



Calgary in the New Economy

Grow your Career conference

calgary economic
development
be part of the energy™

Calgary Economic Development



Business attraction,
expansion & retention



Tell Calgary's story



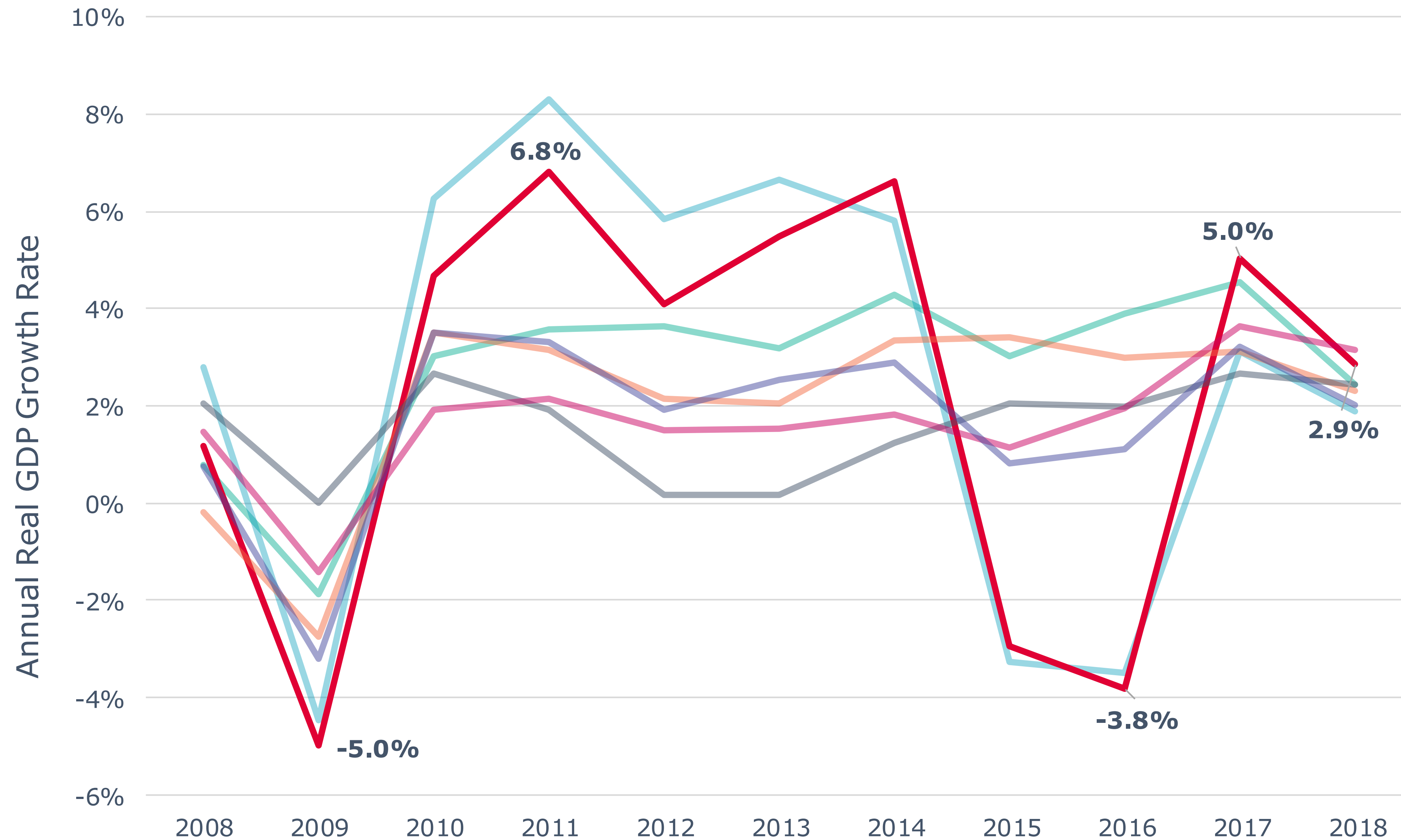
Talent
attraction &
workforce development



