara with a recognized global brand in agritourism centred on the region’s viticulture assets, its full potential remains underutilized.

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<sup>19</sup> <https://clustercollaboration.eu/tags/smart-industrial-specialisation>



In some respect, Niagara's current economic development strategy manifests an understanding of the logic of pinpointing component industries where the region's growth outpaces the Ontario and Canadian rates and outperforms comparator regions and zeroing in on those industries. A case in point is **electric vehicles (EV)**, which has been selected as an area of focus over the next decade (notwithstanding the confusing nomenclature of calling it a "sector"). A careful look at the data in the preceding section points to strong resurgent competencies in Niagara's auto manufacturing industries, with positive implications for its pursuit of EV as an area of focus.<sup>20</sup> For instance, Niagara registers positive employment growth in the related industries of Industrial machinery manufacturing; Engine, turbine and power transmission equipment manufacturing; Electric lighting equipment manufacturing; Commercial and service industry machinery manufacturing; Other fabricated metal product manufacturing; Iron and steel

mills and ferro-alloy manufacturing; Motor vehicle body and trailer manufacturing; and Aerospace product and parts manufacturing. This logic, illustrated in the case of EV within the broader manufacturing sector, holds for larger sectors like agriculture and tourism.

In short, the manufacturing sector numbers in the preceding section present a mixed story of component industry strengths and weaknesses that requires Niagara to examine areas needing reinforcement as it builds the scaffolding of its EV strategy in the global race to the new frontier of the auto sector. Nevertheless, the industrial growth trend in Niagara positions the region favourably in the race to build an attractive and compelling regional innovation and production ecosystem for the sector, with critical assets to support new investments and businesses. As noted earlier in the preceding section, vital support through millions of dollars already invested by the federal

<sup>20</sup> As we noted earlier, the trends reported for EV is more of a reflection of the automotive sector as a whole than of EV as such. The expectation is that as technology shapes the automotive industry, some of the employment trends and business counts will transition to EV, and more precise metrics developed by Statistics Canada will track those trajectories.



and provincial governments will form a key part of the region's strides to carve itself a global niche in the industry. Another example of the potential for smart industrial specialization is the **health and life sciences sector**. Granted, Niagara's sector-wide job growth of 10 per cent is below the increases seen in Ontario (17 per cent) and Canada (12 per cent), respectively (Table HC 1).

However, beyond the modest overall 10-per-cent increase, several industries within the sector have registered impressive growth over the past decade (HC 2). These include Medical equipment and supplies manufacturing (107 per cent); Pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers (88 per cent); Scientific research and development services (65 per cent); Pharmaceutical and medicine manufacturing (63 per cent); and Medical and diagnostic laboratories (17 per cent).

Based on the logic of smart industrial specialization, the region's life-sciences strategy should identify and focus investment on component industries that set Niagara apart from its neighbours rather than attempting to claim competencies in the whole sector. The latter approach would leave Niagara in the periphery and shadow of its neighbour, Hamilton, whose world-renowned smart-health-and-life-sciences cluster strategy operates within a dense scaffolding of institutional, human and technological assets.

We would conclude this recommendation by striking a note of caution about the region's claims to "emerging sectors" like **EV, Film, and Sports Tourism**. Quite apart from the nomenclature and classification issues we discuss above, it is not a given that the growth trends in the respective industries will eventually result in the consolidation of the clusters. For instance, some of the strong growth industries/occupations in manufacturing are tangential to what could be strictly defined as EV. Similarly, the trends marked as constituting a film cluster reflect growth in industries/occupations in other types of Arts and Entertainment activities that have also traditionally been prominent in Niagara and do not necessarily signal growing strength in film. In short, these opportunities are not a given and the data supporting such claims should be put in their proper context.

Nevertheless, we see a case for identifying these clusters as emergent opportunities, with the understanding that they must be aggressively pursued and leveraged through

purposive strategies. Therefore, what seems still lacking is a cohesive strategy to enable integration and convergence among complementary industries transcending several sectors. This would involve constructing an 'integrated cluster' that brings together key stakeholders from several distinct and siloed economic sectors in collective forums to identify and address the market, fiscal and regulatory barriers constraining the agritourism industry, for example. This last point provides a convenient segue to the next recommendation.

## **2. Invest in building industry-led consortia of regional innovation systems for each priority cluster.**

The primary vehicle for leveraging the full potential of economic clusters in the modern knowledge-driven economy is to create industry-led regional innovation consortia. These consortia are also referred to in the innovation literature as innovation systems. The economic clusters discussed above are different from innovation systems (Gertler and Wolfe 2016; Conteh 2025). All that is required for an economic cluster to exist is geographic proximity, co-location, and spatially localized concentrations of interlinked industries and firms. Innovation systems or industry-led consortia, on the other hand, are institutionalized and sustained interactions among stakeholders governed by soft rules and norms, with organizations at their centre committed to facilitating the sharing of information, knowledge, and resources as well as sustaining intense linkages and cooperation among agents and actors.

Industry-led innovation consortia are platforms through which companies of all sizes and stages of development, research institutions, non-profits and public officials come together to solve productivity problems, exploit emerging opportunities and generate new ideas that help build their region's competitive edge (Doloreux and Frigon 2022; Bramwell et al. 2019; Ansell and Gash 2018). They collaborate to strengthen their industry's ecosystems and help position all businesses (new, expanding and established alike) to adapt to market trends (Shearmur et al 2023). They also act as a catalyst for skills and talent development specific to the changing needs of industries within the consortia.

Canada's five Global Innovation Clusters (GICs, formerly Innovation Superclusters) are examples of industry-led innovation consortia.<sup>21</sup> They are mandated to pull

<sup>21</sup> Global Innovation Clusters. <https://ised-isde.canada.ca/site/global-innovation-clusters/en>

together a set of industry actors comprising networks of businesses, universities, research centres, public agencies and other stakeholders (Conteh and Harding 2023; Doloreux and Frigon 2022). Their purpose is to advance research and development and commercialize new ideas and technologies. Each GIC focuses on an economic cluster where Canada has a significant competitive advantage (namely, ocean sciences, artificial intelligence, advanced manufacturing, plant-based proteins and products, and digital technology (Conteh et al. 2023).

The empirical focus of the discussion is an examination of Canada's recent Innovation Superclusters Initiative (ISI), a federal government initiative aimed at building a network of five regionally based national innovation systems (or clusters) across the country. These 'Superclusters' consist of a constellation of cities and regions stretching across provinces and bringing together public agencies, post-secondary institutions, research centres, businesses and a wide range of civic entrepreneurs (Government of Canada 2017).

At the regional level in Ontario, a notable example of an industry-led innovation consortium is the McMaster Innovation Park (MIP).<sup>22</sup> It serves as the bridge between research and industry in commercializing research, facilitating business uptake of new technologies and process innovations, and solving real industry problems. MIP has become an integral part of Hamilton's economic development strategy to build industry-specific innovation ecosystems. Another Ontario example of a regionally-based industry-led innovation consortium is NORCAT in Sudbury. It offers a range of programs, services, and facilities designed for new, expanding and established businesses in mining and other industries where Sudbury has identified emerging opportunities.<sup>23</sup> NORCAT serves as the platform for industry, researchers, economic development officers and other actors to work together in supporting local enterprises, tech innovators, and skilled labour in Northern Ontario. It offers programs, services, and resources that provide its members and clients with the skills and competencies to pursue their business goals and aspirations. It serves as a one-stop shop for all that is the future of mining technology and innovation, working with community partners to help start and accelerate the growth of companies.

From the examples above, Niagara can draw lessons about positioning industry-led innovation consortia as the

institutional scaffolding of the region's smart industrial specialization.<sup>24</sup> A critical point to note when building industry-led innovation consortia is to reject the distinction between investment attraction, retention, and expansion. It also means rejecting narrow silos of business support programs in which innovation hubs focus on start-ups. Industry-led innovation consortia based on smart industrial specialization support businesses across the spectrum, from start-ups to mid-range to anchor firms, within a given industry. They are based on sustained and iterative dialogue among consortium participants to facilitate experimentation with new R&D and innovative activities, technology adoption, and adaptation (Asheim et al 2019).

Operationally, industry-led innovation consortia consist of building intermediary platforms or innovation hubs that are based on partnerships between businesses, public entities and knowledge institutions. This approach invests in the hard and soft infrastructure of technology adoption, production enhancement, and entrepreneurial programs (Gertler, Wolfe and Bradford 2016). Typically, these intermediary platforms are industry-led in the sense that select businesses that fall within the priority sectors are delegated the authority to actively champion their creation in pursuit of industry-specific innovation strategies (Beznitz 2021). These platforms then set priorities for investing in and building productivity and competitive advantage for businesses by developing and matching research and innovation to the needs of businesses in order to address both emerging opportunities and constraints.

