

The Halifax Index 2014

An economic gut check with insights for action

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An economic gut check with insights for action

AUTHORED BY FRED MORLEY AND RYAN MACLEOD

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INTRODUCTION

The Halifax Index measures more than economic growth. It measures progress – the strides we are making as a community across key components of community well-being. Are we sustainable fiscally and environmentally? Are we maintaining and enhancing our quality of life? Are we growing our economy? And are we creating enough opportunities to attract and retain people?

The most important of these interrelated elements is growing our population. If our population declines, our fiscal sustainability is threatened. We've seen this happen first hand in communities across the province. In addition, weak population numbers threaten most outcomes across the range of indicators.

People are the lifeblood of communities. The good news is that Halifax is growing. The bad news is that we only grew marginally last year – by four tenths of one percent. This is slower than most Canadian cities, slower than our benchmark cities, and half our normal rate of growth.

The biggest challenge we face as a community is hanging on to our new graduates and attracting immigrants. Immigration to Halifax hit an eight-year low last year. The unemployment rate of those under 25 is high, and migration west jumped significantly in the last year as more new labour market entrants opted to take their chances out West.

The new report from the Nova Scotia Commission on Building Our New Economy offers ideas to turn this tide. It sets out aggressive goals and 19 recommendations to achieve them. These efforts however, are not enough.

Achieving important change requires all of us to think and act differently. It requires us to dream big, challenge long-standing assumptions, take bold measures and calculated risks, and work together to accelerate economic growth in our city and province. And it all starts with a shift in attitudes.

ATTITUDES AND GROWTH

"The Commission has come to believe, the critical first step is a shift in attitudes and a greater willingness and capacity on the part of business, key institutions and communities throughout Nova Scotia to join together in the pursuit of shared goals..." Now or Never: An Urgent Call to Action for Nova Scotians

The report Now or Never: An Urgent Call to Action for Nova Scotians identifies a crisis we are facing with respect to future growth prospects in our city and province. It also asserts that we have all of the assets we need to thrive: talented people, strong businesses, quality post-secondary institutions, a solid core of business and government services, infrastructure, and natural resources. Still something is missing: the right attitude.

Nova Scotia's history is alive with big thinkers. Three of Canada's big five banks had their start here. We claim the telephone, kerosene, wood-pulp paper, propellers, and standard time as inventions that originated here. But Nova Scotia also has gatekeepers, those who resist change and are risk averse. Others are activist pessimists. They see little potential in our city, our province and our region and they are quite willing to spread their gloomy message.

Such vocal opinions can be infectious, and they paint Halifax as a place where growth is uncertain and successful people and companies are unwelcome. We seem susceptible to zero sum attitudes. If a business, person,

city or region is successful then it must be at the cost of someone else. We embody a culture of scarcity making us clannish, competitive, and resistant to risk. An attitude change is essential. We need to shift to a win-win mindset; we need to celebrate our individual and collective successes. Fortunately, the attitudes we project as a community are ones each of us can own as individuals. Attitudes can change and the process seems to be underway. Just in time.

FOSTERING THE INNOVATION ECOSYSTEM

The first step in changing attitudes is understanding that we live in a highly complex and heavily integrated economic ecosystem made up of thousands of businesses, NGOs, government departments, agencies, and individuals layered over many jurisdictions, a broad geography, and national and international markets. Halifax's first two economic strategies identified numerous actions undertaken by many organizations. These strategies, once seen as complex, are now recognized as a very simplified version of thousands of interactions and initiatives that take place in a typical innovation ecosystem.

The first attitude shift requires us to recognize this complexity and eschew instincts that drive policymakers to try and reorganize and simplify the ecosystem. It would be like trying to simplify the Serengeti by organizing the lions, zebras, and wildebeests to take turns at the waterhole. But standing back and hoping for the best is not an option. We can – and we must – influence the functioning and the success of our innovation ecosystem.

An innovation ecosystem has two necessary components: innovative structures and a solid innovation culture. The former may include basic economic development efforts like investment attraction. business retention and expansion, or labour market programs. An innovation structure may also include newer approaches like incubators and accelerators. mentoring or connector programs, and a range of financing tools and options. These structures are necessary but not sufficient conditions to develop and sustain an innovation ecosystem.

The secret sauce of successful innovation ecosystems is attitude. The most successful communities have a strong innovation culture.

This means that businesses, governments, universities, and NGOs relate to a singular goal that puts community objectives ahead of organizational and personal goals.

Successful innovation ecosystems depend on collaboration and partnerships built on a solid foundation of trust and "can do" attitudes that embrace and manage risk.

They are driven by people who commit to:

- > Being bold
- > Challenging active pessimism
- > Extending trust and being trusted
- > Experimenting together
- > Being a champion
- > Celebrating success

Leadership and curation are also essential to fostering a thriving innovation ecosystem. Economic leadership is about having that gut conviction that you can change the future of your city, province, or business. It's about a belief that prosperity is not about the accident of location, proximity to markets or a place's natural resources. It's about people and organizations that believe that their effort and personal commitment can forge a new path and shape the future. This kind of leadership recognizes the abundance of opportunities and rejects attitudes of scarcity and pessimism that limit our ability to identify and pursue important new opportunities.

The role of the curator is more nuanced. Ecosystem curators are a catalyst for innovation. They set the table for progressive action through thought leadership. They make sure key initiatives move forward and opportunities are maximized and they do this, in part, by connecting the right people at the right time.

We have the recipe for success and many of the ingredients to create a successful innovative ecosystem here in Halifax. There is no better time than now.

MOVING TO ACTION

A new outlook is critical, but how do we move to action on key issues like talent attraction and retention, business climate, and sector opportunities. The answer involves building effective working partnerships.

Successful partnerships rest on a strong foundation of positive attitudes. These attitudes include demonstrating boldness, embodying trust, challenging pessimism and propagating optimism, trying new things together, paying it forward, and celebrating success – all while having fun. Good attitudes build good relationships, and these relationships are the foundation of great partnerships.

To move our city forward, we need broad partnerships that include business (the job creators and exporters in our economy), universities and research organizations (who are the pioneers and innovators), and NGOs, hospitals, schools, and others that nurture our community. Ideally governments should support this partnership by working diligently on developing a strong business climate and improving the quality of life of its citizens.

All of this is facilitated by a curator. Curators coordinate and convene, but their main role is to remind partners and members they are part of a bigger ecosystem that interacts across many channels, that they are connected to the broader economy and that their actions, or inaction, have an impact on everyone.

Perhaps the toughest attitude shift will be transforming pessimism into optimism about the future. It's not about blind faith or a cheery attitude. It's about seeing a path forward where others only see a dead end. It's about seeing obstacles as challenges to surmount, not as stop signs. It's about recognizing success here at home.

Fact: The massive construction under way at the Halifax Shipyard means we're actually readying to build ships.

Fact: Two major oil companies are putting more into offshore exploration in Nova Scotia than any other offshore in the world.

Fact: There are more building cranes dotting the Halifax landscape now than at any time in our 250-year history. These are all signs that Halifax is growing and our prospects for the future of our city and province are very positive.

We have good businesses doing amazing things all over our city. We have good people in government, in NGOs, and in our post-secondary institutions eager to help Halifax succeed. We are poised for prosperity.

Optimism is where great cities like Halifax get their energy and their drive. It's the foundation on which we build a better future. Pessimism is our kryptonite that kills good organizations, a good city and a good province.

It's time to make a personal commitment to changing attitudes. Together we have the power to create real and sustained prosperity for Halifax and for Nova Scotia.

Take action with us by visiting www.greaterhalifax.com/HIE

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KEY FINDINGS

The Halifax Index benchmarks Halifax's progress against five other cities (St. John's, Quebec City, London, Regina, and Victoria) in a more comprehensive way than ever before.

It enables us to understand whether Halifax is achieving growth, how that growth compares to other cities, and what needs to be done to achieve even better results. Partners in the Halifax success story know that our progress must be measured by more than simple economic growth. We are focused on broader economic development, a term that measures growth as well as improvement in the economic circumstances of individuals, the quality of life they enjoy, and the sustainability of the environment and fiscal aspects of the community.

The Halifax Index has four sections – People, Economy, Quality of Place, and Sustainability – that reflect a wide-angled view of what economic and community progress looks like. It is not meant to be a pass-fail exercise or to point fingers, but rather to provide deep insight into the community and allow for course corrections as Halifax moves along the path towards attaining its vision.

A number of key trends have emerged and provide insight into the inner workings of the economy, the community, and the long-term success of the region.

PEOPLE

- Halifax's population grew by only 0.4% from 2012 to 2013, approaching 409,000, the slowest growth among benchmark cities. This represents a break with recent trends.
- » Behind the slower-than-normal population growth was below-average immigration (only 1,600 net international migrants), while outmigration to other parts of Canada spiked to its highest level in over a decade.
- > University enrolments in Halifax grew by twice the national average in 2011 and community college enrolment continued to grow at a strong pace in 2013. University enrolments in Halifax are fastest growing in science, mathematics, engineering, and commerce programs, especially at the graduate level.
- Halifax's employment grew at a moderate pace in 2013, outpacing a number of benchmark cities that suffered from declines in participation rates, but falling short of comparatively stronger growth in Montreal, Toronto, Calgary, and Regina. Unemployment crept up to 6.6%, but remained well below the national average.

ECONOMY

- Halifax's GDP grew by 1.9% to \$18.1 billion in 2013, keeping pace with the national average. This was the third fastest growth among benchmark cities. GDP per capita grew by 1.4% to \$44,300 in 2013, twice the Canadian average growth and also the third fastest among benchmark cities.
- > The Halifax housing market has shifted in the past several years from the development of single-detached housing, which has fallen to its lowest level since 1980, to the development of apartment housing, which has continued to surge for the third year in a row.
- > Building permit values cooled in 2013, bringing them closer to historically average levels after three record-breaking years.
- > Movements of people and cargo through the Halifax Gateway continued to show strength in 2013, with the airport marking its third busiest year and the port seeing another near-record year for cruise ship activity.
- > Business confidence slipped for the second year in a row, but remained relatively positive. About 80% of businesses are optimistic about their current economic prospects in Halifax, although most only moderately so.

KEY OPPORTUNITY

A population growth strategy for the city and province must focus on stemming the outflow of youth from the region and increasing the attraction and retention of immigrants. Post-graduation retention of the growing number of international students studying in Halifax represents a major opportunity. Policy should focus on creating more career opportunities for recent graduates, both domestic and international.

KEY OPPORTUNITY

Investment in R&D and innovation is a key driver of economic growth and opportunities. In Nova Scotia, R&D investment is led by the academic sector, while private and government investment lags behind the national average. Increased cooperation and coordinated R&D strategies between the academic, public, and private sectors would be a boon to the region's culture of innovation.



OUALITY OF PLACE

- > Both total and violent crime rates fell to their lowest levels on record in 2012, with total crime rates dipping below the national average for the first time. This represents a huge improvement, but Halifax still has work to do to get violent crime rates down to the national average.
- Scrowth in income in Halifax outpaced the national average in 2013 and was second among benchmark cities, and most importantly, outpaced growth in the cost of living. Poverty rates improved in 2011, marking the first year that the rate of poverty in Halifax fell below the national average.
- Perceptions of physical and mental health declined slightly in 2012, as reported levels of physical activity declined for the second year in a row. Nevertheless, Halifax remains the second most-active city among benchmark cities.
- Overall life satisfaction in Halifax remains very high, growing slightly in 2012 compared to 2011. However, residents' sense of belonging dipped a little.
- Employment in arts, culture, recreation, and sport increased by 700 people to 9,400 in 2013, Halifax's highest level on record and the fifth straight year of growth.

KEY OPPORTUNITY

Living affordability has perhaps the single-largest impact on quality of life, determining our ability to attract students, young professionals, and immigrants as well as determining the standard of living available to Halifax families. The cost of living and the average level of income are the two sides of the affordability coin. A strategy to increase living affordability in Halifax must include both cost control and income growth strategies.