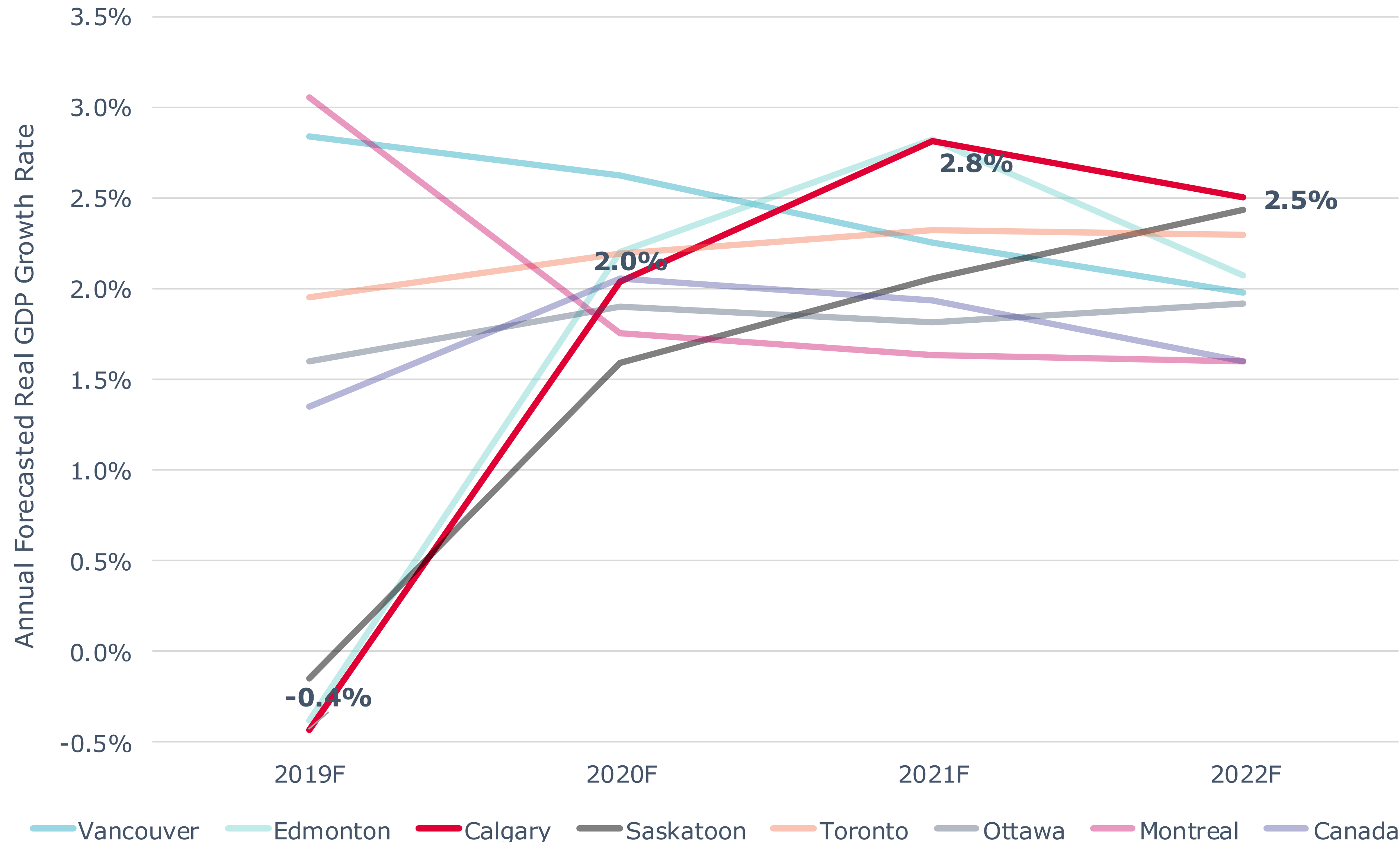
Startup
Calgary & support for the
innovation ecosystem



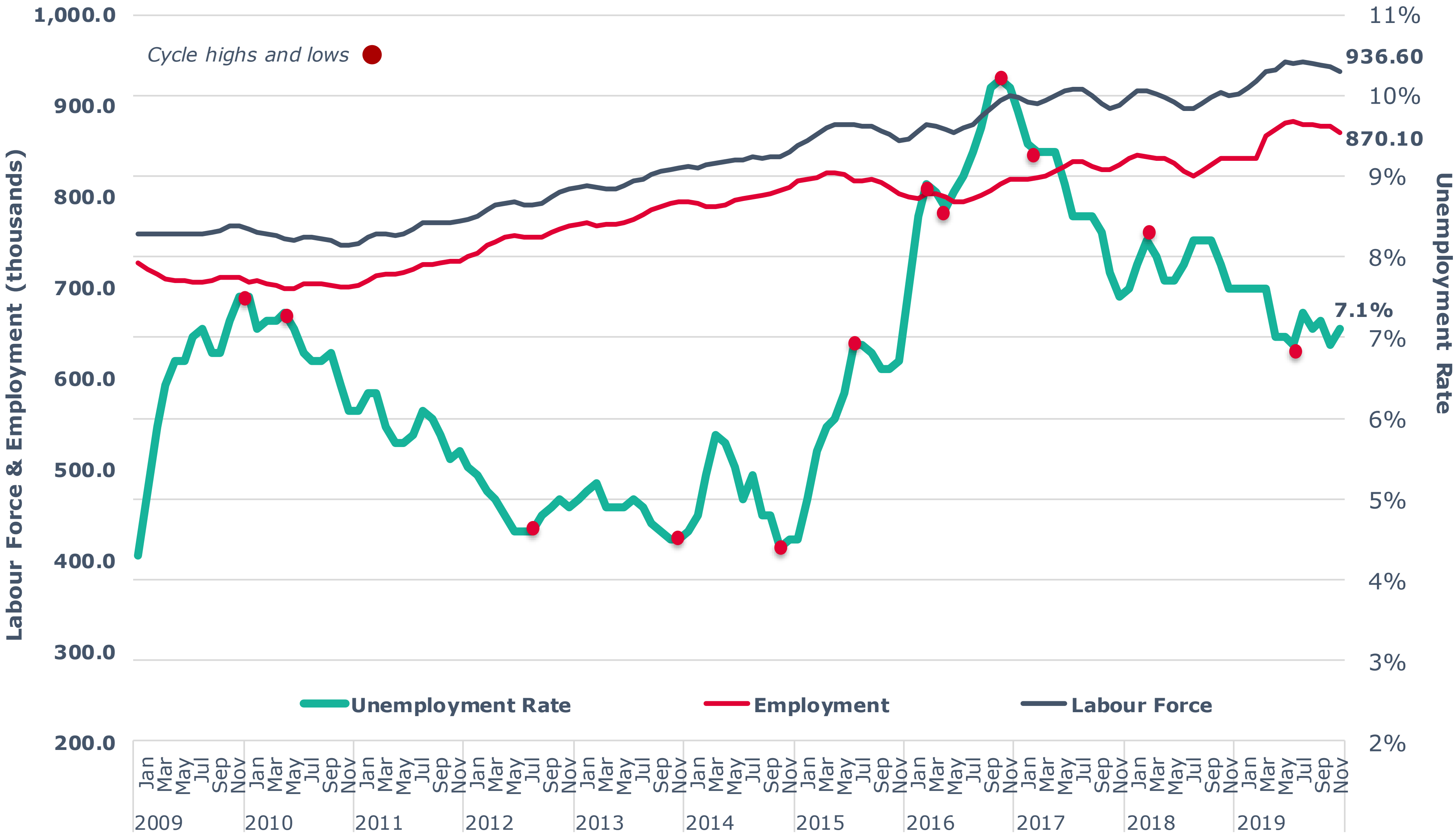
Annual Real GDP Growth Rates Across Canada