The literature on regional innovation systems in pursuit of smart specialization views economic development as more bottom-up than top-down (Asheim et al 2019; Gertler, Wolfe and Bradford 2016). The primary rationale behind this approach is acknowledging that even the most carefully crafted economic development strategies or the smartest EDOs often do not possess 'ex-ante' knowledge about changing technologies, shifting markets, emerging opportunities and the future. These can only be revealed and exploited through an interactive process of multi-actor experimentation. Businesses are the main drivers of discovery, supported by innovation hubs. A functioning industry innovation consortium would thus have a set of mechanisms and concrete infrastructure to house and foster problem-solving, knowledge creation, distribution, and diffusion.

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<sup>22</sup> McMaster Innovation Park. <https://mcmasterinnovationpark.ca/aboutmip>

<sup>23</sup> NORCAT. <https://www.norcat.org>

<sup>24</sup> "Key elements of Smart Specialization Strategies" <https://bit.ly/474lH9e>

Niagara's 10-year strategy accurately lists the region's plethora of institutional assets supporting Niagara's businesses. These include Brock University's Cool Climate Oenology and Viticulture Institute (CCOVI), Brock-Niagara Validation, Prototyping and Manufacturing Institute (VPMI) and Brock LINC, among others. Niagara College also has a wealth of research and innovation assets that include the Walker Advanced Manufacturing Innovation Centre (WAMIC), the Canadian Food and Wine Institute (CFWI), the Agricultural and Environmental Technologies Innovation Centre (AETIC) and the Greenhouse Technology Network (GTN).

Beyond these postsecondary-based centres of research excellence, Vineland Research and Innovation Centre (VRIC) is a world-recognized horticultural science and innovation centre. Similarly, Niagara Parks Botanical Gardens and School of Horticulture is a distinct centre of excellence in its own right. Furthermore, there are technology incubational platforms like Innovate Niagara and the Niagara Falls-Ryerson Innovation Hub (NFRIH) that offer a range of support services in their specialized domains. These institutional assets and their pool of research talents point to a region with the vital foundations of a knowledge-intensive economy.

However, as our interview data confirm, economic stakeholders think these institutional assets still need to be leveraged into an integrated ecosystem that can strategically serve as industry-led consortia for supporting existing and new businesses. Therefore, the next critical step in Niagara is to create such industry-led innovation consortia involving research institutes and postsecondary institutions to serve as a hub for addressing the productivity challenges and to support the expansion of the full spectrum of businesses within that industry, from start-ups to mid-level and anchor firms. Smart specialization through industry-led innovation consortia means the integration of institutional assets into hubs to avoid duplication and fragmentation of efforts within the region. Industry-led innovation consortia are designed to elicit bottom-up responses by ensuring that projects emerging from these platforms are driven by the needs of businesses.

The vast majority of firms across major economic sectors and industries in Niagara are small businesses (Table BC 1).<sup>25</sup> Other studies have noted that in Niagara, small businesses account for 97.8 per cent of all businesses (Niagara

Workforce Planning Board, 2016; Niagara Community Observatory 2019). Such firms often do not have the internal capacity to undertake their own R&D or the resources to de-risk the adoption of existing technologies. Capacity constraints of this nature can take a profoundly heavy toll on the productivity and competitiveness of small businesses and, thus, on their potential to compete, expand, or take advantage of new market opportunities.

As Table BC 1 further indicates, the region does not have the critical mass of businesses that could be considered anchor firms to serve as the engines of heavy investment in R&D that can energize the cluster dynamics of innovation complementarities and spillovers. In terms of its economic prospects, Niagara must thus create the systems capacity among sets of component industries to invest in R&D technology adoption and address productivity bottlenecks for sustained job creation, economic growth and socioeconomic prosperity in the face of shifting global markets and technologies. As we noted earlier in the report, Niagara's economic destiny need not be shackled by the longstanding structural predicaments of economic competitiveness and resilience that constrain mid-sized regions in Canada and elsewhere. Productivity challenges are not insurmountable. Industry-led innovation consortia can serve as platforms for investing more in research and development, addressing cluster-specific productivity challenges, scaling up enterprises, strengthening supply chains, penetrating global trade, and navigating the currents of technological and market changes.

Niagara's 10-year strategy highlights several noteworthy initiatives in support of businesses, such as the Gateway Economic Zone and Centre Community Improvement Plan (Gateway CIP). There is also a relatively new initiative, the 'Niagara Business Attraction' program, offering matching dollars to the seven municipalities that do not currently fall within the Gateway Economic Zone and Centre. All these initiatives are extremely important, but they do not address the pressing productivity challenges and internal capacity constraints of SMEs. They also tend to be focused on investment attraction. Industry-led innovation consortia in pursuit of smart industrialization entail much more. It involves building technology and innovation eco-system hubs focused on each set of component industries within the key sectors to assist businesses with addressing productivity bottlenecks and adopting new technologies.

<sup>25</sup> It is worth reiterating that we define small businesses as having fewer than 50 employees, medium-sized enterprises (SMEs) as employing between 50 and 99 workers, and large businesses as those with 100 employees or more.

The operational activities of the consortium should entail initiating ongoing conversations and need assessments with businesses, developing information network events aimed at addressing general issues pertaining to industry-wide technology trends, and forging one-on-one business support related to technology adoption or adaptation. The industry-led consortia will thus serve as the intermediary platform or hub facilitating innovation and entrepreneurship support for individual businesses.

Through such industry-led consortia, economic development officers from Niagara Economic Development (NED) and the local area municipality (LAM) will facilitate the ongoing inventory of current assets and constraints for existing and new businesses in their respective industries.<sup>26</sup> For instance, it will be the function of the consortia to investigate gaps in the supply chain pertaining to the productivity and competitiveness of their industry and individual businesses and identify measures to address them. The consortia will also commission research to help businesses adopt such technologies.

It is also worth noting that the term “innovation systems” does not presuppose a narrow focus on technology. Such systems can also support industry consortia in dealing with other constraints to business productivity and expansion. For instance, as our interview data and review of the extant literature point out, they could be working closely with EDOs and other regional/local officials to address the implications of the region’s shifting population trends, increasing density, and urbanization as opportunities or constraints for business production. Similarly, some bottleneck issues like balancing residential and industrial lands, addressing employment land constraints, exploring brownfield and greenfield development, and downtown revitalization are best managed within platforms of industry-led consortia and viewed through the lens of business productivity.

### **3. Foster the creation of industrial corridors that leverage scale economies beyond Niagara.**

A close look at the data in the preceding section reveals that some sectors and industries transcend Niagara and are best positioned in terms of industrial districts with immediate neighbours. Marine commerce, life sciences,

and electric vehicles are some of the most outstanding examples. As a further example, it would be misguided to pursue a marine commerce strategy for Niagara without a close partnership with Hamilton, its next-door neighbour with which it shares most of the natural and infrastructural assets within a broader marine corridor.<sup>27</sup> Other opportunities exist for economic clusters such as health and life sciences to form the basis of a Niagara-Hamilton industrial corridor strategy. Similarly, some industries offer opportunities in advanced manufacturing, transportation and logistics, and aerospace, to name a few, to cultivate a Niagara-Buffalo binational industrial corridor that can include Western New York, the Southern Tier, and the Finger Lakes.

The 10-year economic development strategy rightly recognizes that Niagara is at the centre of a binational corridor from Toronto to Buffalo. As our interview data suggest, such industrial corridors are gifts of Niagara’s strategic location as a border region sandwiched between major urban metropolises, presenting unique opportunities for the region to explore more robust partnerships and collaborations with its immediate neighbours. A previous Niagara Community Observatory (NCO) study has examined the data supporting such industrial corridors (Friedman et al 2019). That study explored the value propositions for supporting, strengthening and sustaining cross-border innovation ecosystems drawing from the concept of the “binational advantage.”<sup>28</sup> The study’s findings highlight the benefits of the economic growth, productivity and efficiency that arise from integrated production, provision and distribution of goods and services between regions of geographic proximity. Integration, however, does not mean uniformity. Rather, it means strategically leveraging differences, or complementarities, to generate economies of scale.

The NCO study compared three cross-border regions: the Cascadia Innovation Corridor; the Detroit-Windsor Corridor; and the Buffalo-Niagara-Hamilton-Toronto Corridor. The Cascadia Innovation Corridor (CIC—the most developed of the three corridors) offered useful lessons on establishing a binational industrial corridor and innovation ecosystem through a Memorandum of Understanding among government, business and academic leaders in the Pacific Northwest. The CIC focuses on four innovation sectors: life

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<sup>26</sup> Interviews

<sup>27</sup> Interviews

<sup>28</sup> Cross-Border Institute. 2017. “The Binational Advantage.” <https://www.cbstitute.ca/may-2017-the-binational-advantage>



sciences, transformative technologies, retail innovation and sustainable agriculture. At the heart of the CIC and other vibrant cross-border industrial corridors or innovation ecosystems are public sector actors, entrepreneurs, research institutions, and myriad economic development actors (business organizations, accelerators, incubators, bridge authorities), each playing interdependent roles in a complex web of relationships. The study concludes with an emphasis on “the importance of strong connections among the various actors with a stake in the innovation ecosystem” (Friedman et al. 2019. p.6). Niagara and its immediate neighbours on both sides of the border have a constellation of such actors. What is still missing is a focused strategy for building platforms that can investigate specific opportunities of scale economies and facilitate closer collaboration among the neighbours.