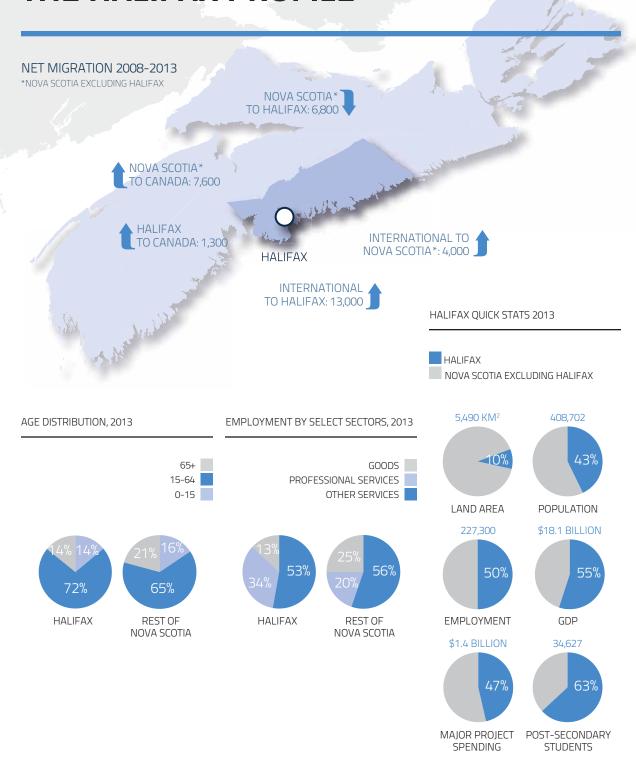
SUSTAINABILITY

- Recent trends in housing construction and building permits suggest that investors and developers are betting on renewed growth in the Regional Centre, as booming apartment starts over the past three years have been concentrated on the Peninsula and in Dartmouth, and major projects like the new Halifax Central Library and the Nova Centre drive higher concentrations of building permit values in the downtown.
- > Public transit ridership grew by 1.9% in 2013-14, keeping pace with growth in service hours of 2.1%. However, over the last five years, ridership has only grown by 0.4% despite service hours increasing by 22.4%.
- > Halifax residential and commercial waste levels continued a long-term decline in 2012-13, both falling by about 5% per capita. The proportion of waste diverted from landfills through recycling and composting remained steady at 61%, one of the highest rates in the country.
- The municipality's fiscal health remains in excellent shape, with a AA- bond rating signifying confidence on the global lending market. The overall tax burden as a share of GDP remained steady in 2013-14, but the burden on households has grown slightly in recent years.

KEY OPPORTUNITY

Increased density of development in the Regional Centre is key to both the environmental and fiscal sustainability of Halifax. Residents of denser cities are far less dependent on automobiles which is beneficial to their health and the environment, and cities that grow more densely rather than grow outwardly are able to save on investment in costly new infrastructure.

THE HALIFAX PROFILE



PEOPLE

Population growth and retention is more important than ever before. Between 2001 and 2013, net migration accounted for 2/3 of Halifax's population growth.

KEY INDICATORS

POPULATION

- > Population estimates
- > Components of growth
- > Migration by source
- > Immigrant retention

EDUCATION

- > Workforce by education
- > University and college enrolment
- > Programs of study
- > Elementary and secondary standardized test scores

LABOUR FORCE

- > Labour force population
- > Employment
- Unemployment and participation rates
- > Outcomes by age group

WORKFORCE STABILITY

- > Registered claims
- > Time-loss claims
- > Weeks of short-term disability

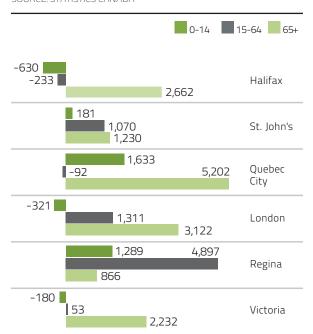
POPULATION

WHY IS THIS IMPORTANT?

A growing population is as vital to a community as blood is to a person. Lose too many people from a community, and that community is in serious trouble. Quite simply, strong population growth drives the economic health of a region. A growing population creates an environment that supports business; more people consume more goods and more services.

It also provides an evolving and vibrant labour force that the business community relies on to produce goods and services. And a growing populace means greater tax revenue for government to put new and improved services in place without increasing the tax rates.

POPULATION CHANGE BY AGE GROUP, 2012-2013 SOURCE: STATISTICS CANADA



POPULATION ESTIMATES AND ANNUAL GROWTH, 2013 SOURCE: STATISTICS CANADA

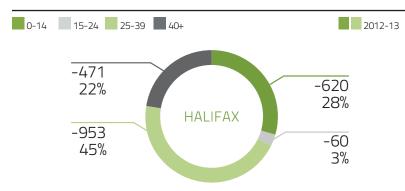


A growing population creates an environment that supports business.



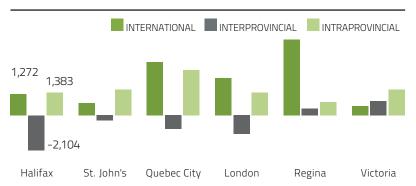
NET INTERPROVINCIAL MIGRATION NUMBER AND SHARE OF TOTAL BY AGE GROUP, HALIFAX

SOURCE: STATISTICS CANADA



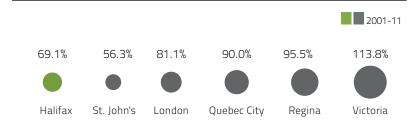
SOURCE OF NET MIGRATION, 2012-2013

SOURCE: STATISTICS CANADA



IMMIGRANT RETENTION RATES

SOURCE: STATISTICS CANADA, NATIONAL HOUSEHOLD SURVEY



Note: The immigrant retention rate here is equal to the number of immigrants from the 2001-2011 cohort that were living in each city in 2011 divided by the number that immigrated to that city between 2001 and 2011. Victoria's rate exceeds 100% because immigrants that originally landed in other parts of the country have since relocated to Victoria.

HOW ARE WE DOING?

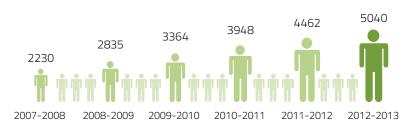
Halifax's population grew by only 0.4% from 2012 to 2013, to roughly 409,000. This rate of growth is well below the national average, is the lowest among benchmark cities, and is the second lowest in the Atlantic region. It also represents a break with recent trends. It is important to understand the drivers of this change and whether they will likely persist.

Part of this growth pattern relates to shifting demographics, a reality affecting most Canadian cities. In Halifax, this includes growing numbers of people aged 65 or older and declining numbers of people under age 15. What was unusual in the last year was the spike in migration to Alberta and lower international migration, which shows up in all benchmark cities. However, demographic shifts and changing migration patterns were more significant in Halifax.

Much of Halifax's population growth comes from immigration. Since 2000, international immigration has accounted for over half of Halifax's population growth. But the net number of new arrivals dipped in 2013 to its lowest level in eight years. Immigrants to Nova Scotia now represent just 0.9% of all Canadian immigrants even though Nova Scotia's share of the population is 2.7%. Almost 2/3 of the province's immigrants live in Halifax, which has been doing

INTERNATIONAL STUDENTS STUDYING IN HALIFAX

SOURCE: MARITIME PROVINCES HIGHER EDUCATION COMMISSION



Note: Includes Dalhousie's Agricultural Campus in Truro.

better in recent years at retaining its immigrant population. Of the 17,000 international immigrants that moved to Halifax between 2001 and 2011, 70% still lived here in 2011. However, immigrant retention in Halifax is still comparatively low. Benchmark cities west of Halifax had retention rates of 81% and higher.

The biggest problem with respect to population growth for Halifax and Nova Scotia has been outmigration to other parts of the country. In 2013, 2,100 Halifax residents left the

province for other Canadian communities. New entrants to the labour force, new graduates, and other young Nova Scotians, account for a disproportionate share of this exodus. In 2013, Halifax residents between the age of 20 and 39 accounted for 45.3% of interprovincial out migrants but accounted for only 21.2% of the Halifax population. The parents in this age group also take their young children with them, and children under the age of 15 accounted for a further 29.5% of interprovincial out migrants last year.

WHERE ARE OUR OPPORTUNITIES?

Halifax's population numbers need to be closely watched to determine if the 2013 downturn is, in fact, a trend. Turning this tide will require focusing on two groups: youth and immigrants. International students represent an important opportunity for growth on both of these fronts. In five years, the number of international students studying in Halifax more than doubled to over 5,000 in the 2012-13 school year. Many international students do not remain in Halifax after graduating. Promoting the creation of entry-level employment opportunities for graduating students, both international and domestic, is a key step in retaining the region's youth and increasing the number of international students who become permanent migrants to the region. While the province has recently introduced measures aimed at creating entry-level jobs, like the Graduate to Opportunity Program, more must be done on this front to encourage growth in entry-level employment opportunities.

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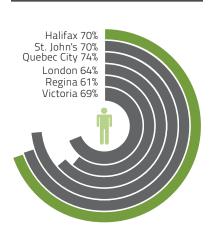
EDUCATION

WHY IS THIS IMPORTANT?

Halifax and the world have quickly transitioned to a knowledge-based economy over the last decade. Now over 75% of new jobs require post-secondary education. Strong educational institutions and an educated population are sources of innovation and a productive workforce with better labour market outcomes. Last year in Nova Scotia, the unemployment rate for those with post-secondary education was 6% compared to a rate of 14% for those without. Studies have also shown that a better-educated population is associated with other positive outcomes such as lower crime rates and more community engagement.

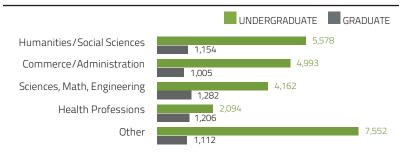
POST-SECONDARY EDUCATIONAL ATTAINMENT, 2011

SOURCE: NATIONAL HOUSEHOLD SURVEY



HALIFAX UNIVERSITY ENROLMENTS BY MAJOR PROGRAM OF STUDY AND ANNUAL GROWTH RATE, 2012

SOURCE: MARITIME PROVINCES HIGHER EDUCATION COMMISSION



HOW ARE WE DOING?

The Halifax labour force is highly educated: in 2011, 70% of the population aged 25 to 64 had a post-secondary education. Over 37% had a university degree – the highest rate among benchmark cities. University enrolments in Halifax grew by 0.8% in 2011, twice the national average and third highest among benchmark cities.

Encouragingly, enrolments in Halifax are growing most quickly in science, mathematics, engineering, and commerce programs, especially at the graduate level. Recent research suggests that graduates in these fields, as well as health sciences, are in the highest demand among recent graduates in Nova Scotia. However, while faster growth in graduate-level enrolment contributes to a more educated population, this could also reflect fewer entry-level job opportunities for undergraduate degree holders.

Province-wide enrolment at the Nova Scotia Community College grew by 1.8% to roughly 10,900 in 2013, and Halifax campuses had their largest enrolment ever with more than 4,600 students.

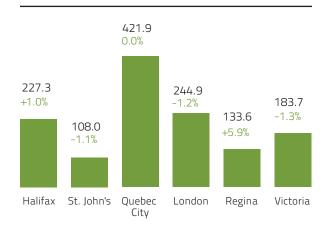
Success at college and university requires a strong educational foundation. Universities have become concerned that too many first-year students leave after the first semester. Those concerns have merit. In 2012, average scores for Nova Scotia in reading, science, and mathematics in the internationally administered PISA tests were significantly below the national average and weaker than provincial scores in all three categories in 2009. More recent information showed that grade three standardized test scores are in decline; only 70% of these students were able to read at the expected level in this year's test, the worst result since the test was first administered in 2007. For a knowledge economy to thrive, it is critical that we graduate people who are equipped to succeed.

LABOUR FORCE

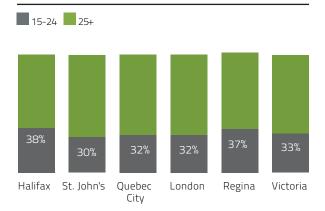
WHY IS THIS IMPORTANT?

The labour market is where the population and the economy intersect. A talented, growing labour force is critical to business success. Conversely, a weak labour market, characterized by high unemployment rates or weak attachment to the workforce, drives outmigration. An efficient labour market is always a balance between healthy availability of labour and growth in higher-paying, sustainable jobs.

