

# Sector Profile

## Professional, Scientific and Technical Services

### Atlantic Region

2023



#### HIGHLIGHTS

- The professional, scientific, and technical services sector, representing 6.5% of Atlantic Canada's workforce, is a diverse sector that covers a wide range of occupations and sub-industries.
- The workforce consists of highly educated individuals, of whom more than half are male, and most are prime working age (25 to 44 years).
- Sector job growth has been strong and steady, especially during the COVID-19 pandemic. Job growth in 2022 was historically high, continuing a trend of being the fastest growing sector in the Atlantic economy.
- Annual employment growth in this sector is projected to be 1.3%, almost twice as fast as the average rate for all industries. The fastest job growth is expected in Nova Scotia (+3.1%).

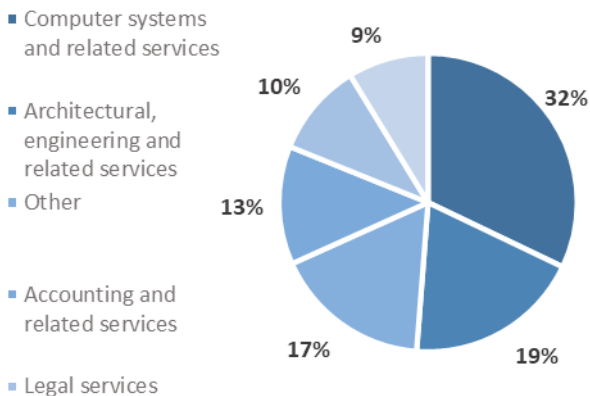
#### ABOUT THE INDUSTRY

##### Composition and Importance of the Sector

The professional, scientific and technical services sector is comprised of nine diverse sub-industries. The distinguishing feature of this sector is that production processes are almost wholly dependent on worker skills, while equipment and materials are of secondary importance. Businesses in this sector are characterized as selling expertise, and sub-industries are defined by the area of expertise offered. Some notable highly skilled specializations includes engineering, computer systems design, accounting, law, and scientific research.

The two largest sub-industries comprise more than half of employment in this sector: computer systems design and related services (32%) and architectural, engineering and related services (19%). In 2022, there were a total of 62 firms that employed over 100 workers each. Of these, 46.8% were in computer systems design and related services, 19.4% were in engineering related services, and 11.3% were in accounting related services.

##### Employment Share by sub-industry



Source: Statistics Canada, Labour Force Survey 2022



## Geographic Distribution of Employment

The sector employed 6.5% of Atlantic Canada's workforce in 2022, with an employment level of 76,100. This was a considerable increase of 9,300 workers (+13.9%) compared to 2021.

Nova Scotia has the highest concentration of employment in this sector and comprises almost half of the sectoral workforce in the Atlantic region. This can be attributed in large part to a growing technology hub centred in Halifax. The other Atlantic provinces also have prominent sub-industries with large employers, such as cyber security in New Brunswick, bioscience in Prince Edward Island, and financial technology in Newfoundland and Labrador.

	Employed 2022	Industry Share (%)
Atlantic Canada	76,100	6.5%
Newfoundland and Labrador	11,600	5.0%
Prince Edward Island	4,900	5.8%
Nova Scotia	37,600	7.8%
New Brunswick	22,000	5.9%

Source: Statistics Canada, Labour Force Survey

## WORKFORCE

### Workforce Characteristics

Workers in the professional, scientific, and technical services sector tend to be highly educated. In 2022, almost no workers in the sector had less than a high school degree (0.9%), while 56.8% had at least a university degree—much higher than the average share (29.6%) for all workers in Atlantic Canada. Furthermore, 20.0% of individuals employed in this sector held a degree above the bachelor's level, doubling the average share across all industries.

Employment income in this sector is above the average for the Atlantic Canadian workforce. Average annual earnings in this sector in 2020 stood at \$61,725, compared to \$48,750 for all industries. This reflects the high educational attainment requirements of employees in the sector, as well as strong demand for specialized skillsets in various areas. Tech-related skills have been in particularly high demand, prompting governments and industry associations to work with post-secondary institutions to expand and support programs related to this field.

Males accounted for 57.5% of sectoral employment in 2022, widening the gender gap by 2.1 percentage points over the previous year. The workforce in this sector is relatively young, with 78.4% of workers falling between the ages of 15 and 44, and more than 50% in the prime working age (25 to 44 years of age) bracket.

### Main Occupations

Occupations in the sector are widely dispersed across a broad range of professional skill sets. As such, even the largest occupations only comprise a small share of total sectoral employment. The two largest occupations in 2022, Information systems specialists and Software developers and programmers, employed 9,125 workers primarily within technology related sub-industries. The next three largest occupations were professions related to legal and financial services.

Notably, IT-related occupations comprise a growing share of employment in this sector. Between 2012 and 2022, these occupations accounted for nearly half of sectoral job growth, despite making up less than one-quarter of total employment.