Annual Forecasted Real GDP Growth Rates Across Canada

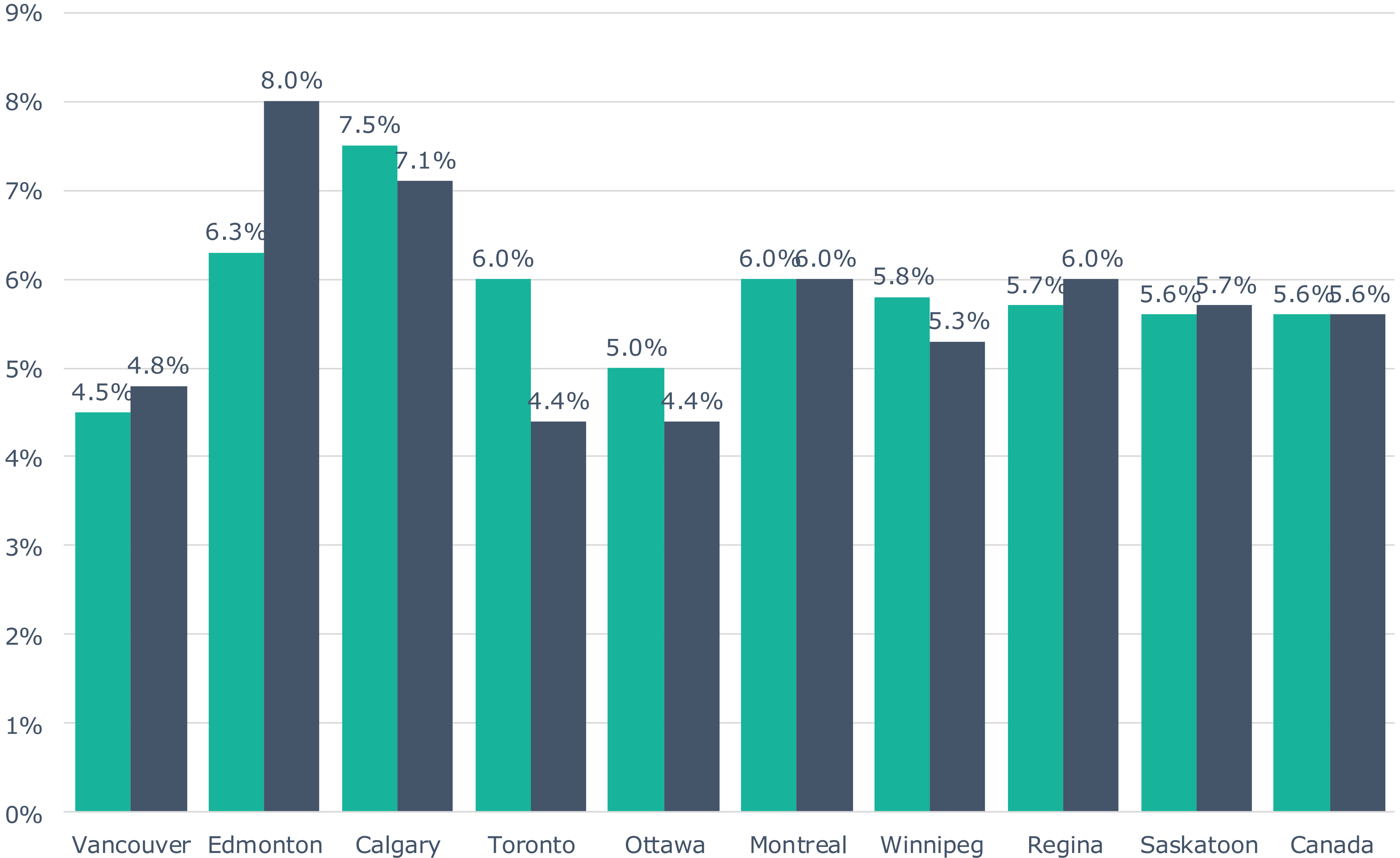


Calgary CMA Historical