#### ***4. Tap into the federal and provincial governments’ program resources for industry-wide investments.***

No region, large or small, has the local resources to realize the goals of its economic development strategy (Bradford and Wolfe 2013; Galvin 2019). The recommendations above to pursue a smart industrial specialization strategy

and create industry-led innovation consortia will be pipedreams without mobilizing funds from upper levels of government. Even the current goals of the Region’s 10-year strategy will be fantasies or wishful thinking, hanging on the hope that private investments will help Niagara realize those dreams without the support of upper-tier jurisdictions. A plethora of programs across federal and provincial ministries, departments and agencies (MDAs) could unleash resources that support and actualize key planks of Niagara’s economic development strategy (Bakvis et al 2019). The recommendation to tap into federal and provincial resources relates to what Neil Bradford (2021) describes as “place-based federalism.” This concept emphasizes mobilizing the financial resources of federal and provincial governments through tri-level urban development agreements to harness the strategic position of cities and regions as the jurisdictions closest to Canadians and thus best positioned to address community problems. A similar idea has been advanced through what is referred to as “multilevel governance” (Conteh 2020). This is a framework for thinking about resource alignment across orders of government that give central importance to cities and regions as frontlines for exploiting emerging opportunities and tackling the most pressing problems facing Canada.

The above recommendation and the concepts from which it emerges mean that the notion of investment attraction, as is often understood by economic development offices in Niagara and other regions in Canada, requires a broader conceptualization in two respects (Conteh 2025; Bradford and Wolfe 2013). First, it is more than about attracting private sector investment. It is also about mobilizing upper-level (in Canada: federal and provincial) government resources to build the necessary organizational, physical and technological support systems for industry-led innovation consortia proposed above. Second, when such upper-level government resources are pursued, it is crucial to expand the mindset from seeking such grants for individual businesses (important as they are) to mobilizing those resources to invest in industry-led innovation consortia support in order to de-risk technology adoption and enhance business productivity and competitiveness for all firms within priority industries.

As we noted earlier, an example of tapping into the federal and provincial governments' program resources for industry-wide investments is the \$300,000 federal government investment Niagara received to support the growth of the electric vehicle (EV) industry in the region.<sup>29</sup> Niagara Region is using the investment to develop an EV strategy that focuses on building partnerships, developing the infrastructure needed, connecting industry leaders and post-secondary institutions, and enabling an effective representation of the region at industry events.

It is worth noting that the Federal Economic Development Agency for Southern Ontario (FedDev Ontario), through which the EV strategy grant was mobilized, has invested over \$110 million in more than 140 projects in Niagara over the past 10 years. However, this recent investment in Niagara's EV strategy is more consistent with the logic of cultivating regional innovation systems through industry-led innovation consortia.<sup>30</sup> The investment is not directed to any one business but to supporting complementary businesses and building critical supply chains across the industry as they adopt more sustainable processes and technologies and increase their production capabilities.

This FedDev investment is only a small example of the vast potential for such resources that can be secured from an agency that provides contributions up to \$10 million per

project to support regions and communities in creating a thriving innovation and entrepreneurship environment, supporting new entrepreneurs through mentorship and training, and transforming and diversifying their local economies. Several federal ministries, such as Agriculture and Agri Food Canada (AAFC), have programs through which they can partner with industries and municipalities to pursue strategic goals related to enhancing innovation and entrepreneurship, skills training and mentorship, and diversifying their local economies.

At the provincial level, the Ontario government is currently investing \$140 million through its Regional Development Program (RDP) to support distinct regional priorities and challenges. Municipalities like Niagara can apply for investment in economic development projects such as industry-led consortia, providing technical support and advisory services to businesses.<sup>31</sup> In 2022, the Ontario government also launched the Advanced Manufacturing and Innovation Competitiveness stream of the RDP. Similarly, the province has invested millions of dollars in the renewed Ontario Together Fund to support local innovators and businesses to enhance Ontario's domestic supply chain capacity, promote Ontario's medical technology ecosystem, and build up the province's manufacturing sector.

Pursuing a smart industrial specialization strategy in Niagara will mean aggressively tapping into the federal and provincial governments' program resources by forging more strategic alliances with the relevant ministries, departments, and agencies, scanning their respective programs, and leveraging resources to build the scaffolding of innovation systems architecture that supports business productivity and expansion in select industries. It also means rejecting piecemeal adventures by empowering and positioning NED as the sole legitimate conduit for mobilizing such funds from upper-tier governments and that every request be tied directly to the Region's smart industrial specialization strategy. This approach still leaves considerable room for local economic development officers.

Each industry-led consortium will serve as an advisory group to help explore new investment opportunities and constraints. NED and local economic development officers could collectively scan the relevant federal and provincial programs aligned with the opportunities and challenges

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<sup>29</sup> Government of Canada. 2023. "Government of Canada supports electric vehicle (EV) sector in Niagara Region." <https://bit.ly/473VEz8>

<sup>30</sup> Federal Economic Development Agency for Southern Ontario. "Funding for southern Ontario." <https://bit.ly/3AJjAf7>

<sup>31</sup> Government of Ontario. Regional Development Program. <https://www.ontario.ca/page/regional-development-program>

to facilitate Niagara-made solutions.<sup>32</sup> NED can support the work of the industry-led consortia by providing an evidence-based analysis of industry and occupation trends in Niagara and across the province and Canada. The innovation consortia will identify areas of opportunity and constraints, and their report will inform the work of NED and its LAM partners in pursuing and mobilizing industry-specific sources of funding from the federal and provincial governments. Specific industry-wide grants can then be requested from federal and provincial MDAs to derisk the adoption of such technologies.

**5. Leverage key industries in “all-purpose” sectors like information communication technology (ICT), transportation and logistics (T&L), and aerospace as vital scaffolding for the rest of the economy.**

Unlike traditional economic sectors, the extant literature refers to certain industries in ICT, T&L,<sup>33</sup> and aerospace as “all-purpose platforms” because they provide enabling physical assets and digital platforms that support the global competitiveness of a region’s economy (Conteh 2025). One significant way for regions to think about these sectors is not as stand-alone sectors distinct from say, manufacturing, agribusiness or tourism. Rather, they are foundational to the resilience and adaptive capacity of all sectors of the economy and the very well-being of society. Their full value is not captured in traditional metrics like GDP contribution, exports and the like. Instead, they serve as vital physical and digital arteries through which a region can further consolidate its connections to global technologies and markets.

For instance, in the case of T&L, thanks in large part to the natural endowments of its geographic position, Niagara boasts a world-class multimodal network of highway, rail, water and air transport infrastructure, making it an invaluable node for quick and easy access to global markets. Companies involved in the transport of goods across the border between Canada and the U.S. Northeast can reach destinations in two provinces, nine states and half of the North American population within a one-day trip. In addition to its intermodal terminals, the region has built an asset of border-related support services and border-related logistics activities.

This cursory overview of Niagara’s T&L sector paints the picture of a region well endowed with natural and built assets to maintain its niche in a rapidly changing global economic landscape. However, as the North American and global economy undergoes earthshaking transformations across several fronts—including technological, financial, demographic, and regulatory changes—the fundamental question that Niagara must address is whether it is fully leveraging its assets to not only weather the storms of change but also exploit new and emerging opportunities.

Coincidentally, over the past decade, the ICT, T&L, and aerospace sectors in Niagara have registered impressive sector-wide growth. For example, between 2013 and 2023, Niagara’s ICT sector job growth rate of 83 per cent led both Ontario and Canada, each of which had growth of 59 per cent (Table IT 1). Over the same 10-year period, Niagara’s T&L sector registered a growth rate of 22 per cent, which is better than Canada’s 18 per cent (Table TL 1). In the aerospace sector, Niagara’s 53-per-cent increase over the past decade is the highest overall percentage growth compared to Ontario’s modest increase of three per cent and a general decline of three per cent for all of Canada (Table AS 1).

In the preceding section, we disaggregated these positive sector-wide trends into their component industries to highlight specific areas of industrial and occupational growth and competencies. We saw that in addition to the impressive growth of these three sectors, sets of industries within them point to specific areas of potential for further expansion.<sup>34</sup> Strategies for building the T&L and aerospace industries could readily tap into Niagara’s locational advantages at the centre of vast industrial hubs and major urban metropolises spanning two industrialized countries. Leveraging their full potential will mean mobilizing federal and provincial resources to invest in critical assets within select industries in these three sectors. The success of these grant requests will hinge on the narrative the region frames about the vital role of select industries within these sectors as enabling assets to consolidate Niagara’s “gateway” advantages and its transition into a knowledge economy.

**6. Address the perennial mismatch between jobs and labour that plagues most industries and businesses.**

<sup>32</sup> Interviews

<sup>33</sup> It is important to note that industries listed under Marine Commerce also fall within T&L. Thus, the former can be viewed as an all-purpose sector. However, it has already been listed in the 10-year strategy as one of the “emerging sectors” and therefore analyzed in this report accordingly.