Top 5 largest occupations	Employed 2022	% Share of Industry
Information systems specialists	4,650	6.1%
Software developers and programmers	4,475	5.9%
Lawyers and Quebec notaries	4,350	5.7%
Financial auditors and accountants	3,650	4.8%
Accounting technicians and bookkeepers	2,525	3.3%

Source: ESDC/Service Canada



## RECENT HISTORY

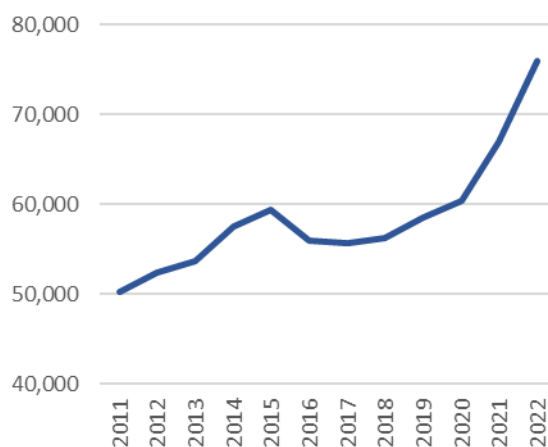
The professional, scientific and technical services sector maintained its rapid rate of employment growth in 2022 (+13.9%), far exceeding other sectors and the pace of the Atlantic workforce (+3.6%) as a whole. Substantial employment growth occurred in both New Brunswick and Nova Scotia, seeing 3,600 (+19.6%) and 4,700 (+14.3%) workers, respectively. Demand for the specialized services supplied by this sector tends to increase with population growth, which has accelerated considerably in Atlantic Canada in recent years. The ongoing digital transformation of the economy has also boosted activity in tech-related sub-industries.

In contrast to sectors that were greatly impacted by COVID-19 containment measures, this sector has thrived in recent years. As employers across many industries sought to reduce viral transmission in workplaces, demand was created for tech-related services and infrastructure provided by this sector that could allow employees to work remotely. Investments in these changes were further boosted by low interest rates. The professional, scientific and technical services sector itself was well suited to adapt to pandemic containment measures, with 47% of its workforce working from home. Strong job growth and higher salaries in this sector also attracted workers from other industries amid widespread lay-offs and reskilling.

Despite having grown at a rapid pace in recent years, this sector faces some challenges. The primary concern for employers is recruitment and retention. Although it has stabilized somewhat, the labour market in this sector remains tight, with just 0.8 workers available per job vacancy in Nova Scotia in 2022. It is particularly difficult for employers to find workers who have both hard skills (education and training) as well as soft skills from multiple years of work experience. Further, rising interest rates and recent high inflation has made it more difficult to raise capital in this sector. These economic pressures have resulted in greater demand for experienced workers, as firms try to limit spending on training junior hires. Compared to regional firms and start-ups, larger global firms tend to have a greater competitive ability to retain workers and absorb rising costs. Further, hiring international talent although more expensive and time consuming has been necessary in many cases to meet these labour demands.

Upward pressure on wages resulting from inflation has slowed somewhat in the past year, and worker priorities

### Historical Employment Trend Atlantic Canada



Source: Statistics Canada, Labour Force Survey

have shifted toward work-life balance. A large share of employees who began to work from home during the pandemic would prefer to keep this arrangement, while many employers have indicated their intention to return to office-based work. Given the competitive hiring conditions in this sector, some employers have tried to strike a compromise between these priorities. This may include limiting in-office attendance to a portion of the week, or even just once or twice a month.

There have been several capital investment projects announced in recent years relevant to this sector. In 2022, over \$3M from the P.E.I. and federal governments was granted to the P.E.I. BioAlliance as well as an additional \$5M towards a biomanufacturing training facility in Charlottetown and a bioscience manufacturing Incubator. This will support the 2,200 workers employed by the 60 firms in the PEI bioscience industry. Digital NS secured \$3.7M in federal funding in 2022 towards their Skills for Hire Atlantic project, looking to provide training and skills development to 1,500 Atlantic Canadians. In 2023, Thales Group with \$8.6M in joint government funding will be opening the National Digital Excellence Centre (NDEC) at UNB's Knowledge Park in Fredericton. The centre will focus on cybersecurity and expects to create 110 jobs in the field and contribute \$63M to the provincial GDP over the next five years.



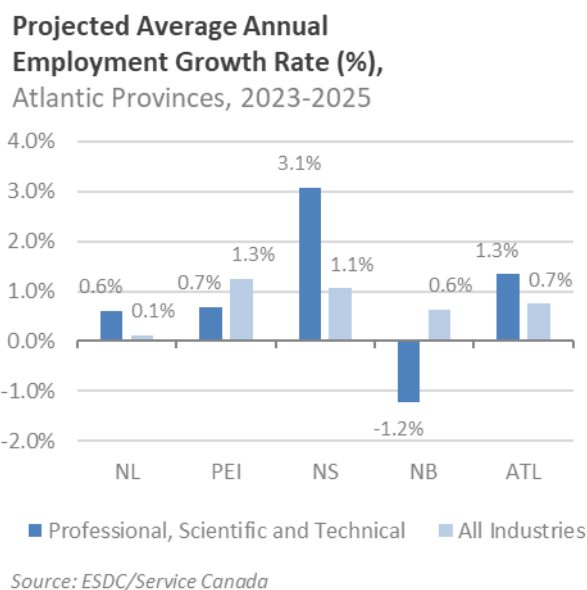
## OUTLOOK

Employment growth in professional, scientific and technical services is projected to average 1.3% over the next two years, outpacing overall employment growth by 0.6 percentage points.