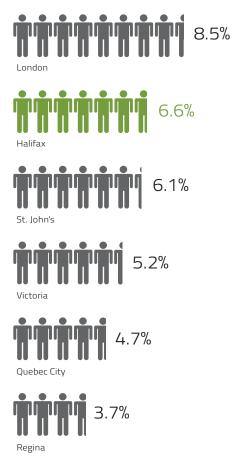
EMPLOYMENT LEVEL AND ANNUAL GROWTH, 2013, 000s SOURCE: STATISTICS CANADA



UNEMPLOYED YOUTH AS A SHARE OF TOTAL UNEMPLOYED, 2013 SOURCE: STATISTICS CANADA



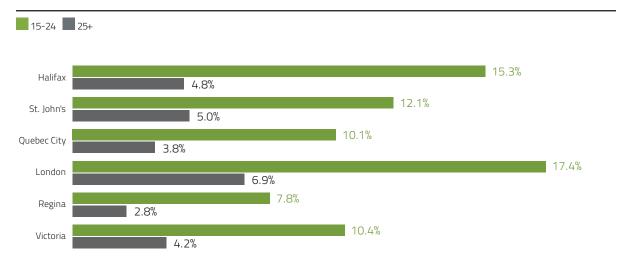
UNEMPLOYMENT RATE, 2013 SOURCE: STATISTICS CANADA





UNEMPLOYMENT RATE FOR SELECT AGE GROUPS, 2013

SOURCE: STATISTICS CANADA



HOW ARE WE DOING?

Halifax's employment and labour force grew at a moderate pace in 2013, outpacing a number of benchmark cities but falling short of stronger growth in Montreal, Toronto, Calgary, and Regina. Halifax traditionally avoids the boom-and-bust cycles of other cities and tends to perform better over the longer term. Over the last five years, Halifax had employment growth of 7.3%, far exceeding the national average and keeping pace with major cities.

The unemployment rate in Halifax crept up to 6.6% in 2013. Employment growth simply did not keep pace with the increased number of people looking for work. While this ranks poorly among benchmark cities, it is still better than the national average and well below the 8% unemployment rate in Toronto and Montreal.

Youth continue to struggle in Halifax and most labour markets across the country. While Halifax's unemployment rate among workers age 25 and over is very low, the city has the second highest youth-unemployment rate among benchmark cities at 15.3% and ties for the highest gap in unemployment rates between those under 25 and those 25 and over – a gap of 10.5%. Retaining more of our youth will require more and better opportunities for new graduates to enter the workforce. The perception of greater opportunities in Canada's booming western economies is a major draw to youth who are struggling to start their careers in Halifax.

Fortunately, it seems that good jobs are materializing in Halifax. While overall employment among Halifax youth declined by 1% in 2013, full-time youth employment grew by an impressive 7%.

This reflected strong growth in full-time employment for all ages, reversing the post-recession trend in Halifax toward part-time employment growth. Good news indeed.

WORKPLACE SAFETY

WHY IS THIS IMPORTANT?

Workplace safety is important for a variety of reasons. Most obvious is the quality of life and potential loss-of-life impacts that workplace injuries can have on individuals and their families. Beyond this, workplace safety and an early and safe return to work for those who are injured are critical to a highly productive economy. Time lost to injury and absence contributes to lower productivity, affects competitiveness, and, ultimately, pushes wages and salaries down. We all share the responsibility to help ensure the safest work environment possible.

HOW ARE WE DOING?

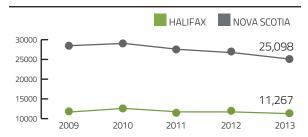
Halifax has seen some significant declines in the number of registered claims and time-loss claims received by the Nova Scotia Workers' Compensation Board in recent years. There were 2,571 time-loss claims made in Halifax in 2013, 434 fewer than in 2009, a decline of 14%. That's 1,900 more work weeks on the job not lost to short-term disability. In Nova Scotia, the injury rate of 1.86 injuries per 100 covered workers is the lowest it has ever been, marking a 35% reduction since 2005. There were 29,000 fewer working days lost to workplace injury in 2013 than the year before – equal to 79 people working full-time for one year.

In 2013, A Workplace Safety Strategy for Nova Scotians was released. Prepared by the Workers' Compensation Board and the Nova Scotia Department of Labour and Advanced Education, this five-year plan establishes strong goals for health and safety and a long-term vision to make Nova Scotia the safest place to work in Canada.

Recent years have seen significant improvement in workplace safety in Halifax and Nova Scotia. It is nevertheless important that workplace safety remain a priority and that time off the job due to injury continues to decrease. Every employer and every employee has a vested interest in achieving this objective.

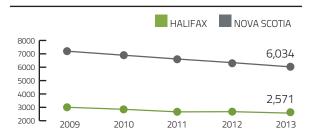
REGISTERED INJURY CLAIMS

SOURCE: WORKER'S COMPENSATION BOARD OF NOVA SCOTIA



TIME-LOSS INJURY CLAIMS

SOURCE: WORKER'S COMPENSATION BOARD OF NOVA SCOTIA



TIME LOSS INJURY CLAIMS BY INDUSTRY, 2013 SOURCE: WORKER'S COMPENSATION BOARD OF NOVA SCOTIA

	Halifax	Nova Scotia
Health/Social Services	580	1,597
Construction	341	592
Retail Trade	313	625
Government Services	242	585
Transportation/Storage	208	352
Manufacturing	201	683
Accommodation/Food/Beverages	186	383
Wholesale Trade	146	309
Communication/Utilities	121	224
Other Services	99	172
Business Services	55	87
Educational Services	55	190
Real Estate/Insurance Agents	11	25
Logging/Forestry	8	41
Agriculture/Related Services	3	48
Fishing/Trapping	1	103
Mining/Quarries/Oil Wells	1	16
Finance/Insurance	0	0

Special Analysis: Big Data

In 1981, International Business Machines, or IBM as we know it today, unleashed its first personal computer. The cutting-edge machine had a processing power of 16KB, which was perfect for running the spreadsheet programs and computer games of the day, all in a box that was small enough to fit on a desk. Today, a typical laptop has 16GB of processing power. It would take one million IBM personal computers to match the computing power of a modern laptop – enough to fill almost 6,000 standard 20-foot cargo containers – roughly the capacity of a post–Panamax container ship.

Several of Halifax's major industries stand to gain from the adoption of big data.

Roughly 100,000 of today's laptops have the equivalent computing power of the human brain. In their book *Abundance: The Future is Better than You Think*, Peter Diamandis and Steven Kotler predict that by 2027 the average \$1,000 laptop will have the equivalent computing power of the human brain and by 2050 that of the entire human race. Our data-processing power has grown, and will continue to grow, exponentially over time. So has the volume of data we produce: 90% of the world's data was produced in the last two years, and it is estimated that the amount of data created globally is growing by 40% a year. The vast majority of that data is produced by individuals. Thirty billion pieces of content are shared on Facebook every month, and this year the number of active mobile phones will surpass the world's population for the first time, hitting 7.3 billion phones.

Growing capacity for computing and data storage, innovative technologies allowing for inexpensive data collection, and the development of new types of data analysis and visualization have made it possible to use information in ways that have never been conceived of before. Big data is now used everywhere – in every industry – informing decision-making and the efficient use of scarce resources.

Several of Halifax's major industries stand to gain from the adoption of big data analysis techniques including healthcare, public administration, finance and insurance, and ocean industries. This presents an opportunity to develop a dedicated, competitive data analytics industry in the region. Moreover, the adoption of big data analytics would benefit residents and local businesses through the more efficient provision of municipal services. This special analysis will explore some of the opportunities presented to Halifax by big data, current big data activity in the city, and the challenges that must be overcome to take full advantages of the opportunities big data inherently holds.

WHAT IS BIG DATA?

Data analysis has long been an important tool for decisionmaking, but big data is a relatively new concept. It refers to datasets that are exceptionally large or are updated very frequently (perhaps in real time) and that require new, specialized hardware or software to collect, store, and analyze. For example, a dataset tracking the movements of people in and out of the city core in real time would be tremendously useful for public transit planners but would be difficult to collect and prohibitively large to analyze by conventional means. In the age of smart phones and modern computers, however, a dataset of this scope can be relatively easy and inexpensive to collect, analyze, and recreate on a map. In other words, there's an app for that.

What would a smarter Halifax look like?

WHAT'S THE BIG DEAL?

Today we can crunch numbers faster than ever before. So what? The big deal with big data is that it will allow us to inform our decisions and design intelligent systems unlike any other time in history. It will, quite frankly, make us smarter. What would a smarter Halifax look like?

A smarter Halifax will be easier to get around. The city of Dubuque, Iowa, has partnered with IBM Research to create Smarter Sustainable Dubuque. As a part of this initiative, Dubuque outfitted 1,000 volunteers with a smartphone app that tracked their movements. The city is now using the information generated by the app to study movement patterns over time and inform changes to their bus transit system to better serve the city. In Halifax, which this year announced a two-year transit system overhaul, this kind of analysis could produce a more efficient transit system, with more buses assigned to higher-demand traffic routes, and routes redrawn to mirror locations people need to go.

In Lyon, France, a system built by IBM uses real-time traffic data to anticipate where traffic congestion and gridlock will happen – before it actually happens – and adjusts signals from traffic lights in the area to divert flows away from the area. In Halifax, smarter management of traffic flows could reduce commute times and ease heavy use of key transportation

infrastructure. This could translate into big savings. Estimates of the total cost of a proposed third bridge for the Halifax harbour range from \$1.1 to \$1.4 billion. Smarter traffic management could reduce or eliminate this need.

In Boston, a mobile app called Street Bump has been used since 2012 to detect potholes. Using the phone's built in accelerometer, the app detects when a driver hits a bump in the road and transmits that information back to city staff. When the system identifies a number of bumps in the same area, employees are notified to check it out. Dalhousie University's Institute for Big Data Analytics is planning to implement a similar system in Halifax using sensors on buses to identify problem spots in the road.

A smarter Halifax will be more sustainable. Dubuque, lowa, has also installed smart water meter technology in the 23,000 homes in the city. The meters monitor water usage in near real-time enabling residents and city staff to identify leaks and other problems. This has resulted in a 7% decrease in water usage and an eightfold increase in leak detection.

Seattle recently partnered with Microsoft and Accenture to launch a data-driven, energymanagement pilot program in four major downtown buildings. The system will use real-time data generated by sensors in

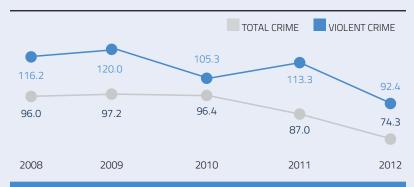
the buildings to identify energysaving opportunities. Microsoft used the technology in its own Seattle office and reduced energy consumption by 10%.

In Halifax, Stromline Technologies Inc. is developing sensors for use in personalized, smart thermostats. The thermostats will use readings including temperature and humidity from within the home and combine them with **Environment Canada's local** weather forecast to anticipate weather changes and maintain conditions inside to exactly the user's preference. Smart thermostat technology can also reduce home heating bills by automatically reducing heat at times when residents are sleeping or at work.

A smarter Halifax will be safer.

In Halifax, police work doesn't just entail officers walking the beat. Using their Comstat program, computer analysts track and map crime data to identify problem areas and direct police resources to neighbourhoods in greatest need using predictive analytics. The results have been game changing. The number of break and enters declined by 300 in the first year of the program, and this year, Halifax's total and violent crime severity indexes fell to their lowest levels ever. Predictive analytics can also be used to increase fire safety. New York City's fire department has catalogued buildings in the city and ranked them based on

TOTAL AND VIOLENT CRIME SEVERITY INDEX, HALIFAX SOURCE: STATISTICS CANADA



60 risk factors, such as age of the building and known electrical problems. High-risk buildings are given a higher priority for inspection, reducing the likelihood and severity of a fire.

A smarter Halifax will be healthier. Tesco, a U.K. grocery chain, has announced a commitment to help combat obesity. Users of their club card can opt in to receive "nudges" toward healthier eating, like coupons for healthier food options or healthy recipe ideas sent to their phone based on their food choices and habits. In Halifax, data on consumer behaviour at stores like Sobevs and Atlantic Superstore could be used by the Department of Health and Wellness to inform the development of public health campaigns and measure their success – saving untold taxpayer dollars in future healthcare costs...

HOW DO WE GET THERE?

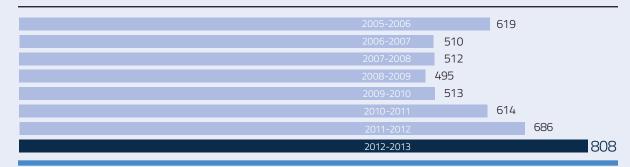
According to a 2013 KPMG survey of corporate executives, only one in five Canadian executives have a big data plan in place, and only one in four are somewhat likely to prepare one in the future. This suggests that Canadian companies are not aware of the value of big data and the impact it will have on future competitiveness. Companies that fail to take this into account will fail to compete. This may be an area where Halifax firms, organizations, and governments can embrace the potential of big data and leapfrog other parts of Canada. But how?