<sup>34</sup> Interviews

One of the prevalent themes in our interviews with economic stakeholders is the mismatch between job vacancies and the labour market in Niagara. Examining industry trends through the “occupation” lens adopted in the preceding section of this report is important because it sheds light on the human and talent dimensions of the sectors and their component industries. Such data provide useful insights into the breakdown of skillsets or expertise in high demand in each industry, identifying emerging job skills as well as the decline of traditional occupations. They supply a framework to understand the composition, skill requirements, labour market trends, and other characteristics of economic sectors. This information, in turn, allows them to make inferences about the region’s existing talent pool and gaps, thus allowing for effective policy responses.

People are at the heart of any economic cluster’s vitality and the productivity of its individual businesses. Niagara could benefit from a talent development and retention strategy that deploys insights from occupation trends data to pursue focused skills training and retention through partnerships between the industry-led consortia and the region’s postsecondary institutions. Such a skills-training strategy can be tailored to the specific strengths, constraints, opportunities and challenges of businesses in each economic cluster.<sup>35</sup>

## **7. *Reconfigure the mandate and governance architecture of economic development from a concierge-style to an orchestrator-style approach.***

Our final two recommendations fall under the broad theme of governance. These recommendations are premised on the fact that technological change, shifting global markets and the configuration of the requisite assets of a knowledge-intensive economy dictate a fundamentally different approach than conventional practice.

Coincidentally, another prevalent theme in our interviews with Niagara economic stakeholders was the desire to see a more “proactive” approach to economic development. Beneath this cliché term is a felt need for economic development governance in Niagara expanding from a concierge-style to an orchestrator-style approach to facilitating change in the region. Our review of the extant literature on global best practices in several industries

reveals a distinction between what can be termed the “concierge” approach and what we will refer to as the orchestrator approach to economic development (Asheim et al 2019; Wolfe, Gertler and Bradford, 2016; Breznitz, 2021). The former connotes passive housekeeping while the latter points to a strategic mobilization of actors and resources within priority industries. The concierge style concentrates on new enterprises and is not selective or strategic in its efforts whereas the orchestrator style focuses on strategically building innovation support systems centred on enhancing the productivity of local business and the economic competitiveness of the region.

The concierge approach means that the predominant focus of economic development is to be a doorkeeper and administrative caretaker for businesses. This often involves marketing the region to potential investors, addressing investment inquiries, helping potential investors source useful information, offering administrative support with development approvals and other process issues, providing information on tools, resources and financial incentives available to assist businesses, assisting with completing financial incentive program applications and supporting businesses with site expansion and zoning changes. All the above-listed functions are important but not enough to meet the imperatives of the modern economy.

The imperatives of the modern economy, with its seismic shifts in technology and markets, require economic development mandates and mindsets in which EDOs are orchestrators. As we noted in the fourth recommendation above, orchestrators mobilize public-investment resources from upper-tier governments to build industry innovation consortia to support existing businesses rather than wait for new private investors to come knocking (Bradford 2021; Conteh 2020). They facilitate and weave together platforms consisting of select actors from industry, financial institutions and postsecondary institutions to strategize on emerging opportunities. They actively facilitate and mobilize resources to address the productivity needs of existing businesses within select industries, building from the ground up through business expansion. They coordinate key resources, organize core actors, design platforms, devise strategies for building industry consortia, choreograph, plot, and designate. They work closely within these industry innovation consortia to develop mechanisms to address pain points of productivity. The orchestrator mindset is thus a prerequisite to actualizing all the other recommendations above.

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<sup>35</sup> For more details on the recommendation for talent retention, see the Niagara Community Observatory’s “Brain Drain” report, a distinct project within the wider Wilson Foundation-funded project.





However, the orchestrator mindset needs to be supported by an institutional milieu that requires rethinking the governance of economic development in two-tier regions like Niagara. Our final recommendation addresses this broader milieu of economic development governance.

**8. *Transition away from conflating the region’s economy with the administrative boundaries of local municipalities.***

The words of one interviewee capture a sentiment shared by many others: “Niagara is a disaggregated economy, disaggregated municipality, and disaggregated culture.”<sup>36</sup> One concrete measure to address this perception or

reality of disaggregation is to mitigate any administrative disjointedness borne out of a false dichotomy between business attraction on the one hand and retention and expansion on the other. For instance, the 10-year economic development strategy notes that the role of NED will be constrained by its current mandate, as defined in the Memorandum of Understanding (MOU). The current division of labour in which the Region focuses on business attraction and the LAMs deal with business retention is well-intentioned but misguided and reflects a poor understanding of the complex imperatives of facilitating knowledge-driven economic development in the context of fast-changing markets and technologies (Asheim et al., 2019; Wolfe and Gertler, 2016; Breznitz, 2021; Conteh, 2025).

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<sup>36</sup> Interviews

Some of our interviews noted that despite the MOU, economic development in Niagara has been done in collaboration and partnership with members of Team Niagara (a collective of regional and local EDOs). However, such a collaborative approach rests on the serendipity of having the right personalities of EDOs with the right chemistry at any given time. It has no institutional support system to ensure integrated governance. More importantly, the very existence of the MOU with a division of labour between NED and the LAM EDOs, in which the former is restricted to marketing and investment attraction while the latter is responsible for business retention and expansion, feeds into interviewees' general perception of a fragmented governance architecture. Furthermore, it also raises troubling questions about the assumptions that led to such a division of responsibilities.

The logic of such a division of functions has its appeal in navigating the political complexities and sensitivities of two-tier regions but has no place in the knowledge economy of the 21st century. It reflects the sophistry of imagining Niagara as consisting of 12 distinct economies separated by its political boundaries. Taken to its logical conclusion, the result can be worsening economic fragmentation degenerating into a vortex of inter-municipal duplication, disaggregation, and competition.

The demarcation between the two functions seems artificial and unrealistic and does not keep with the imperatives of the modern economy or any of the recommendations about smart industrial specialization and the orchestrator-style approach offered above (Bourgeois 2016; Bradford and Bramwell 2018). Despite Team Niagara's much-improved efforts at collaboration in recent years, perceptions of coordination challenges, duplication of function and inter-municipal competition still linger among many of our interviewees. Some of these tensions are a function of the region's economic geography, rural-urban divide, and the fact that its municipalities have different sectoral assets that require different foci. However, having different assets and endowments does not make them different economies. Economic development should be about identifying opportunities based on the available data on region-wide industry and market trends and deploying the region's assets and resources to exploit those opportunities.

It is worth emphasizing that this recommendation does not call for closing down economic development offices in the local municipalities, nor does it suggest that local economic development strategies are redundant. EDOs in the local municipalities excel at understanding their

respective area's peculiar assets and constraints, thus leveraging the region's economic diversity as strength and resilience. However, it means transcending the two-tier region's current framework of division of labour between the Region and local municipalities' economic development offices. It means empowering NED to serve as the principal orchestrator of change and the primary (if not sole) conduit for mobilizing federal and provincial resources to invest in industry-led innovation consortia supporting the full spectrum of business attraction, retention and expansion in all of Niagara.

## **CONCLUSION: GLOBAL OPPORTUNITIES AND REGIONAL RESPONSES—ORCHESTRATING CHANGE**

This report aimed to analyze Niagara's current and emerging economic trends, focusing on industrial strengths and constraints against the backdrop of shifting provincial, national and global trends, opportunities and challenges. The goal was to generate policy recommendations for navigating the next decade in a changing world. Since the project coincided with the release of the Region's 10-year economic development strategy, the report's objectives were closely aligned with critically engaging the content of the strategy and validating its aspirations to "foster resilient diversity in our economy" (Niagara Economic Development Strategy 2022, p.35).

The report was structured into several sections. After a brief introduction, we provided an overview of the research method that guided the investigation from which the report emerged. Second, we undertook a statistical analysis of key industry and occupational trends over the past decade, building on the work done in the earlier phase of this project that provided 50-year and 20-year breakdowns of key trajectories in select economic sectors in Niagara. Third, we generated recommendations by combining findings from our statistical analysis of industry trends with data from content analysis of the Region's 10-year economic development strategy, semi-structured interviews held with regional and local economic stakeholders and a review of the global literature on regional economic development best practices.

The recommendations were grouped under two broad themes. The first set of recommendations focused on spelling out key components of what we refer to as a "smart industrial specialization approach" to pursuing the next wave of economic development over the next 10 years and beyond. The second set of recommendations addressed the mandate and

governance architecture of economic development in Niagara. They are centred on our argument for a shift from the current concierge-style approach to what we term an “orchestrator-style approach” to change management in economic development.

This report was part of a larger project investigating Niagara’s economic history over the past 200 years. We uncovered a region with a textured and contoured economic history to which most of today’s local industry can trace its roots—blessed with natural endowments of favourable geography and dynamic people. Based on its natural and human assets alone, the region has every reason to be optimistic (without being complacent) about its ability to foster a resilient and diverse economy as it navigates the global whirlpools and domestic rapids of the next decade and beyond.