Provincially, Nova Scotia is expected to have the strongest job growth rate in this sector at 3.1%, exceeding its overall growth by 2.1 percentage points. Much of this growth can be attributed to the computer systems design industry in Halifax, where real GDP growth (+10% y/y), government support, and a large number of small medium enterprises (SMEs) are driving expansion. Conversely, New Brunswick is the only province forecasted to experience a decline in sectoral employment. The number of workers is projected to fall by -1.2% over the next two years, well below the 0.6% growth rate projected for the province's workforce as a whole.

Demand for labour in this sector has been high and stable, with the number of vacancies remaining around 2,000 since Q3 2021. This contrasts with the total number of vacancies for all industries in the Atlantic region, which peaked in Q2 2022 before trending downward. It indicates that firms are still seeking labour, and with a small pool of workers qualified to fill these positions, competition for talent should persist throughout the coming years.

Rising interest rates and inflation along with tightness in the labour market represent factors that may slow the growth of this sector. Large technology companies such as Ontario-based Shopify have been laying off employees to optimize operations and minimize rising costs. Regardless, the Canadian digital economy is expected to expand by 250,000 workers by 2025 to reach an employment level of 2.26 million.



Recent drivers of employment growth are expected to continue to support the sector throughout the projection period, resulting in above-average job gains. Ongoing population growth will benefit sub-industries such as legal and accounting services, while emerging trends such as artificial intelligence, green technologies, and automation will boost tech-related parts of the sector. While solid job growth is projected through 2025, the exceptionally high rate of growth observed in recent years is not expected to continue at the same pace.

**Note:** In preparing this document, the authors have taken care to provide clients with labour market information that is timely and accurate at the time of publication. Since labour market conditions are dynamic, some of the information presented here may have changed since this document was published. Users are encouraged to also refer to other sources for additional information on the local economy and labour market. Information contained in this document does not necessarily reflect official policies of Employment and Social Development Canada.

The analysis in this report was finalized as of **August, 2023**.

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## APPENDIX

Real GDP (2022) and Employment (2022) for Atlantic Canada						
	Professional, Scientific and Technical Services			All Industries		
	Number	Share of Total	AAGR*	Number	Share of Total	AAGR*
Real GDP (M\$)	\$4,429.7	100.0%	3.0%	\$109,227.1	100.0%	1.0%
Newfoundland and Labrador	\$946.5	21.4%	1.5%	\$30,150.3	27.6%	0.1%
Prince Edward Island	\$223.4	5.0%	4.9%	\$6,542.6	6.0%	2.5%
Nova Scotia	\$2,137.1	48.2%	4.6%	\$40,011.5	36.6%	1.5%
New Brunswick	\$1,122.7	25.3%	1.4%	\$32,522.7	29.8%	1.1%
Employment (000s)	76.0	100.0%	3.8%	1175.2	100.0%	0.4%
Male	43.8	57.6%	4.1%	596.0	50.7%	0.4%
Female	32.3	42.4%	3.4%	579.2	49.3%	0.5%
15-24 years old	5.8	7.6%	3.0%	158.7	13.5%	0.4%
25-54 years old	53.6	70.6%	4.0%	734.4	62.5%	-0.2%
55 years and older	16.6	21.8%	3.5%	282.1	24.0%	2.2%
Worked full-time	67.5	88.8%	4.3%	990.6	84.3%	0.6%
Worked part-time	8.5	11.2%	0.6%	184.6	15.7%	-0.4%
Self-employed	17.3	22.7%	0.5%	123.2	10.5%	-1.0%
Employees	58.8	77.3%	5.0%	1052.0	89.5%	0.6%
Permanent job	54.5	71.8%	5.4%	884.4	75.3%	1.0%
Temporary job	4.2	5.5%	1.0%	167.6	14.3%	-1.4%
Less than high school	0.7	0.9%	-2.1%	95.5	8.1%	-3.9%
High school graduate	7.6	10.1%	0.9%	275.3	23.4%	-0.5%
Postsecondary cert. or diploma	24.5	32.3%	2.7%	456.3	38.8%	0.3%
University degree	43.1	56.8%	5.3%	348.2	29.6%	3.3%
Newfoundland and Labrador	11.6	15.2%	1.4%	232.5	19.8%	-0.3%
Prince Edward Island	4.9	6.4%	3.6%	84.3	7.2%	1.5%
Nova Scotia	37.6	49.5%	4.6%	484.9	41.3%	0.6%
New Brunswick	22.0	28.9%	3.9%	373.5	31.8%	0.5%

Source: Statistics Canada, Labour Force Survey - Custom Table; Table 36-10-0402-01

\*Average annual growth rate for last ten years of available data (GDP 2013-22 and Employment 2013-22)