First, we must ensure Halifax has the necessary pool of skilled labour. Big data is growing internationally, and the labour market for those specializing in this field is tight. The McKinsey Global Institute estimates that by 2018 the U.S. could face a shortage of 190,000 highly skilled data analysts and 1.5 million additional managers and analysts

in the big data field. Nova Scotia universities and NSCC have taken note of this and have coordinated efforts to ensure students in the region are prepared for jobs in this field, taking inventory of courses relevant to big data and adding new courses and programs where appropriate. Interest among students is growing. Last year, enrolment in computer science and related programs at Halifax universities reached an eight-year high, having grown by almost 60% in the last five years.

However, Dr. Stan Matwin, Director of the Institute for Big Data Analytics, notes that many computer and information sciences students end up leaving the region after graduation. Graduates in this field, like so many others, face a shortage of entry-level employment opportunities here. Some, like the cofounders of LeadSift, are able to launch impressive startups, but this is not the case for the majority. As with students in most fields, graduates often head out in search of employment opportunities. We must match the need in government and business for big data approaches with the talent that is all around us. The Graduate to Opportunity Program, introduced in the latest provincial budget, could be a step in the right direction but more needs to be done to provide entry-level employment and to support local tech start-ups, especially among new graduates.

UNIVERSITY ENROLMENT IN COMPUTER SCIENCE, ENGINEERING, AND RELATED PROGRAMS, HALIFAX SOURCE: MARITIME PROVINCES HIGHER EDUCATION COMMISSION



Facilitating the flow of data from those that have it to those that need it is also important. Many organizations have the need and ability to analyze big data to improve their processes but don't have access to the data required to do this. Conversely, many organizations may find that their activities give them access to treasure troves of information, which may be useful to themselves or to others, but that they aren't currently using or even collecting. To the holders of this data, this likely represents new revenue streams. Social networks like Facebook are built on this business model. Retailers and other consumer services are often in this position as well. Grocery chains, for example, are sitting on a goldmine of data on public eating habits that could be incredibly useful to inform public health campaigns. Cell phone providers have access to a vast amount of data on the movements of people that would be invaluable to

informing the development of transportation infrastructure. Developing partnerships between those that have data and those that need it is crucial to align interests and to ensure that useful data gets used. These partnerships should also address important issues like data security and protecting the privacy of individuals; often the most useful information, like personal expenditures or health data, is also the most sensitive.

It's clear that public and private sector organizations in Halifax need to develop and implement data strategies to assess their current IT capabilities and data availability; identify opportunities for big data analytics to improve their processes; and evaluate the needed IT capabilities and data associated with those opportunities. Most importantly, these strategies should identify data-driven means of benchmarking success. Luckily, big data makes this more of a

possibility now than ever before. It's a possibility we must harness.

WHAT ARE WE DOING NOW?

There are a number of active players already involved in big data in Halifax, including startups, multinationals, educational institutions, and government. One of the most visible so far has been IBM, which opened a Global Delivery Centre in Halifax last year with the support of the province through Nova Scotia Business Inc., and a consortium of six universities and colleges. The Centre, the only one of its kind in Canada, provides a full range of application management and consulting services. The province serves as the Centre's anchor client, with IBM providing solution and support services to the province and its public sector clients, including district health authorities, school boards, and housing authorities. IBM has also committed to working with six Nova Scotia universities and NSCC to educate students in analytics and application development.

To that end, IBM has donated a multi-million dollar cloud computing platform to those schools, to be housed at Dalhousie University, that will foster the creation of new curriculum and research in data analytics.

Dalhousie is also home to the Institute for Big Data Analytics. the first academic research institute in Canada dedicated to the study and advancement of this field. The Institute, launched last year, acts as an international hub of big data research, partners with local industries on big data projects, and develops advanced training for the next generation of big data analysts. Though relatively young, the Institute has already begun working on projects with local companies including Stromline Technologies and Seaforth Analytics Ltd. The Institute, with funding from the Nova Scotia Department of Economic and Rural Development and Tourism, is also working to support local start-ups and SMEs by providing courses on big data analytics and its benefits.

Halifax is home to a number of promising big data-related start-ups, including LeadSift, which has developed software to detect sales leads using data from social media. For example, for an automotive company, the software would scour sites like Twitter for users whose tweets suggest they are in the market for a new car, allowing the company

to then contact the potential customer directly. The start-up, co-founded by four Nova Scotia students and incorporated in 2012, has piqued the interest of **OMERS** Ventures and other angel investors, who contributed \$1.1 million in funding. Since then, San Francisco-based cloud computing company Salesforce has agreed to include LeadSift's product in its suite of marketanalytics tools, with a 50-50 revenue-sharing agreement. Halifax is also home to Analyze Re, a start-up co-founded last year by three veterans of the reinsurance industry. It is developing technology to improve how the industry analyzes big data. In November, Analyze Re secured \$1.4 million in financing from a number of funders, including the province, Innovacorp, and BDC Venture Capital.

Halifax Regional Municipality has dabbled in big data over the past year as well. In April, the city launched its open-data catalogue as part of a pilot project to release high-quality municipal datasets for public viewing and use in the development of web and mobile apps. Data released included information on transit routes, zoning boundaries, and crime. A contest to develop apps based on the data resulted in 38 submissions, including the winning Halification app that allows users to receive notifications relating to a range of topics like weather warnings, traffic updates, and school closures.

Ultimately, big data is a big game changer around the world. But many Canadian executives have been slow to embrace the opportunities it offers and address the challenges. This oversight presents an opportunity for Halifax to get ahead of the curve. But it will require the active participation of major players from the public, private, and educational sectors to tackle difficult issues like skilledlabour retention and data security. In doing so, however, Halifax could become a city of choice for entrepreneurs, youth, investors, and others. Doesn't that sound like the smart choice for a smart city?



ECONOMY

Universities account for 38% of R&D spending in Nova Scotia. More collaboration between the public, private, and academic communities would be a boon to the research and innovation culture in the province.

KEY INDICATORS

GROSS DOMESTIC PRODUCT (GDP)

- > GDP growth
- > GDP per capita
- > Research and development

COMMERCIAL SPACE

- > Inventory of office space
- > Vacancy rates

KEY SECTORS

- > Employment by sector
- > Public and private sector employment
- > Wages by industry

GATEWAY MOVEMENT

- People and cargo movement through Halifax Stanfield International Airport and Port of Halifax
- > Total air and boat movements

CONSUMER BEHAVIOUR

- > Retail sales
- > Housing starts and sales
- > Housing prices

BUSINESS CONFIDENCE

- > Rating of Halifax as a place to do business
- > Optimism of current economic prospects

CONSTRUCTION

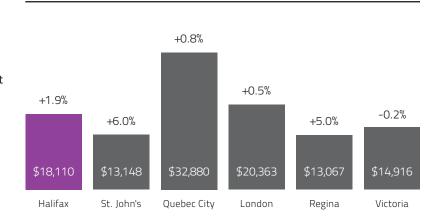
- > Value of building permits
- > Total capital investment
- > Building permit processing times

GROSS DOMESTIC PRODUCT

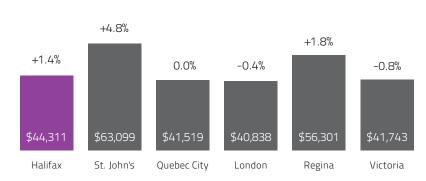
WHY IS THIS IMPORTANT?

GDP measures the amount of goods and services – how much "stuff" – an economy produces in a given year and the volume of spending. It measures the amount of consumption, business investment, government spending, and the difference between exports and imports. Economic growth fluctuates depending on factors like consumer demand, business confidence, government restraint, and success of local businesses in export markets.

REAL GDP LEVEL AND ANNUAL GROWTH, CMAs, 2013, \$2007 CHAINED MILLIONS SOURCE: CONFERENCE BOARD OF CANADA



REAL GDP PER CAPITA AND ANNUAL GROWTH, CMAS, 2013, \$2007 CHAINED DOLLARS SOURCE: CONFERENCE BOARD OF CANADA

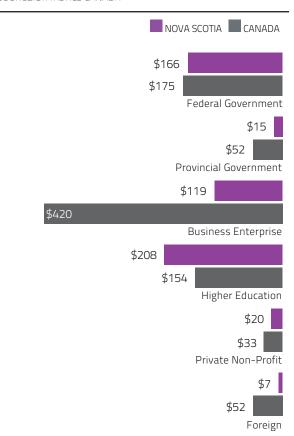


GDP per capita is an important measure of living standards, or what the average person has to live on. Growth in GDP is important. If GDP growth doesn't keep pace with population growth, our standard of living will decline. That's why so many economic experts are focused on the performance of output per worker - our productivity. A province and a country that doesn't invest in productivityenhancing measures such as investment in labour, technology, and R&D will ultimately see its living standards decline.



Given the success of universities in Halifax in attracting research dollars, more collaboration with the public and private sectors could be a boon to research and innovation.





R&D EXPENDITURE PER CAPITA, 2011

SOURCE: STATISTICS CANADA



HOW ARE WE DOING?

According to The Conference Board of Canada, Halifax's GDP grew by 1.9% to \$18.1 billion in 2013, keeping pace with the national average. This was the third-best performance among benchmark cities, behind St. John's (+6.0%) and Regina (+5.0%), which had a strong year driven by the strength of the resource industry. Halifax GDP per capita grew by 1.4% to \$44,300 in 2013, more than double the Canadian growth rate. This was also the third-best performance amongst benchmark cities, following St. John's and Regina.

This is welcome news. Both total economic activity and productivity are improving faster than most. Projections by The Conference Board suggest that growth metrics will improve even more significantly this year.

However, R&D spending in Nova Scotia declined by 4.2% in 2011, bringing the per capita investment level to \$534. This is well below the national average and only just over half the per capita level in Quebec and Ontario.

While per capita R&D expenditure by the higher education sector is greater than the national average in Nova Scotia, research spending by the provincial government and business are all well below the national average. As well, federal direct investment in Halifax R&D is in sharp decline with budget cuts to prominent federal government research labs in the city.

WHAT ARE OUR OPPORTUNITIES?

The shifting emphasis of the federal government to focus more on university-based research suggests a need for more collaboration between the public, private, and academic communities on research and innovation agendas. Given the success of universities in Halifax in attracting research dollars, this kind of collaboration could be a boon to the research and innovation culture in the province.

KEY SECTORS

WHY IS THIS IMPORTANT?

Steady growth requires economic diversity. An economy invested disproportionately into a small number of industries is subject to the ebb and flow of those industries. Resource economies are notoriously boom and bust depending on the pressures on world commodity prices. Halifax, and similarly structured economies like Toronto, doesn't have all of its economic eggs in one basket.

HOW ARE WE DOING?

The Halifax economy is diversified, with no single dominant industry. According to data produced by The Conference Board of Canada, Halifax's economic diversity is second among benchmark cities and is equivalent to Toronto.

In 2013, the services sector drove Halifax's employment growth. Growth was strongest in three sectors: professional, scientific, and technical services (+3,600); business, building, and other support services (+2,500); and retail and wholesale trade (+2,100).

However, 2013 has been the worst year to date for federal public service job cuts, with Nova Scotia losing 7.1% of its workforce in this area, for a total of 10.6% since 2010. As a result, federal public service employment, including defence, is now at its lowest level since before World War II. Provincial and municipal government employment has grown, with public administration and healthcare employment

EMPLOYMENT BY SECTOR, HALIFAX, 2013

SOURCE: STATISTICS CANADA

	2013 (000s)	Annual Growth
Total Employed	227.3	2,200
Goods-producing Sector	29.6	300
Agriculture	-	N/A
Forestry, Fishing, Mining, Quarrying, Oil & Gas	2.4	400
Utilities	2.5	0
Construction	14.6	600
Manufacturing	9.9	-600
Services-producing Sector	197.6	1,900
Trade	34.3	2,100
Transportation & Warehousing	10.1	-1,700
Finance, Insurance, Real Estate & Leasing	14.8	-1,500
Professional, Scientific & Technical Services	20.4	3,600
Business, Building & Other Support Services	13.1	2,500
Educational Services	19	-1,300
Health Care & Social Assistance	33.3	800
Information, Culture & Recreation	11.3	-100
Accommodation & Food Services	14.1	-1,200
Other Services	9.2	-2,000
Public Administration	18.1	900

FEDERAL PUBLIC SERVICE EMPLOYMENT LEVEL AND ANNUAL CHANGE, 2013 SOURCE: TREASURY BOARD OF CANADA

10,807 (-7.1%) Nova Scotia

4,792 (-7.2%) Newfoundland

30,683 (-5.4%) Quebec (excluding Gatineau)

08,433 (-5.4%

Ottawa (including Gatineau)

38,889 (-4.6%) Ontario (excluding Ottawa)

6,072 (-6.2%) Saskatchewan

23,797 (-6.2%) British Columbia

increasing by 3.4% in 2013. This pattern of growth in healthcare personnel responds to our aging demographic but presents major challenges for Nova Scotia given that most federal government healthcare transfers will be shifting westward and away from Atlantic Canada starting in 2014.