Unemployment Rate, Labour Force & Employment



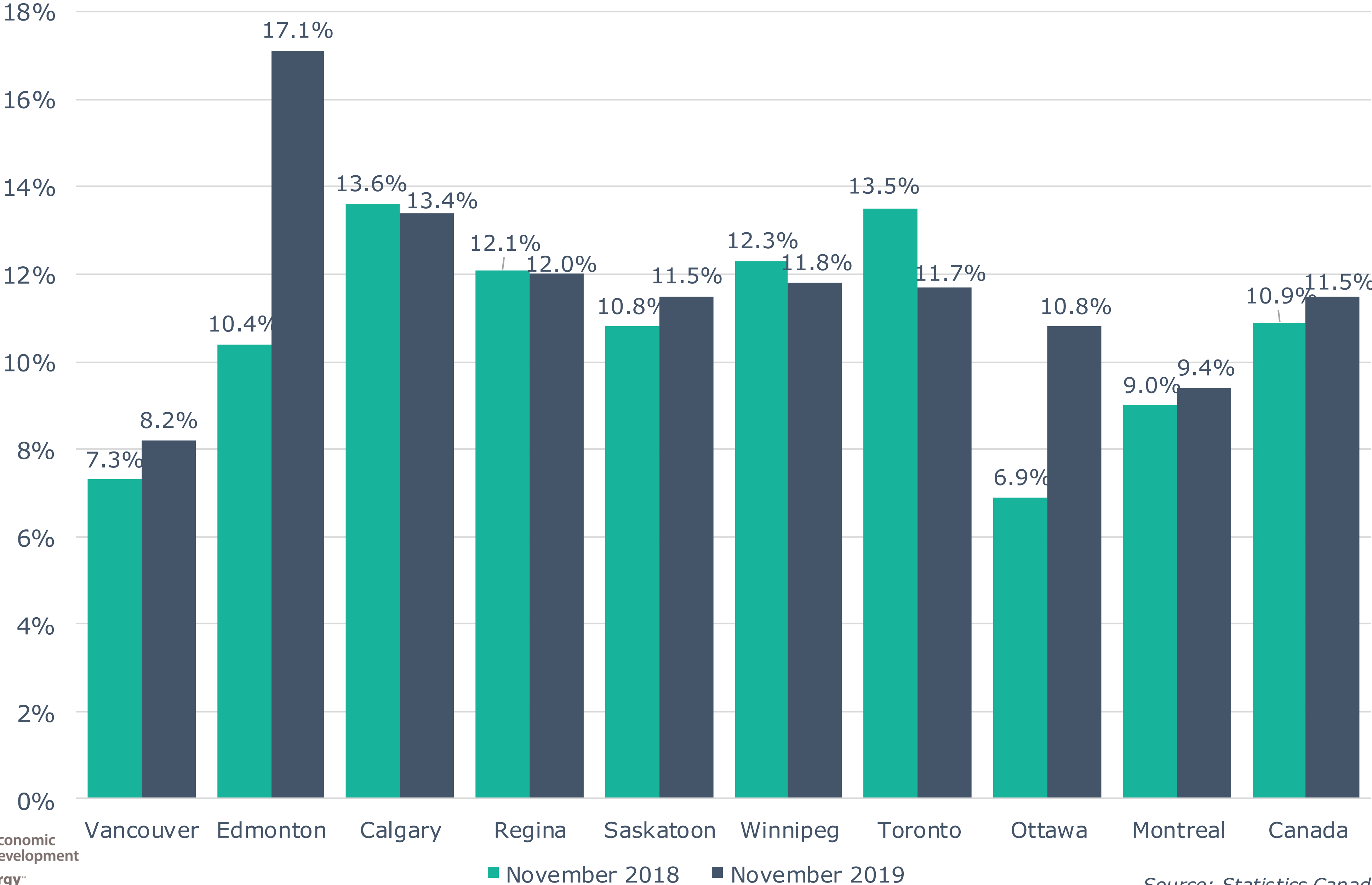
Source: Statistics Canada, December 2019