In reflecting more broadly on the past 200 years, Niagara has witnessed profound growth and change as the region, like the rest of Canada, aspired to carve its unique place in the world under the long overarching shadow of its giant neighbour to the south. It has successfully adapted to ever-shifting contours of local, provincial, national, continental and global currents of technological, market, and cultural transformations over the years. Niagara is the quintessential microcosm of the economic resilience, adaptability, growth and development of midsized regions across the country.

In Canada, we know a lot about larger metropolises, such as Toronto, Vancouver, and Montreal, and innovation hotbeds, such as Kitchener-Waterloo and Ottawa, but too little about midsized regions. This problem is not unique to Canada. Globally, our understanding of economic growth and development in midsized regions is inadequate, especially given that such regions have emerged as dynamic centres with significant potential for economic reinvention (Economist Intelligence Unit, 2016).

The main theme of this project is that regions large and small are on the frontlines of technological and socioeconomic change in Canada. Economic development is fundamentally a local affair. The currents of change are generated globally but must be navigated locally by actors in cities and regions (Wolfe and Lucas 2005; Conteh 2025). This process is specific to the economic, political, institutional and cultural configuration of each region, which explains why some regions reinvent themselves and thrive in the face of crisis and change while other regions under the same conditions (even within the same country) stagnate or collapse.

A central theme in our recommendations is about exploring mechanisms to deepen the institutional infrastructure of economic resilience and adaptability through the creation of industry-led innovation consortia right across the full spectrum of the value chains in the relevant industries that make up each cluster. One key characteristic of Niagara’s economy is the plethora of small- to medium-sized enterprises (SMEs). This need not be seen as a weakness. The most adaptive industrial ecosystems are known for the prevalence of SMEs. The key question is whether actors within the relevant economic clusters share a common understanding of industry and occupation trends that point to emerging opportunities and challenges. A shared cognitive frame positions a constellation of actors to jointly exploit these emerging opportunities, mitigate threats and address productivity bottlenecks.

In recent years, major phenomena like the 2008 financial crisis, the COVID-19 pandemic, the perturbations of climate change, geopolitical instability, shifting global markets, and technological phenomena like the emergence of AI all present challenges and opportunities for regions worldwide. Some will be overwhelmed and sink. Others will have the vision and mission to navigate the choppy waters and transform their economies and societies for the better (Mazzucato 2018).

This report has made recommendations for how Niagara can orchestrate change in partnership with public, private and nonprofit stakeholders as it navigates these global rapids. Central to this process is a vision of the role of economic development as bringing together community actors and resources, industry champions, and postsecondary researchers. It is also about transcending a two-tier region’s administrative boundaries and political fragmentation in mobilizing investment resources to exploit new opportunities and address constraints.

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## Agribusiness

**Table AG1:** Change in agribusiness jobs,<sup>37</sup> 2013–2023; Niagara, Ontario, and Canada Compared. Industry Change Summary

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	7,736	9,433	1,697	22%
Ontario	208,825	214,863	6,037	3%
Canada	638,834	640,805	1,971	0%

**Table AG 2:** Percentage change in agribusiness jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Cannabis product manufacturing	Insf. Data	Insf. Data	Insf. Data
Seafood product preparation and packaging	Insf. Data	18%	(2%)
Animal food manufacturing	484%	7%	13%
Farm product merchant wholesalers	72%	34%	19%
Meat product manufacturing	46%	22%	12%
Beverage manufacturing	45%	51%	66%
Other food manufacturing	36%	8%	35%
Dairy product manufacturing	21%	31%	21%
Farms	17%	(17%)	(16%)

**Table AG 3:** Change in agribusiness jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	7,736	9,433	1,697	22%
Hamilton	10,309	12,563	2,254	22%
London	9,150	11,606	2,456	27%
Windsor	8,773	10,064	1,291	15%

**Table AG 4:** Niagara's top agribusiness occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Nursery and greenhouse labourers	1,042	7,868	17,802
Managers in agriculture	1,002	25,602	109,243
Process control and machine operators, food and beverage processing	770	19,452	45,954
Harvesting labourers	550	8,346	33,671
Livestock labourers	534	9,683	34,264

<sup>37</sup> It is important to reiterate that for this study, we used the geographical area of the St. Catharines-Niagara CMA, which does not include Grimsby and West Lincoln. This was necessary to be able to compare Niagara to other CMAs (the geographic unit of economic analysis) in Ontario.

**Table AG 5:** Niagara’s top agribusiness occupations by Percentage change, 2013–2023

Description	St. Catharines—Niagara	Ontario	Canada
Livestock labourers	54%	17%	13%
Harvesting labourers	42%	(3%)	8%
Process control and machine operators, food and beverage processing	19%	10%	14%
Managers in agriculture	13%	(36%)	(32%)
Nursery and greenhouse labourers	12%	19%	14%

**Table AG 6:** Niagara’s national location quotient for agribusiness jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Farm product merchant wholesalers	4.55	0.90
Grain and oilseed milling	4.50	0.83
Beverage manufacturing	3.42	1.06
Cannabis product manufacturing	3.13	1.42
Farms	1.72	0.70

## Manufacturing

**Table MN 1:** Change in manufacturing jobs, 2013–2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
Niagara	13,951	16,545	2,594	19%
Ontario	652,759	687,061	34,302	5%
Canada	1,504,628	1,577,915	73,287	5%

**Table MN 2:** Percentage change in agribusiness jobs by industry, 2013- 2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Cannabis product manufacturing	Insf. Data	Insf. Data	Insf. Data
Animal food manufacturing	484%	7%	13%
Industrial machinery manufacturing	290%	41%	52%
Household and institutional furniture and kitchen cabinet manufacturing	225%	21%	16%
Paint, coating and adhesive manufacturing	198%	5%	(1%)
Engine, turbine and power transmission equipment manufacturing	197%	(54%)	(42%)
Electric lighting equipment manufacturing	193%	(29%)	11%
Converted paper product manufacturing	174%	1%	(13%)
Ventilation, heating, air-conditioning and commercial refrigeration equipment manufacturing	132%	41%	48%
Railroad rolling stock manufacturing	128%	6%	10%
Commercial and service industry machinery manufacturing	120%	(4%)	8%
Forging and stamping	119%	(48%)	(41%)
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	107%	(26%)	(14%)

**Table MN 2:** Continued...

Description	St. Catharines—Niagara	Ontario	Canada
Medical equipment and supplies manufacturing	107%	22%	21%
Veneer, plywood and engineered wood product manufacturing	93%	95%	20%
Other fabricated metal product manufacturing	85%	21%	20%
Basic chemical manufacturing	84%	(9%)	7%
Iron and steel mills and ferro-alloy manufacturing	78%	11%	12%
Pharmaceutical and medicine manufacturing	63%	9%	28%
Other wood product manufacturing	62%	(4%)	(13%)
Other textile product mills	62%	(26%)	(7%)
Motor vehicle body and trailer manufacturing	61%	(7%)	29%
Aerospace product and parts manufacturing	58%	(2%)	(0%)
Foundries	54%	(21%)	(3%)
Steel product manufacturing from purchased steel	49%	37%	(7%)
Meat product manufacturing	46%	22%	12%
Coating, engraving, cold and heat treating and allied activities	46%	(5%)	5%
Beverage manufacturing	45%	51%	66%
Spring and wire product manufacturing	44%	23%	9%
Plastic product manufacturing	43%	14%	16%
Soap, cleaning compound and toilet preparation manufacturing	37%	25%	10%
Other food manufacturing	36%	8%	35%
Other general-purpose machinery manufacturing	30%	10%	3%
Architectural and structural metals manufacturing	23%	10%	10%
Dairy product manufacturing	21%	31%	21%
Non-ferrous metal (except aluminum) production and processing	12%	(5%)	(24%)
Pesticide, fertilizer and other agricultural chemical manufacturing	9%	87%	12%
Boiler, tank and shipping container manufacturing	1%	(19%)	(17%)

**Table MN 3:** Change in manufacturing jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
Niagara	13,951	16,545	2,594	19%
Hamilton	36,793	41,576	4,784	13%
London	26,668	31,447	4,779	18%
Windsor	33,301	35,341	2,040	6%
Greater Sudbury / Grand Sudbury	4,556	5,186	629	14%

**Table MN 4:** Niagara's top manufacturing occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Motor vehicle assemblers, inspectors and testers	782	23,778	25,702
Process control and machine operators, food and beverage processing	782	21,889	50,663
Manufacturing managers	780	36,433	86,293
Construction millwrights and industrial mechanics	651	22,440	48,566
Machinists and machining and tooling inspectors	406	13,812	34,282