Provincial average hourly wages grew by 1.5% in 2013, with the largest increases in management (+4.6%); art, culture, recreation, and sport (+4.2%); and social science, education, and government (+3.6%). Primary industries saw the only wage decline, a 9.1% drop.

CONSUMER BEHAVIOUR

WHY IS THIS IMPORTANT?

Consumer spending is an economic driver. In Halifax, it can represent up to 70% of the GDP. Healthy growth in retail sales is an indicator of growth in local business. Simply put, if consumers aren't spending, then businesses have no one to sell to. Housing markets are also important, both as a large portion of business for the construction industry and as an indicator of consumer confidence. Housing represents the single largest purchase that most people will ever make, so growth in the housing market is a good indicator of the confidence local consumers have in the economy.

HOW ARE WE DOING?

Growth in Halifax's retail sales was on par with the national average this year, growing by 3.2% to \$6.8 billion. This ranked second among benchmark cities, behind growth of 3.7% in St. John's.

The Halifax housing market continued to cool in 2013, with housing starts dropping to just over 2,400, about 300 fewer than in 2012. This decline was due almost entirely to slowing demand for single-detached housing. Starts fell to 678 last year, the lowest level since 1980. The average price of new housing declined for the first time in five years, falling by 7.0%, a reflection of the shift away from single-detached homes. This was the largest decline among benchmark cities. The average selling price for existing homes increased by a modest 1.5% this year, the second slowest growth among benchmark cities and the slowest growth in Halifax in more than a decade.

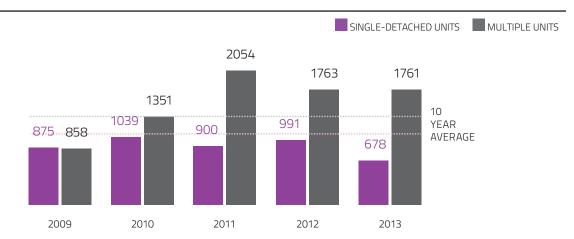
RETAIL SALES LEVEL AND ANNUAL GROWTH, 2013, CMAs, \$ MILLIONS SOURCE: CONFERENCE BOARD OF CANADA



Conversely, high levels of apartment starts continued for the third consecutive year, with almost 1,500 starts this year. This reflects the shift in many cities to apartments as aging boomers look to downsize. In addition, more students from outside Halifax attending post-secondary institutions and increased interest from immigrants drives demand for apartment units.

HALIFAX HOUSING SINGLE-DETACHED AND MULTIPLE UNIT STARTS

SOURCE: CANADA MORTGAGE AND HOUSING CORPORATION



HOUSING STARTS AND RESIDENTIAL SALES

SOURCE: CANADA MORTGAGE AND HOUSING CORPORATION

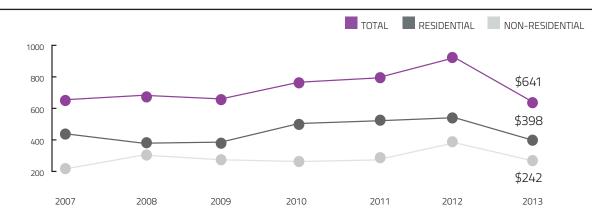
		Halifax	Si	t. John's	Que	bec City		London		Regina	1	Victoria
	Starts	Sales	Starts	Sales	Starts	Sales	Starts	Sales	Starts	Sales	Starts	Sales
2011	2,954	6,119	1,923	4,480	5,445	7,241	1,748	8,272	1,694	3,899	1,642	5,773
2012	2,754	6,239	2,153	4,650	6,416	7,219	2,240	8,272	3,093	3,952	1,700	5,460
2013	2,439	-	1,734	-	4,680	-	2,163	-	3,122	-	1,685	-

CONSTRUCTION

WHY IS THIS IMPORTANT?

Building permits and capital investment are strong indicators of how buoyant business feels about the economy. Confident businesses invest in new technology and equipment, and in the construction of buildings. Conversely, businesses pessimistic about the future will reduce investment and look to consolidate or even downsize their operations. Significant regulatory barriers tilt business attitudes further in a negative direction because of additional costs related to compliance requirements and extended project timelines.

VALUE OF BUILDING PERMITS, HALIFAX, ANNUAL SUM, SEASONALLY ADJUSTED (MILLIONS) SOURCE: STATISTICS CANADA



HOW ARE WE DOING?

After three record-breaking years, Halifax building permit values returned to average levels in 2013, falling by 30.5% over the previous year. This was the largest decline among benchmark cities. The decline reflected significant decreases in both residential (-26%) and non-residential (-37%) permits.

While this does represent a decline, it is due more so to an exceptional spike in permits in 2012 – a few large projects boosting permits that year, including Dalhousie's new residence and the new Halifax Central Library.

Data in last year's Halifax Index showed a worsening trend in the city's development approval timelines in the multi-unit residential, industrial, commercial, and institutional construction sector. Halifax's planning approval timelines do not generally compare well with jurisdictions across the country and the city's

long average turnaround times generally miss policy targets. Updating policy to improve on these timelines would be a major step towards improving the city's business climate.

Part of the issue appears to be Halifax's heavy reliance on site-specific development agreements, which require time-consuming public consultation and council review. The city has already made some strides to improve the situation in the downtown core. Development approval timelines have seen considerable improvements following the implementation of HRM by Design, and recent amendments to the HRM Charter allow for a more streamlined approval process throughout the rest of the Regional Centre. A critical review of the rest of the city's planning infrastructure could further identify means of allowing for more time-efficient, as-of-right development.

COMMERCIAL SPACE

WHY IS THIS IMPORTANT?

An adequate supply of office and retail space ensures that there is space to accommodate growth as well as shifting business and consumer patterns. Vacancy rates, the ratio of vacant space to the total amount of space available, are indicators of business demand. This provides signals to the commercial real estate sector regarding price and is an indication to developers of future demand. Vacancy rates are also a leading indicator of business activity. Declining vacancy rates suggest business is growing which increases the demand for commercial space.

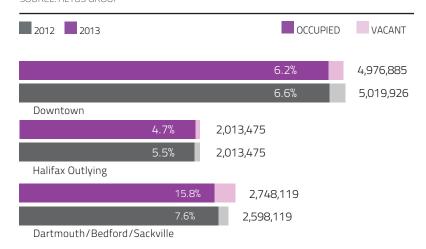
HOW ARE WE DOING?

Office inventory in the downtown remained virtually unchanged in 2013 at about 5 million sq. ft., while vacancy rates edged down slightly to 6.2%. The vacancy rate in Dartmouth, Bedford, and Sackville more than doubled from 7.6% to 15.8%, due in part to 150,000 sq. ft. of new inventory and a slight decline in occupied space.

HRM BUSINESS PARK SALES SOURCE: HRM PLANNING AND INFRASTRUCTURE

Year	Acreage Sold	Gross Sales Revenue		
2012-13	346.3	\$21,678,205		
2013-14	35.8	\$7,155,389		

TOTAL SUPPLY OF OFFICE SPACE INVENTORY AND VACANCY RATE BY REGION (SQ. FT.), HALIFAX SOURCE: ALTUS GROUP



While growth in inventory has been relatively flat in recent years, there is currently over 655,000 sq. ft. of office space under construction in the region. Over half of that is located in downtown Halifax. This is a positive sign that investors and developers are confident in future growth in the downtown. Many of the new projects on the books are mixed use, with residential, commercial, and retail elements. This follows on the strength in downtown apartment starts and big projects like the Halifax Central Library and various university investments in recent years. Wisely, Halifax is following the pattern of development in Toronto. In progressive cities like this, downtowns are no longer just for office workers; they are places where people at both ends of the demographic spectrum want to live as well.

Business park sales in Halifax returned to an average level in 2013 following a large spike in 2012 due to the sale of several big properties. In 2013, 35.9 acres were sold generating more than \$7 million in revenue for the municipality.

GATEWAY MOVEMENT

WHY IS THIS IMPORTANT?

People and cargo moving through the Halifax Gateway are a vital part of the local economy and an indicator of how well we are positioning ourselves as an attractive city and an international trade hub. More air passengers are an indication that people find Halifax an attractive place to visit and companies find it an essential place to do business. Ocean cargo movements are not only an indicator of the strength of the local economy but also of a stronger world economy. The Comprehensive Economic and Trade Agreement with Europe is poised to open up new opportunities for the Halifax Gateway. The movement of people and cargo through the gateway are key indicators of our success in this regard.

TOTAL PEOPLE, PLANE/CRUISE MOVEMENT AND METRIC TONNES THROUGH HALIFAX GATEWAY SOURCE: PORT OF HALIFAX, HALIFAX STANFIELD INTERNATIONAL AIRPORT

Year	Air Passengers (En/Deplaned)	Cruise Passengers	Plane Movements	Cruise Ships	Port Cargo	TEUs	Air Cargo
2012	3,605,701	252,847	80,876	134	9,490,961	416,572	29,569
2013	3,585,864	252,121	79,828	134	8,608,044	442,173	29,500

HOW ARE WE DOING?

Halifax Stanfield International Airport (HSIA) welcomed 3,585,864 passengers in 2013. This marks the airport's third busiest year, following on the strength of a record fourth-quarter surge in passenger traffic. On the cargo side, 2013 marked a solid year with 29,500 metric tonnes processed.

The Port of Halifax had a strong year despite the impact of continued economic uncertainty abroad. Twenty-foot-equivalent units of containerized cargo were up 6.1% over 2012, though overall tonnage of cargo was down 9.3% largely due to a reduction in bulk cargo. This year was another near-record year for cruise ship activity, with 134 cruise ship calls and over 250,000 passengers and crew coming to port, almost identical to 2012's numbers.

Since 2011, over \$100 million has been invested in port-related infrastructure projects. This includes a pier extension, new truck-marshalling facilities, new gates, and two new super post-Panamax cranes at the South End Container Terminal. A pier extension at the Fairview Cove container terminal was completed in late 2013. The extension allows for a more efficient operation when two large vessels are berthed at the same time. Work at the Richmond Terminals is ongoing and will be completed by the fall of 2014. The total investment in this project (from Transport Canada and the Halifax Port Authority) will be over \$70 million, allowing for growth in breakbulk and project cargo. These types of cargo hold tremendous economic potential thanks to the planned \$115 billion that will be spent on Atlantic Canadian mega projects, the National Shipbuilding Procurement Strategy, and work in the offshore oil industry.

BUSINESS CONFIDENCE

WHY IS THIS IMPORTANT?

One of the things economic developers, wherever they are from, understand is that confident businesses and confident communities grow faster. We can't have sustained economic growth and improved living standards without investment in new technologies and infrastructure, and businesses won't invest if they don't feel upbeat about the future. When businesses believe the future is bright, they take risks and innovate, producing new technologies and enhancing productivity. When businesses feel pessimistic, attitudes turn toxic and innovation crumbles.

BUSINESS CONFIDENCE INDEX. HALIFAX

SOURCE: GREATER HALIFAX PARTNERSHIP BUSINESS CONFIDENCE SURVEY. INDEX RANGES FROM 100 TO -100. A SCORE OF ZERO WOULD BE CONSIDERED NEITHER POSITIVE NOR NEGATIVE.

Year	General	Regions					
	Overall	Halifax	Dartmouth	Other HRM			
Spring 2012	25.6	26.1	29.9	20.2			
Spring 2013	24.5	25.2	25.3	22.6			
Spring 2014	20.2	20.0	21.7	18.6			

HOW ARE WE DOING?

Business confidence in Halifax has taken a significant hit since the Partnership's spring 2013 confidence survey. The Business Confidence Index, a measure of past and present, as well as the business climate, ranges from 100 to -100. This year it dropped from 24.5 to 20.2.