Unemployment Rate Across Canada

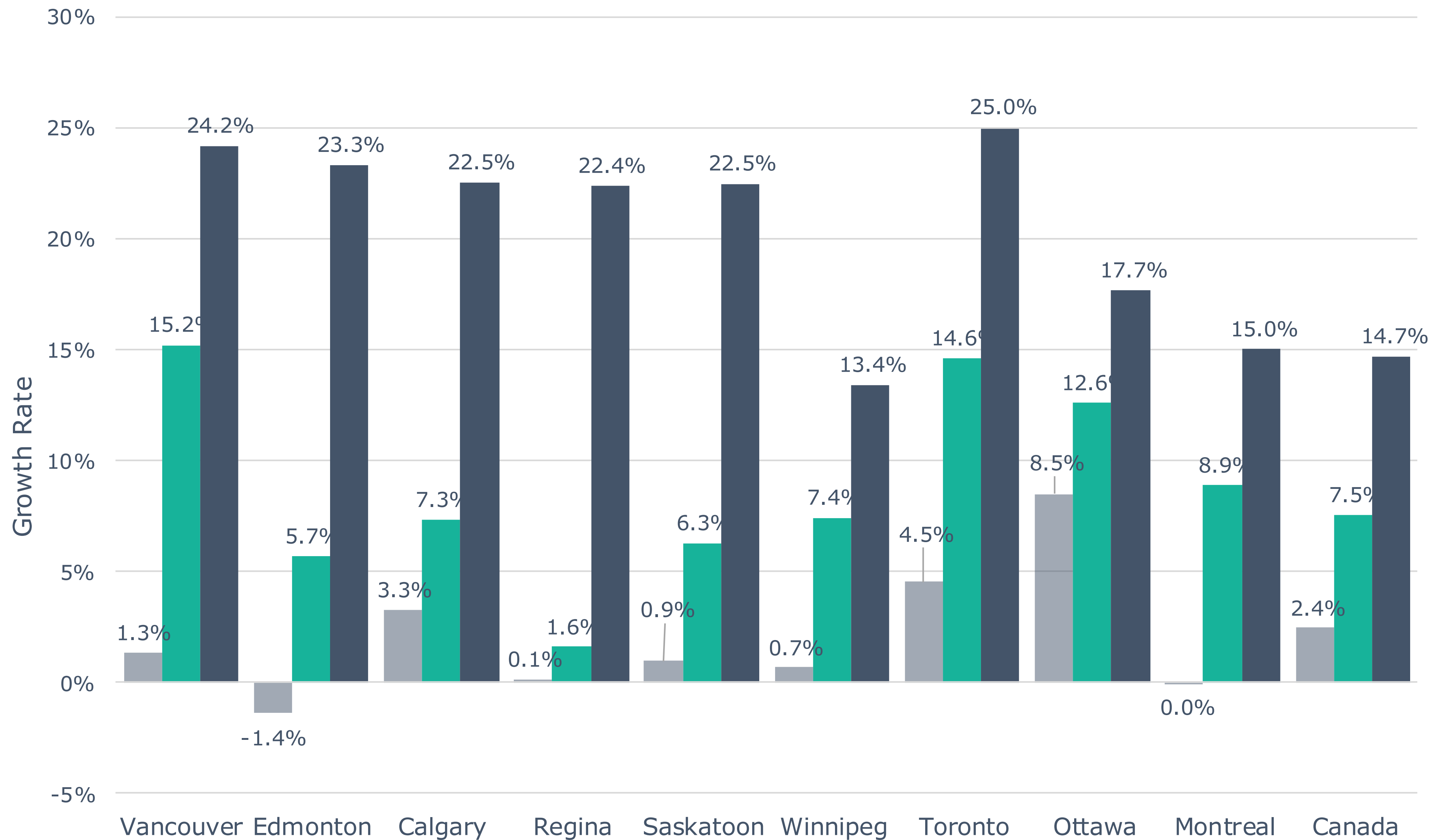


Youth Unemployment Rate Across Canada

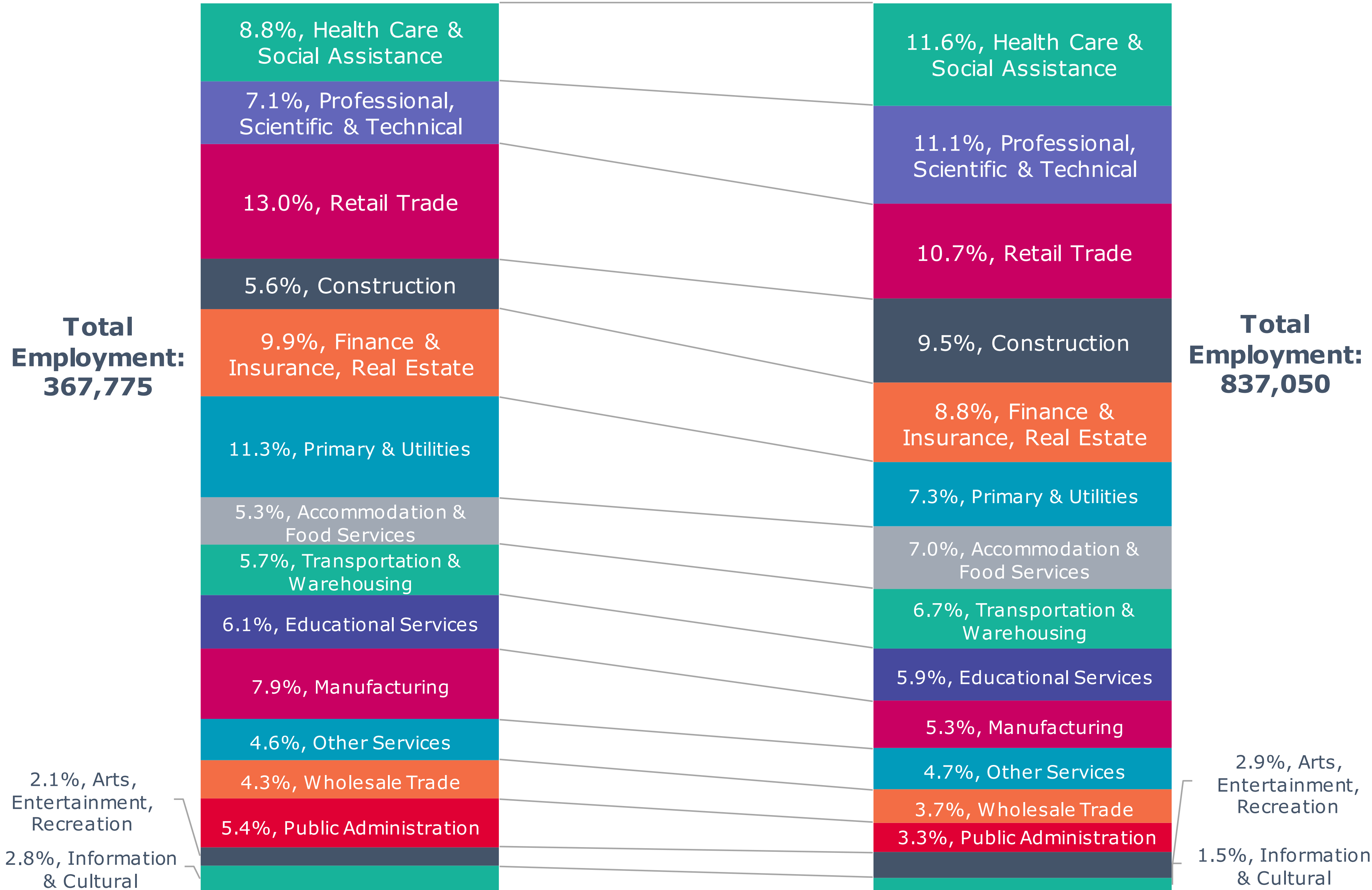
(Ages: 15 to 24 Years)