**Table MN 5:** Niagara's top manufacturing occupations by Percentage change, 2013–2023

Description	St. Catharines—Niagara	Ontario	Canada
Process control and machine operators, food and beverage processing	27%	25%	28%
Construction millwrights and industrial mechanics	25%	9%	12%
Manufacturing managers	9%	27%	25%
Machinists and machining and tooling inspectors	(8%)	8%	(2%)
Motor vehicle assemblers, inspectors and testers	(9%)	(5%)	(1%)

**Table MN 6:** Niagara's national location quotient for manufacturing jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Forging and stamping	6.55	1.18
Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing	5.94	1.43
Steel product manufacturing from purchased steel	4.69	1.81
Grain and oilseed milling	4.50	0.83
Clay product and refractory manufacturing	4.00	1.42
Engine, turbine and power transmission equipment manufacturing	3.43	0.79
Beverage manufacturing	3.42	1.06
Cannabis product manufacturing	3.13	1.42
Motor vehicle manufacturing	2.96	2.21
Railroad rolling stock manufacturing	2.94	1.87
Boiler, tank and shipping container manufacturing	2.72	0.98
Iron and steel mills and ferro-alloy manufacturing	2.65	2.06
Other general-purpose machinery manufacturing	2.21	1.31
Non-ferrous metal (except aluminum) production and processing	2.19	1.10
Coating, engraving, cold and heat treating and allied activities	2.19	1.22
Electric lighting equipment manufacturing	2.19	0.65
Foundries	2.10	0.96
Machine shops, turned product, and screw, nut and bolt manufacturing	1.87	1.11
Other non-metallic mineral product manufacturing	1.78	1.06
Basic chemical manufacturing	1.70	0.97
Household and institutional furniture and kitchen cabinet manufacturing	1.68	0.84



**Table MN 6:** Continued...

Description	St. Catharines—Niagara	Ontario
Paint, coating and adhesive manufacturing	1.38	1.35
Spring and wire product manufacturing	1.35	1.24
Other fabricated metal product manufacturing	1.29	1.22
Other wood product manufacturing	1.23	0.66
Architectural and structural metals manufacturing	1.09	0.93
Other miscellaneous manufacturing	1.04	1.08

## Tourism

**Table TR 1:** Change in tourism jobs, 2013–2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	31,362	27,087	(4,276)	(14%)
Ontario	636,602	714,292	77,690	12%
Canada	1,771,022	1,906,799	135,777	8%

**Table TR 2:** Percentage change in tourism jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Scheduled air transportation	Insf. Data	(8%)	(15%)
Scenic and sightseeing transportation, water	305%	89%	(7%)
Recreational vehicle (RV) parks and recreational camps	187%	20%	7%
Promoters (presenters) of performing arts, sports and similar events	124%	11%	22%
Agents and managers for artists, athletes, entertainers and other public figures	Insf. Data	14%	7%
Independent artists, writers and performers	59%	(4%)	4%
Amusement parks and arcades	45%	44%	32%
Special food services	19%	(11%)	(7%)
Performing arts companies	18%	(11%)	(19%)
Charter bus industry	16%	(12%)	(21%)
Full-service restaurants and limited-service eating places	13%	21%	16%
Taxi and limousine service	12%	3%	7%

**Table TR 3:** Change in tourism jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	31,362	27,087	(4,276)	(14%)
Hamilton	30,748	39,685	8,937	29%
London	23,905	28,498	4,594	19%
Windsor	18,684	21,101	2,417	13%
Greater Sudbury / Grand Sudbury	7,067	7,590	524	7%

**Table TR 4:** Niagara’s top tourism occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Food counter attendants, kitchen helpers and related support occupations	4,772	136,380	328,664
Food and beverage servers	2,496	63,788	188,602
Cooks	2,116	54,967	174,914
Restaurant and food service managers	1,573	42,686	99,063
Cashiers	1,356	36,880	95,089

**Table TR 5:** Niagara’s top tourism occupations by Percentage change, 2013–2023

Description	St. Catharines—Niagara	Ontario	Canada
Food counter attendants, kitchen helpers and related support occupations	8%	24%	17%
Restaurant and food service managers	(2%)	(3%)	(13%)
Cooks	(4%)	8%	8%
Food and beverage servers	(12%)	(6%)	(9%)
Cashiers	(25%)	(0%)	5%

**Table TR 6:** Niagara’s national location quotient for tourism jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Scenic and sightseeing transportation, water	26.29	1.51
Scenic and sightseeing transportation, land	6.53	0.41
Amusement parks and arcades	3.22	1.32
Performing arts companies	2.61	1.19
Charter bus industry	2.21	1.09
Traveller accommodation	2.16	0.77
Recreational vehicle (RV) parks and recreational camps	2.05	0.89
Gambling industries	1.87	0.67
Spectator sports	1.74	1.04
Heritage institutions	1.59	0.75
Full-service restaurants and limited-service eating places	1.46	0.99
Promoters (presenters) of performing arts, sports and similar events	1.37	0.83
Independent artists, writers and performers	1.08	0.95
Non-scheduled air transportation	1.07	0.69
Special food services	1.06	1.04
Taxi and limousine service	1.01	1.09
Other amusement and recreation industries	1.00	1.05

## Electric Vehicle

**Table EV 1:** Change in electric vehicle-related jobs, 2013–2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	2,226	2,081	(145)	(6%)
Ontario	126,258	128,756	2,498	2%
Canada	189,858	196,661	6,803	4%

**Table EV 2:** Percentage change in electric vehicle-related jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Engine, turbine and power transmission equipment manufacturing	197%	(54%)	(42%)
Motor vehicle body and trailer manufacturing	61%	(7%)	29%
Motor vehicle merchant wholesalers	18%	14%	12%
Motor vehicle parts manufacturing	(7%)	11%	12%
Motor vehicle manufacturing	(10%)	(4%)	(3%)
New motor vehicle parts and accessories merchant wholesalers	(43%)	(11%)	(8%)

**Table EV 3:** Change in electric vehicle-related jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	2,226	2,081	(145)	(6%)
Hamilton	3,910	4,679	769	20%
Windsor	12,561	9,225	(3,336)	(27%)
London	5,984	6,787	804	13%
Oshawa	5,298	1,754	(3,544)	(67%)

**Table EV 4:** Niagara’s top electric vehicle-related occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Motor vehicle assemblers, inspectors and testers	625	21,126	22,488
Supervisors, motor vehicle assembling	457	8,913	10,318
Material handlers	51	4,815	8,115
Mechanical assemblers and inspectors	51	2,732	5,553
Sales and account representatives—wholesale trade (non-technical)	28	2,796	6,320

**Table EV 5:** Niagara’s top electric vehicle-related occupations by Percentage change, 2013–2023

Description	St. Catharines—Niagara	Ontario	Canada
Supervisors, motor vehicle assembling	20%	43%	42%
Mechanical assemblers and inspectors	3%	2%	0%
Material handlers	0%	(5%)	2%
Motor vehicle assemblers, inspectors and testers	(22%)	(10%)	(8%)
Sales and account representatives—wholesale trade (non-technical)	(49%)	(16%)	(25%)

**Table EV 6:** Niagara’s national location quotient for electric vehicle-related jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Engine, turbine and power transmission equipment manufacturing	3.43	0.79
Motor vehicle manufacturing	2.96	2.21
Motor vehicle parts manufacturing	0.74	2.29
Motor vehicle merchant wholesalers	0.41	1.09
New motor vehicle parts and accessories merchant wholesalers	0.40	1.00
Motor vehicle body and trailer manufacturing	0.10	0.56

## Marine Commerce

**Table MR 1:** Change in marine commerce jobs, 2013–2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	1,455	2,041	586	40%
Ontario	21,643	28,059	6,415	30%
Canada	108,728	122,196	13,468	12%

**Table MR 2:** Percentage change in marine commerce jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Seafood product preparation and packaging	Insf. Data	18%	(2%)
Scenic and sightseeing transportation, water	305%	89%	(7%)
Deep sea, coastal and Great Lakes water transportation	152%	91%	(8%)
Freight transportation arrangement	2%	27%	22%
Fishing	0%	116%	2%
Support activities for water transportation	(3%)	17%	36%
Ship and boat building	(69%)	(19%)	38%
Inland water transportation	Insf. Data	351%	68%
Total	40%	30%	12%

**Table MR 3:** Change in marine commerce jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	1,455	2,041	586	40%
Windsor	1,003	1,255	252	25%
Hamilton	704	1,278	574	82%

**Table MR 4:** Niagara’s top marine commerce occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Sales and account representatives—wholesale trade (non-technical)	170	3,243	6,830
Customs, ship and other brokers	104	2,688	4,723
Managers in transportation	101	1,427	3,450
Material handlers	66	1,495	4,137
Transport truck drivers	47	1,123	2,834

**Table MR 5:** Niagara’s top marine commerce occupations by Percentage change, 2013—2023

Description	St. Catharines—Niagara	Ontario	Canada
Sales and account representatives—wholesale trade (non-technical)	49%	54%	27%
Managers in transportation	42%	59%	44%
Material handlers	28%	28%	19%
Customs, ship and other brokers	(16%)	36%	30%
Transport truck drivers	(35%)	(7%)	(16%)