Business confidence remains higher in Halifax and Dartmouth than in the rest of the municipality, though the gap has continued to close. Confidence slipped in all three areas over the last year among both new and established businesses.

While the large majority of businesses (80%) are optimistic about their current economic prospects, this is down 6% from last spring. Perceptions of Halifax as a place to do business have remained steady. Sixty-six percent of businesses believe Halifax is an "average" place to do business (up 4% compared to last year), while 14% believe it is above average (down 3%) and 17% believe it is below average (up 1%).

RATING OF HALIFAX AS A PLACE TO DO BUSINESS AND OPTIMISM OF CURRENT ECONOMIC PROSPECTS FOR BUSINESS IN HALIFAX SOURCE: GREATER HALIFAX PARTNERSHIP BUSINESS CONFIDENCE SURVEY

Year	Rating of Halifax as a Place to do Business				Optimism of Current Economic Prospects for Business in Halifax				
	Above Average	Just Average	Below Average	Don't Know /No Answer	Extremely Optimistic	Moderately Optimistic	Not Very Optimistic	Not at all Optimistic	Don't Know /No Answer
Spring 2012	15%	64%	16%	5%	12%	74%	10%	2%	2%
Spring 2013	19%	59%	18%	4%	10%	77%	11%	1%	1%
Spring 2014	14%	66%	17%	4%	10%	71%	13%	4%	2%



Special Analysis: Head and Regional Offices

Head and regional offices (HROs) are good for the economies of cities, and many regions actively recruit and retain head offices. They create high-paying jobs, hire at entry levels, and train their employees well. They invest in people and capital, and their productivity tends to be higher than average. Their concentration of local decision-making power often leads to increased procurement of local goods and services, enhanced corporate social responsibility, and advanced research and development that, in turn, generates new opportunities.

Despite these well-documented benefits, Halifax has had a hard time recognizing the important positive impact that these companies have on our economy and our community. The recently released report Now or Never: An Urgent Call to Action for Nova Scotians noted an "apparent reluctance of some participants to recognize and celebrate the contribution and value of private sector leadership in the economy ... linked to a bias in favour of smaller, locally owned businesses ... over dynamic, growth-oriented enterprises." Fact is, when it comes to business and the impact it has on our community, size doesn't matter. What matters is the presence of firms with a culture of innovation, growth, and business and social ties that support the local community. HRO firms here in Halifax fit that bill.

Halifax is home to HROs of some of Canada's most successful corporations. However, merger and acquisition activity as well as changing macro-economic circumstances, such as the value of the Canadian dollar. mean the structure of our HRO environment is always changing. Local acquisitions and exits in recent years, including the regional offices of Blackberry and Flagstone Management Services Ltd., and the head offices of Ocean Nutrition and Jacques Whitford, show that we can't take the presence of these offices for granted.

Recognizing the significant economic importance of HROs, the Greater Halifax Partnership launched an initiative last year to help existing HROs achieve increased growth and stability while attracting new head and regional offices to the city. Part of this initiative included a study to take stock of the sector in Halifax and its impact in the province, and to better understand how to:

- Attract and retain head and regional offices;
- Remove barriers and provide information to support the expansion of existing head and regional offices;
- Market Halifax as the best location in Canada for head and regional offices;
- Raise awareness about the importance and economic impact of these businesses to our community; and
- Provide significant outreach and aftercare to existing HROs to ensure their needs are being met.

WHAT DOES HALIFAX'S HRO SECTOR LOOK LIKE?

Nova Scotia is home to 78 head offices, the highest concentration in Atlantic Canada and the highest per capita in Eastern Canada. While no official statistics exist on the number of regional head offices located here, the province is clearly home to a substantial

regional head office presence including all of Canada's five major banks, many insurance companies, and several Fortune 500 companies. Halifax is a competitive location for the development of branch offices headquartered elsewhere, particularly to serve the Atlantic Canada marketplace, the defence sector, and sectors aligned with the province's strengths (e.g., transportation and logistics, financial services, ocean industries).

As part of this study, we examined 61 HROs in Halifax to understand the impacts they have on the local economy and community. It is important to note that this sample represents only a small fraction of the total HRO sector in the region. Only 24 of Nova Scotia's 78 head offices were included. In addition, there are over 700 businesses in the province with 100 or more employees. While not all of these firms have regional head offices located here, it is likely that a significant share of them do. Therefore, the total HRO sector and its impact in the region could be anywhere from three to five times greater.

The companies in our study span a wide variety of industries including manufacturing; professional, scientific, and technical services; finance and insurance; real estate; information and cultural industries (primarily telecommunications); and construction.

HOW IMPORTANT ARE HROS?

Modern economies in cities like Halifax and Toronto are service economies, with more than 85% of workers employed in the service-producing sector. Consumer services represent a large portion of this employment. But the money we spend has to come from outside our community. We can't grow by spending the same dollar over and over again. Many of those dollars come from the activities of head and regional offices. This may be from a service-based company that is selling professional services around the world; it may come from a utility or a transportation company with points of presence around the country or around the world supported from their Halifax base. The spending power may come from companies producing unique products for export. It may also come from companies serving a broader regional market. All of these businesses pay other businesses for services from legal and banking to catering and cleaning. HROs, as the centre of business for their firms, are huge consumers of business-tobusiness services, producing a local economic impact far greater than their initial expenditures.

The impacts of the HROs included in our study help to illustrate this point. Overall, they contribute more than \$1.3 billion annually to the production of goods and services in the province. Their need and the need of their employees

for other local goods and services support additional spin-off activity to the tune of \$1.1 billion. This represents about 15% of the total Halifax economy. HROs here directly employ over 12,200 fulltime equivalent positions in their operations, or about 5% of total employment in Halifax. When spin-off employment in other local businesses supported by HRO activity is included, that number more than doubles to 25,600 full-time equivalent positions, or 11% of Halifax employment. HROs in our study pay salaries totalling more than \$575 million a year and their demand for local goods and services enable other local businesses to pay more than \$744 million in annual salaries. In addition, HRO activity and the resulting spin-offs generate \$193

million in federal taxes and \$194 million in provincial taxes annually.

Once again, it is important to note that the impact of HROs included in this study can be increased by three to five times to represent the total impact of the HRO sector in Halifax.

As a result of big investments in training, machinery and equipment, and innovation driven by R&D services, HRO firms create higher-paying jobs than other firms. Employees who work at the 78 head office locations in Nova Scotia earn 37% more than the provincial average. In our sample, the average salary paid to employees at all operations was over \$47,000 a year, 17% higher than the provincial average.

HEAD OFFICES PER 100,000 POPULATION IN CANADA AND BY PROVINCE, 2012 SOURCE: STATISTICS CANADA

Canada	8.2
Alberta	10.7
Saskatchewan	8.9
Manitoba	8.7
Ontario	8.5
Nova Scotia	8.2
Quebec	7.2
New Brunswick	7.1
British Columbia	7.1
Newfoundland & Labrador	7.0

AVERAGE WEEKLY WAGES, NOVA SCOTIA, 2012 SOURCE: STATISTICS CANADA

As corporate citizens of our city, HROs make notable contributions to community development. The presence of HROs has a notable impact on local charitable organizations. A 2008 study by the Institute for Competitiveness & Prosperity of head office operations in Montreal, Toronto, Calgary, and Vancouver found that head and regional offices in those cities contributed over \$30 million to their respective United Way and Centraide chapters. HROs located in Halifax make significant charitable investment in their community as well. For example, Nova Scotia Power makes several large charitable contributions each year, including \$50,000 to FEED Nova Scotia and \$150,000 to the Good Neighbour Energy Fund, and Emera also supports initiatives in the community, including a \$500,000 sponsorship to make the free, outdoor skating oval a permanent landmark. HROs do this because their executives and employees want to support the communities where they live. Improving the quality of life in their communities helps them attract and retain the high-end talent they need.

Employees of HROs also give generously. Employees at LED Roadway Lighting Ltd., contributed over \$152,000 in charitable donations in 2013. HRO employees do this because



Head Office Operations

they are generally well paid and encouraged by employers to give back to their communities. In addition to direct contributions from HROs themselves, the high-wage earners employed by HROs in the community make a big impact. The Institute for Competitiveness & Prosperity study found that employees at head and regional office firms contributed over \$100 million to their local United Way and Centraide chapters.

HROs also encourage community engagement through volunteerism. For example, managers volunteering on boards or for local charity campaigns make qualitative impacts in terms of offering financial management, strategic planning, and fundraising capacities.

The institute's study of 450 people engaged in boards and annual campaigns of 19 large charities across four Canadian cities found that 55% were employed by firms with head offices in those communities. The study reaffirms that executive-level employees at HROs make up a notable portion of management in the charitable and not-for-profit sector. Halifax examples of this include lawyers and staff at Boyne Clarke LLP and managers at Alexander Keith's brewery, as well as numerous other companies, volunteering time on boards for many non-profits and community organizations.

HOW ARE OTHERS BUILDING THEIR HRO BASE?

Many communities are paying close attention to HROs and the big benefits that come with them. For example, research in British Columbia found that for every additional \$1 million in gross domestic product generated by a head office 12 new jobs are created. In Nova Scotia, the number is 11 jobs for every incremental million dollars in GDP.

It makes sense to learn from best practices in other jurisdictions. Some examples from across Canada include:

- Mississauga is building relationships with existing local HRO decision-makers to stay up to date on potential expansion or acquisition plans so that they can capitalize on opportunities as they arise. They are also working with local executives to establish relationships with more senior decisionmakers at the parent company allowing them to attract further investment and resources to their region.
- > Alberta has the highest concentration of head offices in the country as a proportion of population. Calgary is working to build on that success. The city's economic development agency has branded the city as "Western Canada's Head Office Centre" as part of its investment-attraction marketing campaign. It has mapped the recent history of head office relocations to the city and has developed the necessary benchmarks to further gauge its progress in growing the sector. In 2010, Calgary completed a head office strategy, Home Base: What Drives Head Office Location and Calgary's Position as an International Business Hub. It opened a Global Business Centre the same year that provides temporary office space for international businesses visiting the city on procurement missions and helps incoming companies to access and build necessary local networks.
- > British Columbia has the lowest concentration of head offices in the country, but is working hard to get back in the game. The Business Council of British Columbia undertook research and provided recommendations on how to reverse the dwindling presence of corporate headquarters in the province in recent years. This year the province has launched an international head office attraction strategy specifically aimed at Asian companies looking to locate in North America. The goal is to attract five new regional head offices to the province by 2020.
- > Quebec released a report earlier this year on the maintenance and development of head offices that highlights the important economic impact that HROs have in the province. Montreal's economic development agency, Montréal International, has listed head offices as a priority sector for recruitment. The city of Laval also developed an HRO retention and attraction strategy in 2011.
- Waterloo actively visits the headquarters of companies with regional offices in that region when undertaking trade missions to other parts of the world.

HOW DO WE MOVE FORWARD?

Best practice and experience suggest several actions are essential for a successful HRO strategy. Some of these are already underway, some are on our radar screen, and some need to be developed further.

SHIFTING ATTITUDES ABOUT HROS IN HALIFAX

Several of the companies interviewed over the course of the Partnership's recent HRO study and observations from the Nova Scotia Commission on Building Our New Economy noted that successful large companies go largely unappreciated in Nova Scotia. At times, they are vilified for the very success and growth that generate positive economic outcomes for the province. It was further noted that there is a lot of enthusiasm and public support for companies when they first locate here, but once established, there is a lack of recognition for their contribution to the community. To that end, the Partnership has developed an initiative called Celebrate Business to formally recognize the contributions of businesses in Halifax including existing HRO operations.

ENGAGE HROS FACE TO FACE

The Partnership's business retention and expansion program, SmartBusiness, has increased its focus on HRO operations. The Partnership and its SmartBusiness partners are working with existing HROs to establish relationships with them, their parent offices, and organizations in their global supply chains, and to source new opportunities to grow the HRO sector. Further, this will allow for early detection of potential threats like exits or takeovers, and we will be able to respond with specialized support from the Partnership and the SmartBusiness action team, which consists of more than 30 local business and government organizations.

OPEN FOR BUSINESS

Finally, action must be taken to address regulatory, process, taxation, and other businessclimate issues in Nova Scotia. While KPMG's Competitive Alternatives 2014 study found that Halifax overall offers competitive business costs compared to other jurisdictions across North America and around the world, more needs to be done to attract and retain HROs. Several companies in our survey noted specific businessclimate issues that damage our competitive position. Identifying opportunities to improve on these issues would reaffirm our province's commitment to creating the most businessfriendly environment and attract more HRO companies.