Employment Growth Across Canada



Calgary Historical Employment by Industry



**Total
Employment:
367,775**

**Total
Employment:
837,050**

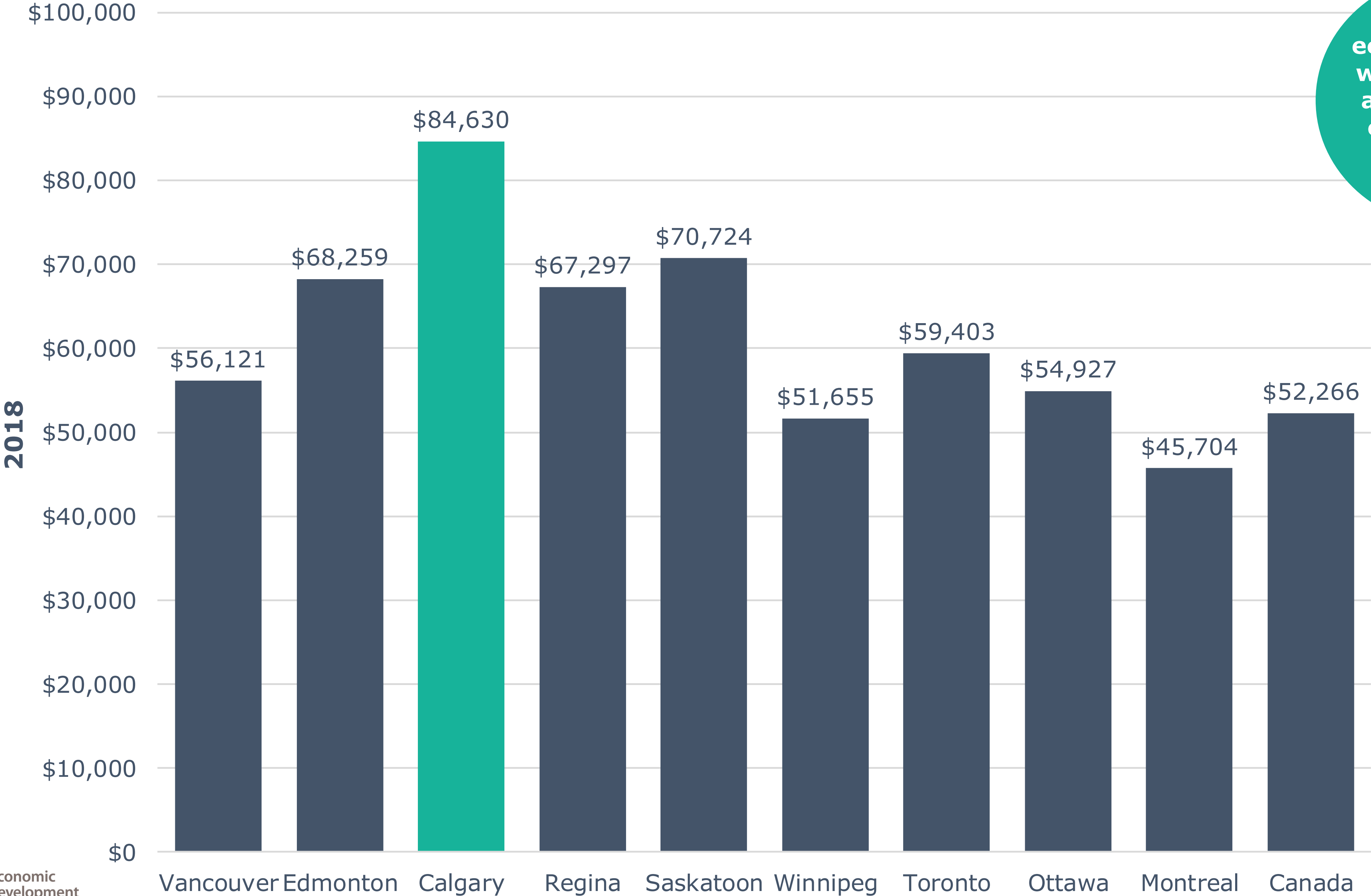
2.1%, Arts,
Entertainment,
Recreation

2.8%, Information
& Cultural