**Table MR 6:** Niagara’s national location quotient for marine commerce jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Scenic and sightseeing transportation, water	26.29	1.51
Deep sea, coastal and Great Lakes water transportation	5.63	0.35
Freight transportation arrangement	1.82	1.27
Support activities for water transportation	0.94	0.23
Ship and boat building	0.52	0.23
Seafood product preparation and packaging	0.08	0.08
Inland water transportation	0	0.28
Fishing	0	0.09

## Sports Tourism/Active Economy

**Table ST 1:** Change in Sports tourism/active economy jobs, 2013–2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	14,952	11,861	(3,091)	(21%)
Ontario	297,151	347,994	50,844	17%
Canada	824,504	923,674	99,170	12%

**Table ST 2:** Percentage change in Sports tourism/active economy jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Recreational vehicle (RV) parks and recreational camps	187%	20%	7%
Promoters (presenters) of performing arts, sports and similar events	124%	11%	22%
Agents and managers for artists, athletes, entertainers and other public figures	Insf. Data	14%	7%
Personal goods merchant wholesalers	73%	(16%)	(12%)
Other schools and instruction	15%	42%	35%
Health and personal care stores	4%	21%	19%
Hunting and trapping	0%	(68%)	(48%)
Other amusement and recreation industries	(10%)	43%	27%
Sporting goods, hobby and musical instrument stores	(10%)	(12%)	0%
Spectator sports	(13%)	(17%)	(11%)
Other miscellaneous manufacturing	(22%)	5%	(2%)
Traveller accommodation	(50%)	(5%)	(8%)

**Table ST 3:** Change in Sports tourism/active economy jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	14,952	11,861	(3,091)	(21%)
Hamilton	14,479	17,921	3,442	24%
Windsor	7,058	8,707	1,648	23%
London	10,767	12,993	2,226	21%
Greater Sudbury / Grand Sudbury	3,311	3,670	359	11%

**Table ST 4:** Niagara's top Sports tourism/active economy occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Program leaders and instructors in recreation, sport and fitness	900	35,089	82,047
Accommodation service managers	742	8,893	26,427
Hotel front desk clerks	740	7,384	23,702
Retail salespersons and visual merchandisers	707	22,873	61,772
Light duty cleaners	590	10,826	36,941

**Table ST 5:** Niagara’s top Sports tourism/active economy occupations by Percentage change, 2013–2023

Description	St. Catharines—Niagara	Ontario	Canada
Program leaders and instructors in recreation, sport and fitness	26%	38%	33%
Accommodation service managers	15%	12%	(1%)
Retail salespersons and visual merchandisers	(13%)	5%	5%
Hotel front desk clerks	(18%)	(3%)	(10%)
Light duty cleaners	(55%)	0%	(1%)

**Table ST 6:** Niagara’s national location quotient for Sports tourism/active economy jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Personal goods merchant wholesalers	3.04	1.18
Traveller accommodation	2.16	0.77
Recreational vehicle (RV) parks and recreational camps	2.05	0.89
Spectator sports	1.74	1.04
Promoters (presenters) of performing arts, sports and similar events	1.37	0.83
Health and personal care stores	1.14	0.99
Other miscellaneous manufacturing	1.04	1.08
Sporting goods, hobby and musical instrument stores	1.02	0.79
Other amusement and recreation industries	1.00	1.05
Other schools and instruction	0.77	1.09
Agents and managers for artists, athletes, entertainers and other public figures	0.36	0.93

## Health Care & Life Sciences

**Table HC 1:** Change in health care and life sciences jobs, 2013–2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	6,059	6,668	610	10%
Ontario	291,788	341,922	50,134	17%
Canada	734,850	823,338	88,488	12%

**Table HC 2:** Percentage change in health care and life sciences jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Medical equipment and supplies manufacturing	107%	22%	21%
Pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers	88%	30%	15%
Scientific research and development services	65%	8%	26%
Pharmaceutical and medicine manufacturing	63%	9%	28%
Architectural, engineering and related services	20%	21%	4%
Medical and diagnostic laboratories	17%	33%	31%
Health and personal care stores	4%	21%	19%

**Table HC 2:** Continued...

Description	St. Catharines—Niagara	Ontario	Canada
Semiconductor and other electronic component manufacturing	1%	19%	16%
Other machinery, equipment and supplies merchant wholesalers	(9%)	14%	4%
Navigational, measuring, medical and control instruments manufacturing	(86%)	(23%)	(6%)

**Table HC 3:** Change in health care and life sciences jobs, 2013 – 2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	6,059	6,668	610	10%
Hamilton	14,399	19,766	5,367	37%
Windsor	6,382	7,614	1,232	19%
London	9,598	11,364	1,767	18%
Greater Sudbury / Grand Sudbury	3,466	3,764	298	9%

**Table HC 4:** Niagara’s top health care and life sciences occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Pharmacy technical assistants and pharmacy assistants	458	11,492	33,476
Retail salespersons and visual merchandisers	328	12,679	28,577
Pharmacists	264	13,354	35,017
Cashiers	255	8,168	20,410
Retail and wholesale trade managers	239	10,187	23,903

**Table HC 5:** Niagara’s top health care and life sciences occupations by Percentage change, 2013–2023

Description	St. Catharines—Niagara	Ontario	Canada
Pharmacy technical assistants and pharmacy assistants	90%	53%	51%
Pharmacists	(1%)	82%	59%
Retail salespersons and visual merchandisers	(4%)	24%	14%
Cashiers	(18%)	(14%)	(11%)
Retail and wholesale trade managers	(35%)	(17%)	(13%)

**Table HC 6:** Niagara’s national location quotient for health care and life sciences jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Other machinery, equipment and supplies merchant wholesalers	1.20	1.38
Health and personal care stores	1.14	0.99
Medical and diagnostic laboratories	1.00	1.15
Medical equipment and supplies manufacturing	0.75	1.21
Architectural, engineering and related services	0.66	0.90
Pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers	0.66	1.37



**Table HC 6:** Continued...

Description	St. Catharines—Niagara	Ontario
Scientific research and development services	0.56	1.11
Pharmaceutical and medicine manufacturing	0.45	1.28
Semiconductor and other electronic component manufacturing	0.40	1.36

## Film

**Table FM 1:** Change in film jobs, 2013–2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	829	1,266	437	53%
Ontario	55,682	81,536	25,854	46%
Canada	138,887	193,813	54,926	40%

**Table FM 2:** Percentage change in film jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Promoters (presenters) of performing arts, sports and similar events	124%	11%	22%
Independent artists, writers and performers	59%	(4%)	4%
Motion picture and video industries	11%	110%	86%
Sound recording industries	(100%)	29%	5%
Total	53%	46%	40%

**Table FM 3:** Change in film jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	829	1,266	437	53%
Hamilton	2,022	3,179	1,156	57%
Windsor	636	666	30	5%
Greater Sudbury / Grand Sudbury	399	473	74	19%
London	1,187	1,854	667	56%

**Table FM 4:** Niagara's top film occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Painters, sculptors and other visual artists	183	4,261	11,551
Producers, directors, choreographers and related occupations	103	10,107	22,933
Authors and writers (except technical)	97	4,105	10,231
Graphic designers and illustrators	80	7,885	19,608
Audio and video recording technicians	11	1,835	5,251

**Table FM 5:** Niagara’s top film occupations by Percentage change, 2013–2023

Description	St. Catharines—Niagara	Ontario	Canada
Graphic designers and illustrators	98%	169%	189%
Painters, sculptors and other visual artists	60%	(20%)	(4%)
Producers, directors, choreographers and related occupations	59%	48%	44%
Authors and writers (except technical)	24%	(22%)	(14%)
Audio and video recording technicians	(65%)	2%	1%

**Table FM 6:** Niagara’s national location quotient for film jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Promoters (presenters) of performing arts, sports and similar events	1.37	0.83
Independent artists, writers and performers	1.08	0.95
Motion picture and video industries	0.27	1.21
Sound recording industries	0	1.24

## Information Communication Technology (ICT)

**Table IT 1:** Change in ICT jobs, 2013 – 2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	1,966	3,598	1,632	83%
Ontario	220,112	349,819	129,707	59%
Canada	447,899	710,019	262,120	59%

**Table IT 2:** Percentage change in ICT jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Communications equipment manufacturing	186%	(60%)	(46%)
Other telecommunications	140%	33%	55%
Computer systems design and related services	130%	89%	90%
Software publishers	118%	146%	69%
Data processing, hosting, and related services	112%	72%	73%
Computer and communications equipment and supplies merchant wholesalers	60%	18%	10%
Electronic and precision equipment repair and maintenance	(35%)	(4%)	(24%)
Computer and peripheral equipment manufacturing	(47%)	(46%)	(45%)
Navigational, measuring, medical and control instruments manufacturing	(86%)	(23%)	(6%)
Audio and video equipment manufacturing	(100%)	(10%)	10%