The Nova Scotia Commission on Building Our New Economy report identified reluctance among Nova Scotians to recognize the important contributions of bigger business to the local economy and community. In the economic ecosystem, businesses of all sizes are important, especially those that are growth-oriented.

We must commit to making Halifax the most attractive place in Canada to locate and grow HRO activity. Policy makers and business organizations across Nova Scotia would be wise to do the same.



QUALITY OF PLACE

Health and social outcomes are directly linked to economic outcomes. They contribute to quality of life, attract investment, and allow the population to live up to its creative and productive potential.

KEY INDICATORS

SAFFTY

- Total and violender crime indices
- > Incidence of
- > Crime and fire stats
- Satisfaction with police services

AFFORDABILITY

- Personal income per capita
- > Percentage of people in low-income
- Market baske low-income threshold
- > Apartment rental and vacancy rates
- > Median housing prices

HEALTH

- Perceived physical and mental health
- > Activity levels
- Rate of overweight individuals and obesity

COMMUNITY

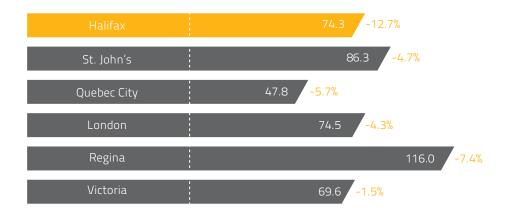
- > Life satisfaction
- Sense of belonging
- > Voter turnout
- Charitable contributions

ARTS, CULTURE AND RECREATION

- Employment and wages in arts, culture, and recreation
- Use of programs in arts, culture, and recreation

SAFETY

TOTAL CRIME SEVERITY INDEX, CMAs, 2012 SOURCE: STATISTICS CANADA



Safety and security top the list of quality-of-life factors for businesses and residents. In this respect, crime and traffic accident rates are important indicators of quality of life and of the social capital of our community. Perceptions of safety have a direct impact on our ability to attract and retain people and business, and affect the bottom line of all sectors from retail to technology.

The latest indicators show that Halifax is becoming a significantly safer city. According to Statistics Canada's Total Crime Severity Index, which measures the volume and severity of crime, Halifax dropped for the fourth year in a row, from 87.0 in 2011 to 74.3 in 2012, falling below the national average for the first time. This was the largest decline among benchmark cities.

Halifax's ranking in the Violent Crime Severity Index also fell to its lowest level ever in 2012, declining by almost 21 points to 92.4. Nevertheless, Halifax still has work to do to pull even with benchmark cities in this category.





Perceptions of safety have a direct impact on our ability to attract and retain people and business.

In 2013, there was also a dramatic improvement in the incidence of crime in Halifax, with every category of crime but one declining compared to 2012. Businesses have taken notice, with 92% of businesses reporting they were mostly or completely satisfied with police services in Halifax, up 4% over the previous year.

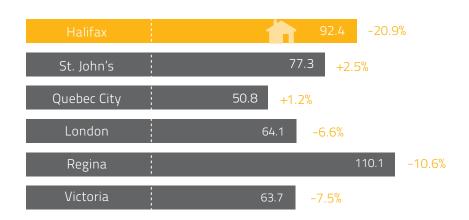
Halifax Regional Fire and Emergency responded to 11,000 incidents in 2013, down 6.9% from 2012. Urban response rates remained steady, with 83% of first-unit responders arriving within five minutes. Rural rates improved slightly rising from 89% to 91% arriving within 10 minutes.

INCIDENCE OF CRIME BY CATEGORY, HRM

SOURCE: HALIFAX REGIONAL POLICE

	Person Crime	Property Crime	Criminal Other	Federal	Provincial	Traffic Criminal	Traffic Collision	Traffic Fatalities	Traffic Injured
2012	3,111	11,787	8,364	1,401	55,964	2,479	8,699	18	1,143
2013	2,878	11,130	7,155	1,292	44,519	2,286	8,560	19	896

VIOLENT CRIME SEVERITY INDEX AND ANNUAL CHANGE, CMAs, 2012 SOURCE: STATISTICS CANADA



AFFORDABILITY

PERCENT OF PERSONS IN LOW INCOME, MARKET BASKET MEASURE (2011 BASE), CMAs, 2011 SOURCE: STATISTICS CANADA

HOUSEHOLD LOW-INCOME THRESHOLD AND ANNUAL GROWTH, MARKET BASKET MEASURE, HALIFAX

SOURCE: STATISTICS CANADA



WHY IS THIS IMPORTANT

Affordable living is tremendously important to the social and economic health of a community and has perhaps the single largest impact on quality of life. A lack of affordable housing limits our ability to attract students to our universities, cuts into our ability to attract and hold on to young professionals, and impacts the quality of life of aging baby boomers. Lack of affordability contributes to expensive urban sprawl, resulting in longer commutes, less family time, and increased costs to our city, to families, and to the environment. For some, high housing costs and low income can mean an inability to pay for basic necessities like food, clothing, and shelter. For others, it means more time commuting and less time with family and friends.

HOW ARE WE DOING?

The good news. At \$40,387, personal income per capita in Halifax ranked fourth among benchmark cities in 2013. Halifax saw strong growth in income per person of 3.1% compared to 2012, exceeding the national growth

rate of 2.5% and second only to Regina among benchmark cities, which grew by 3.5%.

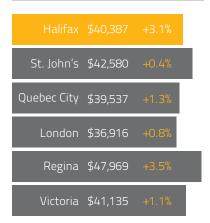
The bad news. At \$36,272, Halifax remained the benchmark city with the second most expensive market basket measure of goods a low-income family would consume. In 2011, Halifax had the lowest growth in costs among benchmark cities at 1.4%.

On balance, things are getting better for Halifax families. In 2011, 11.7% of individuals lived in low-income families, down from 13.4% in 2010. This marks the first year that the rate of poverty fell below the national average of 12.0% and provides some evidence that one of the best ways to deal with poverty is to improve incomes.

The average price of new housing in Halifax fell by 7.0% to \$397,000 in 2013. This was the largest decline among benchmark cities, though the price remains the second highest. The average selling price for existing homes in Halifax increased by a modest 1.5% to \$275,000, the



PERSONAL INCOME PER CAPITA AND ANNUAL GROWTH, CMAs, 2013 SOURCE: CONFERENCE BOARD OF CANADA



second slowest growth among benchmark cities and the fourth highest price tag. Average rental costs increased 2.3% to \$976 per month for a two-bedroom apartment, third among benchmark cities in both growth and price. Expected increases in apartment vacancy rates should moderate rent increases in coming years.



HEALTH

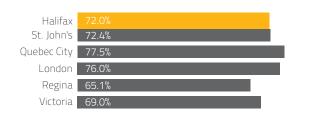
MILLY IS THIS IMPORTANT?

The state of both physical and mental health in a community has far-reaching implications. Most obvious is the impact it has on quality of life and healthcare costs as healthy individuals are more likely to live longer and maintain mobility and independence late into their lives. Healthy individuals are more able to participate in their communities. From an economic perspective, a healthy community means a more productive workforce. In addition, better job opportunities and low unemployment rates drive better health outcomes.

POPULATION PERCENTAGE REPORTING VERY GOOD OR EXCELLENT HEALTH, CMAs, 2012 SOURCE: STATISTICS CANADA



POPULATION PERCENTAGE REPORTING VERY GOOD OR EXCELLENT MENTAL HEALTH, CMAs, 2012 SOURCE: STATISTICS CANADA



POPULATION PERCENTAGE REPORTING OVERWEIGHT OR OBESE, CMAs, 2012 SOURCE: STATISTICS CANADA



HOW ARE WE DOING?

Perceptions of physical and mental health in Halifax declined a bit in 2012. The percentage of the population reporting "very good" or "excellent" physical health declined by 2.7 points to 59.3%, just below the national average of 59.9% and the second lowest among benchmark cities. In all, 72.0% of the Halifax population reported "very good" or "excellent" mental health in 2012, down 2.2 points from the previous year. This was just above the national average of 71.7% and the third highest among benchmark cities. Perceptions of physical and mental health fell among most benchmark cities.

Close to 58% of Halifax residents reported being overweight or obese in 2012, above the national average of 52.5% and the second highest rate among benchmark cities. Physically active lifestyles are tied closely with healthy body weight. The share of Halifax residents reporting an "active" or "moderately active" lifestyle declined for the second straight year in 2012, to 56.6%. While this lands Halifax in second place among benchmark cities, it puts us well behind first-place Victoria, at 65.9%.

Unhealthy weight and inactivity have been linked to a number of serious health problems, including diabetes, high blood pressure, heart disease, stroke, and some kinds of cancer. Improving density and public infrastructure to make active modes of transportation like walking and cycling more feasible could make a big difference to people's health in Halifax.

COMMUNITY

WHY IS THIS IMPORTANT?

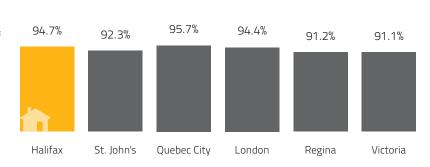
Sense of belonging and life satisfaction are important indicators that people are happy with the community they live in and provide a good indication of whether they will stay in those communities over the long term. Voter turnouts point to the level of engagement the community has with the political process and is reflective of the overall strength of our democracy. Charitable contributions are an indicator of people giving back to their community.

HOW ARE WE DOING?

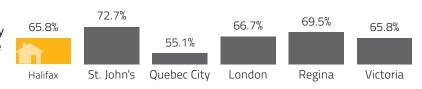
Halifax residents' sense of belonging dipped a little in 2012, with 65.8% of residents expressing a "somewhat" or "very strong" sense of belonging to the community, compared to 68.4% in 2011. This was the fourth highest among benchmark cities and below the national average. Halifax residents' life satisfaction improved, however, with 94.7% reporting they were "satisfied" or "very satisfied" with life, up 1.4 points from 2011. This was the second highest rate among benchmark cities, behind Quebec City.

Voter turnout in Halifax appears to have stabilized after declining steadily since the late 1980s; 59.1% of eligible voters cast votes in 2013's provincial election, up 1.2% compared to the 2009 provincial election. This could be in part to Elections Nova Scotia's efforts to enhance the ease of

PERCENTAGE (AGED 12+) SATISFIED OR VERY SATISFIED WITH LIFE, CMAs, 2012 SOURCE: STATISTICS CANADA



SENSE OF BELONGING TO LOCAL COMMUNITY, SOMEWHAT OR VERY STRONG, CMAs, 2012 SOURCE: STATISTICS CANADA

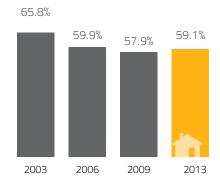


voting, including increasing the number of days for advanced polling and putting polling stations in university campuses, hospitals, shelters, prisons, and nursing homes.

Halifax's people are generous: 24.0% of tax filers claimed charitable contributions in 2012. Although this is down slightly from 24.9% in 2011, and puts us in the second lowest spot among benchmark cities, the median contribution increased to \$320, up from \$310, the second highest among benchmark cities.

PROVINCIAL ELECTION VOTER TURNOUT, HALIFAX

SOURCE: ELECTIONS NOVA SCOTIA





ARTS, CULTURE AND RECREATION

WHY IS THIS IMPORTANT?

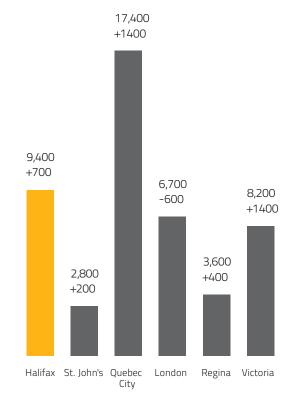
Arts, culture, and recreation are at the heart of any vibrant community. Arts and culture organizations are both employers of creative artists and producers of art and culture that reflect our region's diversity and quality of life. A strong arts and culture community and a variety of available recreation activities are important to promoting a healthy lifestyle and making the city an attractive place to live and work.

FULL-TIME HOURLY WAGES IN ART, CULTURE, RECREATION, AND SPORT OCCUPATIONS, NOVA SCOTIA, 2013

SOURCE: STATISTICS CANADA

EMPLOYMENT LEVEL AND ANNUAL CHANGE IN ARTS, CULTURE, RECREATION, AND SPORT, CMAs, 2013
SOURCE: STATISTICS CANADA





HOW ARE WE DOING?