2.9%, Arts,
Entertainment,
Recreation

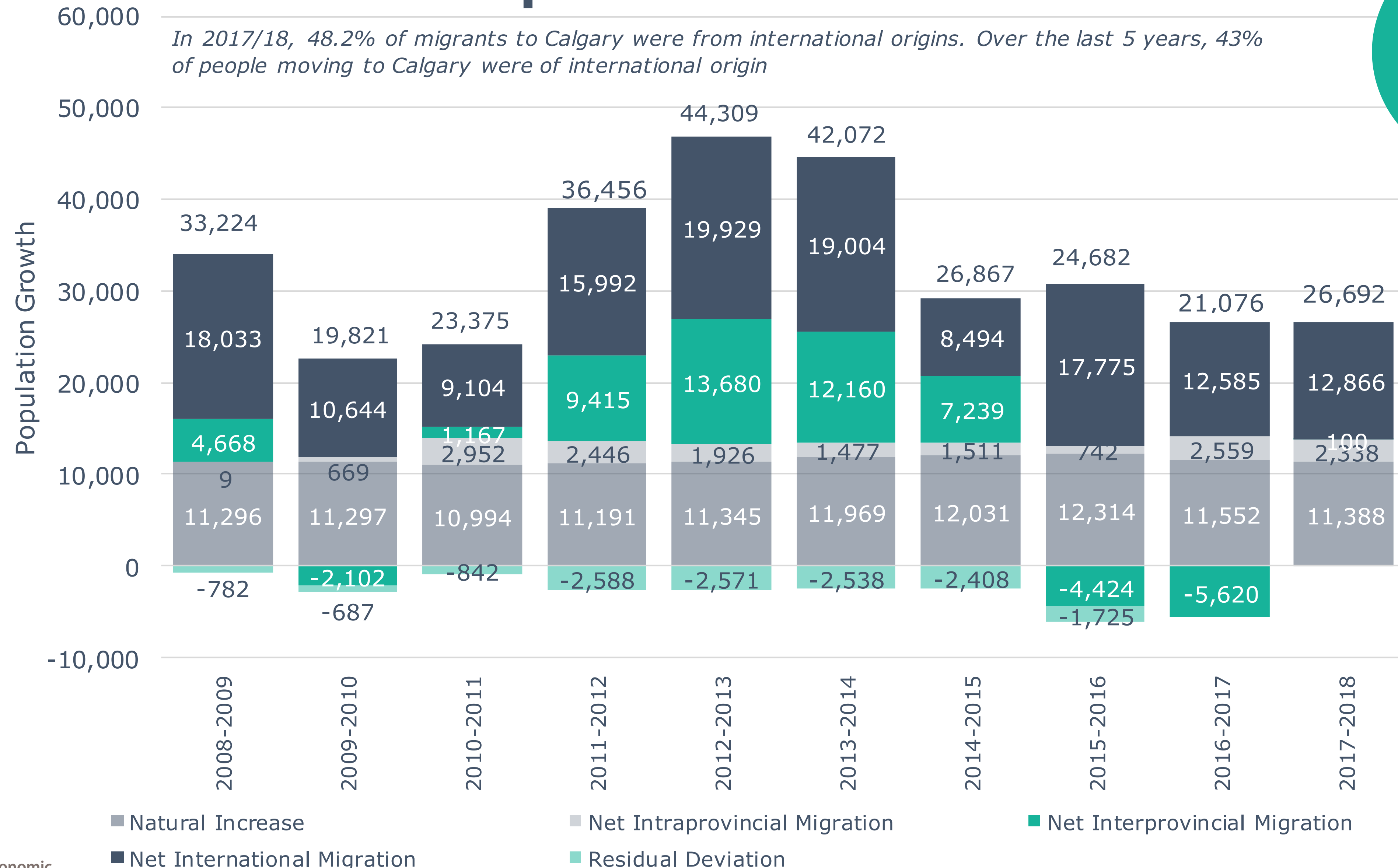
1.5%, Information
& Cultural

Annual GDP per Capita Across Canada



A leader in economic power, with the highest annual GDP per capita of major cities in Canada