**Table IT 3:** Change in ICT jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	1,966	3,598	1,632	83%
Hamilton	7,934	15,369	7,435	94%
Windsor	1,674	2,972	1,298	78%
London	4,608	8,408	3,800	82%
Greater Sudbury / Grand Sudbury	698	977	279	40%

**Table IT 4:** Niagara’s top ICT occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Information systems specialists	414	53,431	101,224
Software developers and programmers	351	41,717	86,901
Computer and information systems managers	190	19,189	33,453
Computer systems developers and programmers	134	14,485	32,392
Electronic service technicians (household and business equipment)	102	6,512	14,947

**Table IT 2:** Percentage change in ICT jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Software developers and programmers	148%	111%	110%
Computer and information systems managers	117%	97%	85%
Computer systems developers and programmers	61%	17%	30%
Information systems specialists	55%	86%	73%
Electronic service technicians (household and business equipment)	(13%)	(23%)	(24%)

**Table IT 6:** Niagara’s national location quotient for ICT jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Data processing, hosting, and related services	0.67	1.53
Computer systems design and related services	0.56	1.20
Electronic and precision equipment repair and maintenance	0.48	1.17
Other telecommunications	0.47	1.26
Communications equipment manufacturing	0.45	1.25
Software publishers	0.40	1.34
Computer and peripheral equipment manufacturing	0.38	1.39
Computer and communications equipment and supplies merchant wholesalers	0.36	1.66
Navigational, measuring, medical and control instruments manufacturing	0.17	1.11
Audio and video equipment manufacturing	0	1.21
Satellite telecommunications	0	1.57

## Transportation & Logistics

**Table TL 1:** Change in transportation & logistics jobs, 2013–2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	6,844	8,342	1,497	22%
Canada	855,489	1,010,821	155,332	18%
Ontario	308,419	386,743	78,324	25%

**Table TL 2:** Percentage change in transportation & logistics jobs by industry, 2013- 2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Local messengers and local delivery	538%	303%	350%
Scheduled air transportation	Insf. Data	(15%)	(8%)
Scenic and sightseeing transportation, water	305%	(7%)	89%
Other support activities for transportation	199%	34%	30%
Support activities for air transportation	177%	10%	28%
Deep sea, coastal and Great Lakes water transportation	152%	(8%)	91%
Support activities for road transportation	105%	21%	22%
Couriers	89%	36%	26%
Warehousing and storage	57%	62%	115%
Postal service	44%	16%	8%
Charter bus industry	16%	(21%)	(12%)
Taxi and limousine service	12%	7%	3%
General freight trucking	5%	25%	29%
Freight transportation arrangement	2%	22%	27%
Pipeline transportation of crude oil	0%	68%	(100%)
Pipeline transportation of natural gas	0%	3%	(100%)
Other pipeline transportation	0%	(60%)	(100%)
Non-scheduled air transportation	(2%)	9%	13%
Support activities for water transportation	(3%)	36%	17%
Urban transit systems	(4%)	11%	13%
Rail transportation	(27%)	13%	35%
Other transit and ground passenger transportation	(30%)	4%	30%
Specialized freight trucking	(42%)	(7%)	(2%)
School and employee bus transportation	(52%)	(4%)	(13%)
Scenic and sightseeing transportation, land	(69%)	(9%)	(74%)
Inland water transportation	Insf. Data	68%	351%
Interurban and rural bus transportation	(100%)	(50%)	(61%)
Support activities for rail transportation	Insf. Data	66%	100%

**Table TL 3:** Change in transportation & logistics jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	6,844	8,342	1,497	22%
Hamilton	13,443	18,020	4,577	34%
Windsor	8,729	9,667	938	11%
London	10,378	12,535	2,157	21%
Greater Sudbury / Grand Sudbury	3,049	3,561	512	17%

**Table TL 4:** Niagara’s top transportation & logistics occupations by job numbers, 2023

Description	St. Catharines—Niagara	Canada	Ontario
Transport truck drivers	1,310	189,874	73,834
Bus drivers, subway operators and other transit operators	651	76,968	33,305
Material handlers	387	57,695	26,426
Letter carriers	375	33,454	12,820
Taxi and limousine drivers and chauffeurs	340	41,689	20,246

**Table TL 5:** Niagara’s top transportation & logistics occupations by Percentage change, 2013–2023

Description	St. Catharines—Niagara	Canada	Ontario
Material handlers	81%	61%	95%
Letter carriers	11%	5%	7%
Taxi and limousine drivers and chauffeurs	(10%)	21%	31%
Transport truck drivers	(15%)	8%	15%
Bus drivers, subway operators and other transit operators	(23%)	15%	14%

**Table TL 6:** Niagara’s national location quotient for transportation & logistics jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Scenic and sightseeing transportation, water	26.29	1.51
Scenic and sightseeing transportation, land	6.53	0.41
Deep sea, coastal and Great Lakes water transportation	5.63	0.35
Charter bus industry	2.21	1.09
Other transit and ground passenger transportation	2.09	1.44
Freight transportation arrangement	1.82	1.27
Support activities for road transportation	1.52	0.73
Local messengers and local delivery	1.52	0.95
Non-scheduled air transportation	1.07	0.69
Taxi and limousine service	1.01	1.09
Other support activities for transportation	0.94	1.18
Support activities for water transportation	0.94	0.23

## Aerospace

**Table AS 1:** Change in aerospace jobs, 2013–2023; Niagara, Ontario, and Canada Compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	475	727	253	53%
Ontario	40,147	41,551	1,404	3%
Canada	146,306	142,124	(4,182)	(3%)

**Table AS 2:** Percentage change in aerospace jobs by industry, 2013–2023; Niagara, Ontario, and Canada Compared

Description	St. Catharines—Niagara	Ontario	Canada
Scheduled air transportation	Insf. Data	(8%)	(15%)
Support activities for air transportation	177%	28%	10%
Aerospace product and parts manufacturing	58%	(2%)	(0%)
Non-scheduled air transportation	(2%)	13%	9%

**Table AS 3:** Change in aerospace jobs, 2013–2023; Niagara and other Ontario regions compared

Region	2013 Jobs	2023 Jobs	Change	Percentage Change
St. Catharines—Niagara	475	727	253	53%
Hamilton	1,398	1,952	554	40%
Windsor	240	338	98	41%
London	598	648	50	8%
Greater Sudbury / Grand Sudbury	115	334	219	190%

**Table AS 4:** Niagara’s top aerospace occupations by job numbers, 2023

Description	St. Catharines—Niagara	Ontario	Canada
Air pilots, flight engineers and flying instructors	88	4,046	12,619
Aircraft assemblers and aircraft assembly inspectors	83	2,654	10,711
Supervisors, other mechanical and metal products manufacturing	64	1,386	3,989
Aircraft mechanics and aircraft inspectors	55	3,213	11,745
Pursers and flight attendants	20	4,250	12,692

**Table AS 5:** Niagara’s top aerospace occupations by Percentage change, 2013–2023

Description	St. Catharines—Niagara	Ontario	Canada
Supervisors, other mechanical and metal products manufacturing	105%	22%	8%
Air pilots, flight engineers and flying instructors	47%	43%	22%
Aircraft mechanics and aircraft inspectors	27%	25%	22%
Aircraft assemblers and aircraft assembly inspectors	2%	17%	20%
Pursers and flight attendants	(20%)	(9%)	14%

**Table AS 6:** Niagara’s national location quotient for aerospace jobs, 2023, compared with Ontario

Description	St. Catharines—Niagara	Ontario
Non-scheduled air transportation	1.07	0.69
Aerospace product and parts manufacturing	0.91	0.60
Support activities for air transportation	0.36	0.92
Scheduled air transportation	0.06	0.81

**Table BC-FM 1**

Sector	Businesses without employees	Businesses with employees	Number of Employees							
			1 to 4	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500+
Agribusiness	960	565	166	98	108	113	49	25	6	0
Tourism	1,638	1,429	376	303	270	269	141	55	12	3
Manufacturing	512	659	207	120	107	119	63	33	9	1
EV	146	186	57	31	28	36	20	10	3	1
Marine Commerce	598	584	258	105	89	65	46	15	4	2
Film	347	65	46	9	6	3	1	0	0	0
Health & Life Sciences	1,762	1,740	948	354	237	124	45	20	10	2
Sport Tourism & Active Economy	3,766	2,990	1,164	698	486	379	184	59	16	4
ICT	518	310	231	42	17	15	1	1	0	3
<b>Totals</b>	<b>10,274</b>	<b>8,528</b>	<b>3,453</b>	<b>1,760</b>	<b>1,348</b>	<b>1,123</b>	<b>550</b>	<b>218</b>	<b>60</b>	<b>16</b>

The Niagara Community Observatory (NCO) at Brock University is a public-policy think-tank working in partnership with the Niagara community to foster, produce, and disseminate research on current and emerging local issues. More information on the NCO office and an electronic copy of this report and others like it can be found on our website <https://brocku.ca/nco>

All of our Wilson Foundation-funded research can also be found on the project website: <https://exhibits.library.brocku.ca/s/NiagEconHist>

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