Employment in arts, culture, recreation, and sport increased by 700 people to 9,400 in 2013, Halifax's highest level on record, and the fifth straight year of growth. This was equal to 4.1% of total employment in Halifax, tying with Quebec City for the second-highest share among benchmark cities, behind Victoria's 4.5%.

After dipping in 2012, average hourly wages in Nova Scotia among art, culture, recreation, and sport occupations grew by 4.2%. This was well above-average growth for all occupations of 1.5%, to \$21.38 per hour. Nevertheless, this wage remains \$1.19 below the average for all occupations in the province.

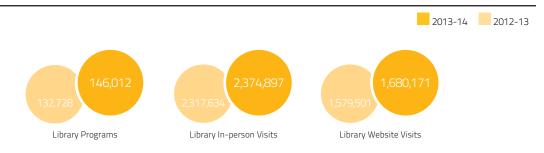
A municipal study on cultural investments found that HRM spent an average of \$6.7 million on net investment in arts and culture annually over the four fiscal years from 2009-10 to 2012-13. This places Halifax sixth out of the seven cities in the study, with a per capita net investment of \$17.19. Halifax was the only city whose investment hadn't grown over the four years, with an average increase of 34% among the sample. It is important to note, however, that this comparison does not include many indirect supports provided by the city, like property tax exemptions and in-kind investments.

AVERAGE ANNUAL NET CULTURAL INVESTMENT PER CAPITA, SELECT MUNICIPALITIES, 2009/10-2012/13 SOURCE: REPORT TO HRM COUNCIL BY THE SPECIAL ARTS AND CULTURAL ADVISORY COMMITTEE, MARCH 20, 2014



Library usage has reached its highest level in over six years, growing by 10.0% in fiscal 2013 over the previous year. The number of visits also grew to their highest level in over six years, with just over six visits per capita, in part due to increased use of public use computer and meeting room bookings.

LIBRARY PROGRAMMING ATTENDANCE AND VISITS, HRM SOURCE: HALLEAX REGIONAL LIBRARY





SUSTAINABILITY

Implementing sustainable practices today ensures that Halifax residents and Nova Scotians will continue to enjoy prosperity and a high quality of life far into the future.

KEY INDICATORS

DENSITY

- Regional Centre population and dwelling counts
- > Regional Centre housing starts
- Value of building permits in Regional Centre

TRANSPORTATION

- > Mode of transportation to work
- > Public transit usage and availability

ENVIRONMENT

- > Waste disposal and diversion
- Greenhouse gas emissions per capita

MUNICIPAL FISCAL SUSTAINABILITY

- > Bond rating
- > Revenues
- > Commercial tax per property

DENSITY

WHY IS THIS IMPORTANT?

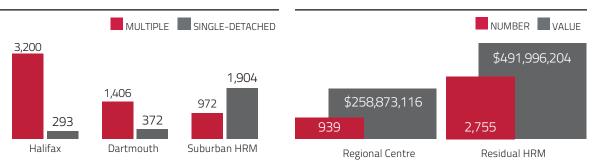
In an urban setting, density and sustainability – both environmental and financial – go hand in hand. Increasing suburban sprawl creates problems: dependency on automobiles is bad for our health and the environment, long commutes cut down on family time, and the need for costly new infrastructure like roads, sewers, and parks is expensive, driving up tax rates. Denser cities are able to mitigate these issues while enjoying economic, health, and environmental benefits.

HOUSING AND APARTMENT STARTS BY HRM SUBMARKET, 2011-13

SOURCE: CANADA MORTGAGE AND HOUSING CORPORATION

TOTAL BUILDING PERMITS, VALUE AND NUMBER, SUB-HALIFAX, 2013/14

SOURCE: STATISTICS CANADA



HOW ARE WE DOING?

The 2011 Census showed growth of 1,832 people in the Regional Centre – defined as the Halifax Peninsula and Dartmouth within the circumferential highway – since 2006, producing a marginal increase in density after a period of slumped population growth in the Regional Centre. Recent trends in housing construction and building permits suggest that investors and developers are betting on renewed growth in the Regional Centre. Booming apartment housing starts over the past three years has been a boon for development in Halifax and Dartmouth, which together accounted for 83% of overall apartment starts in the municipality and 65% of overall housing starts over the past three years. That translates to almost 5,300 new housing units added to the 177,000 dwellings located in the Regional Centre in 2011.

> The value of building permits for construction in the Regional Centre remained elevated in 2013 at almost \$259 million, though slightly below its peak of over \$275 million in 2012. The Regional Centre's share of the municipality's value of building permits increased for the second year in a row, from 29% in 2012 to 34% in 2013.

The HRM Charter was recently amended to give the city the power to use bonus zoning – including density bonusing – and site-planning tools throughout the Halifax Peninsula and downtown Dartmouth. These changes will allow for a streamlined building approval process in the Regional Centre and for the city to encourage more community benefits in development including, for example, more affordable housing.

TRANSPORTATION

WHY IS THIS IMPORTANT?

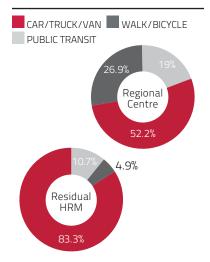
Use of public and active transportation is important to a healthy, environmentally friendly community. Fewer cars on the road mean lower levels of carbon emissions and less congestion reduces commute times. Physically active modes of transportation like walking and biking are associated with all kinds of physical and mental health benefits, including lower rates of obesity and heart disease and improved mood. Median commute times and the mode of transportation that people use to get to work are indicators of how Halifax is doing on density and environmental outcomes.

HOW ARE WE DOING?

Public transportation ridership grew by 1.9% in 2013-14 compared to 2012-13 roughly keeping pace with 2.1% growth in the total number of hours of service on the road. While this is a positive development, it represents only a 0.4% increase in ridership compared to five years earlier in 2008-09, despite an increase in service hours of 22.4%.

According to the National Household Survey, Halifax continued to have the highest proportion of its population that took public transit to work in 2011, at 12.5%. This exceeded the national average of 12.0%. Halifax also had the second highest proportion of its population that walked or cycled to work at 9.7%, about 90% of which are accounted for by Regional Centre residents walking to work. In the Regional Centre, 19.0% of the population took public transit to work and a whopping 27% walked or rode a bicycle as part of their daily commute. Quite obviously,

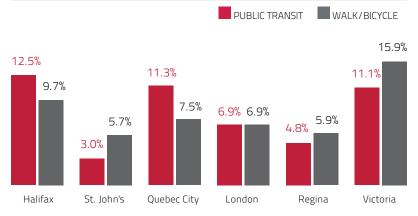
EMPLOYED LABOUR FORCE BY MODE OF TRANSPORTATION TO WORK, HALIFAX SOURCE: NATIONAL HOUSEHOLD SURVEY



more residents living in the core means fewer cars on the road, better health outcomes, and less environmental impact.

A website called Walk Score, which rates North American and Australian cities on their "walkability," has rated Halifax a "very walkable" city, with the second highest walk score rating among comparator cities, behind Victoria.

EMPLOYED LABOUR FORCE BY MODE OF TRANSPORTATION TO WORK SOURCE: NATIONAL HOUSEHOLD SURVEY



WHERE ARE OUR OPPORTUNITIES?

In January, Regional Council approved an expanded \$490,000 study to overhaul the entire transit system, giving staff a chance to redraw the transit map. The plan aims to make public transit a more feasible option for residents and could be implemented as early as late 2016.

ENVIRONMENT

WHY IS THIS IMPORTANT?

Environmental outcomes have a direct effect on quality of life outcomes. Environmental quality is of central importance to a healthy, productive population. In the longer term, environmental outcomes are also tied directly to economic outcomes, affecting our supply of natural resources and the attractiveness of our region. Achievement of environmental goals is a requirement of truly sustainable progress.

HOW ARE WE DOING?

Residential waste levels declined for the second straight year in 2012-13 to 0.137 tonnes per capita, a decline of 4.9% over the previous year. Commercial waste declined as well, down 5.2% over the previous year to 0.239 tonnes per capita. Over the longer term, both residential and commercial waste levels have been on the decline and remain well below the national average.

Part of the reason for this is the success of the city's recycling and composting programs. The proportion of waste diverted from landfills through recycling and composting remained steady at 61% in 2013-14, for the fourth straight year. This remains one of the highest diversion rates in the country.

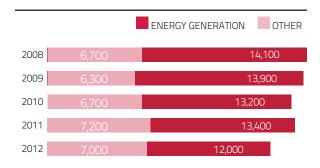
Nova Scotia's greenhouse gas emissions declined in 2012 to roughly 1990 levels. At 20.1 CO, equivalent tonnes, Nova Scotia's per capita emission levels have declined to the national average for the first time on record. Nevertheless, Nova Scotia remains among the four provinces with the highest emissions per capita, behind Alberta, Saskatchewan, and New Brunswick, due to our dependence on coal-fired electricity generation. Moves toward increased use of renewable energy generation, which now accounts for over a guarter of installed generating capacity, have been largely responsible for the province's recent improvements. Wind energy generation in particular, which grew more than tenfold from 2005 to 2012, has accounted for most of the growth in renewable energy generation.

TONNES OF WASTE PER CAPITA, HALIFAX

SOURCE: HRM - TRANSPORTATION AND PUBLIC WORKS

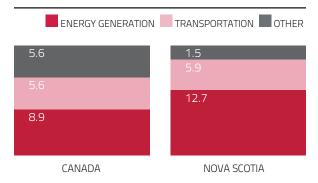


GREENHOUSE GAS EMISSIONS, KILOTONNES OF CO2 EQUIVALENT, NOVA SCOTIA SOURCE: ENVIRONMENT CANADA



GREENHOUSE GAS EMISSIONS PER CAPITA BY SOURCE, TONNES OF CO2 EQUIVALENT, 2012

SOURCE: ENVIRONMENT CANADA





MUNICIPAL FISCAL SUSTAINABILITY

WHY IS THIS IMPORTANT?

Fiscal sustainability is vital to the long-term viability of a city. Revenue growth is key for local government to be able to build the infrastructure and provide the increasing service levels needed to support a growing population. It's also important to ensure that revenue growth is balanced with growth in household incomes and business activity. Otherwise the burden placed on households and businesses can become too large, reducing standards of living and the level of investment. Indeed, several towns in Nova Scotia have found their costs outstripping revenues and have dissolved or are on the path to dissolution.

TOTAL REVENUES BY SOURCE, HRM
SOURCE: HRM TAXATION AND FISCAL POLICY

PROPERTY TAX AND TAX AGREEMENTS

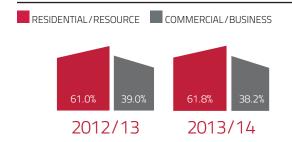
PAYMENTS IN LIEU OF TAXES (PILT)

DEED TRANSFER TAX

NON-TAX REVENUES



RESIDENTIAL AND COMMERCIAL TAX SPLIT, HRM (GENERAL, PROVINCIAL, & TRANSIT)
SOURCE: HRM TAXATION AND FISCAL POLICY



HOW ARE WE DOING?

Municipal revenues and expenditures grew by 4.3% in 2013-14 over the previous year to \$824 million. Residential and resource property tax per dwelling increased by 4.6% in 2013-14 compared to 2012-13. Property tax per dwelling has increased over the longer term as well, reflecting increases in residential assessed values. This raises some concern of a growing property tax burden on residents.

However, as a share of Halifax GDP, the tax burden remained steady at 3.2%. The average commercial property tax grew by 2.5% over the previous year, continuing to grow at a slower rate than GDP so as not to increase the burden on business. The commercial portion of property tax paid decreased by 0.8%, continuing a longer-term decline that is due in part to the phasing out of the business occupancy tax.

KPMG's Competitive Alternatives 2014 found that Halifax's effective business property tax rates (taxes paid as a share of profits) was middle of the pack at 4.6% compared to available benchmark cities, as well as Montreal, Toronto, and Vancouver. The effective income tax rate – including both federal and provincial – was the highest among those cities, however, at 16.4%, leaving Halifax with the second highest overall effective tax rate in the group, behind Vancouver.

Halifax Regional Municipality's credit rating remains at AA- with a stable outlook since May of 2012. This indicates confidence in the municipality's credit worthiness and its long-term fiscal health.

NOTES

NOTES



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