Calgary CMA Components of Population Growth



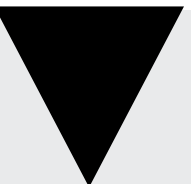
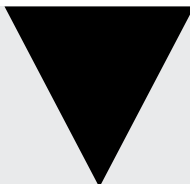
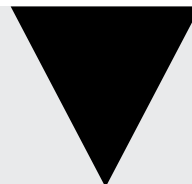
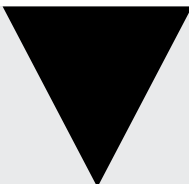
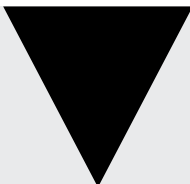


International migration accounted for 59.7 percent of 2016 population growth



DIGITAL TRANSFORMATION

ACROSS INDUSTRIES

Artificial Intelligence Internet of Things Machine Learning Blockchain AR/VR						
 ENERGY Digital twin Remote monitoring Clean energy tech Autonomous vehicles Energy storage solutions Electrification	 AGRIBUSINESS Ag tech Precision agriculture Crop science Animal genetics Livestock monitoring	 LOGISTICS Intelligent transportation Fleet optimization Digital supply chain and logistics automation Robotics and manufacturing Aerospace, defense and autonomous systems	 LIFE SCIENCES Biotechnology Genomics Medical devices Imaging Health tech Wearable technology	 CREATIVE INDUSTRIES Film & TV Digital animation Music Calgary Film Centre Digital media Gaming	 FINANCIAL SERVICES Fintech Cyber security Digital banking Identity management Process optimization	 MANUFACTURING Material optimization Asset tracking Next-generation customer care Autonomic operations Channel management Connected service

A hand holding a smartphone is the central focus, with a glowing digital interface overlaid. The interface features a network of white lines and dots connecting various digital icons: a document, a globe, a shopping cart, a headset, a microphone, an envelope, a laptop, a desktop monitor, and a smartphone. The background is a blurred image of a person's face, suggesting a user interface or a digital experience.

**\$18.4B in
Digital Spend**

FORECASTED DIGITAL TRANSFORMATION SPEND

\$18.4B IN ALBERTA BY 2022

ENERGY

**\$4.2
BILLION**

Investment in digitization across energy (Power & Utilities, Oil & Gas, etc.) in Canada is forecast to more than \$12 billion through 2022; with \$4.2 billion in Alberta

AGRIBUSINESS

**FASTEST
GROWING**

Agribusiness is forecast to be the fastest adopter of digital, growing by approximately 25% through to 2022

LOGISTICS

**\$1.1
BILLION**

Forecast to reach \$1.1 billion and growing at a rate of 19% by 2022

LIFE SCIENCES

**GROWING
AT 21%**

Projected to be \$1.3 billion, growing at an annual rate of over 21% per year

CREATIVE INDUSTRIES

**19% OF
CANADA**

\$2.4 billion will be spent by 2022, approx. 19% of Canada's spend in this sector

FINANCIAL SERVICES

**\$1.1
BILLION**

Forecast to reach \$1.1 billion and growing at a rate of 17% by 2022

MANUFACTURING

**GROWING AT
24%**

\$1.5 billion on digital transformation by 2022, and growing at an annual rate of over 24% per year

Source: IDC Canada, 2019; All percentages are compound annual growth rate (CAGR)

Digital Transformation Spending forecasts were developed in partnership with IDC Canada. They are based on industry classifications provided by Calgary Economic Development and IDC's Digital Transformation Spending Guide (Release Version 1H18).

ECONOMIC STRATEGY VISION

**Calgary is the city of choice
in Canada for the world's
best entrepreneurs.**

**We are embracing
technology to solve the
world's greatest challenges.**



CLEANER
ENERGY



SAFER & SECURE
FOOD



EFFICIENT
TRANSPORT



BETTER
HEALTH SOLUTIONS



CALGARY HAS DIVERSE EMPLOYERS

AGRIBUSINESS



LIFE SCIENCES/HEALTH



FINANCIAL SERVICES



OTHER & GENERAL TECH



DEAL FLOW STUDY

TRENDS IN CALGARY



OVERVIEW

- 1,238 Alberta tech companies were identified in the 2018 study
- 62% of all Alberta tech companies and startups are in Calgary
- 52% are scaling



CAPITAL

- 26% of Calgary companies have \$1M+ in annual revenue
- 73% are currently seeking funding
- 76% of the funding has been raised locally (from Calgary based sources); 30% from other parts of Canada; 26% from the US



SECTORS

- 92% of Calgary companies sell to private industry and 36% to individual consumers
- 54% have a SaaS offering
- 36% incorporate AI/machine learning in their product
- 30% have participated in an accelerator program

Source: Start Alberta, 2018 Alberta Tech Deal Flow Study

RECENT NOTABLE

ENERGY TECH INVESTMENTS



Interface Fluidics developed a nanotechnology platform that optimizes oil production company and recently raised a Series A round of \$6 million

The logo for Blackline Safety, with the company name in a bold, lowercase sans-serif font. 'blackline' is in black and 'safety' is in a dark red color.

Blackline Safety (TSXV: BLN) provides comprehensive live-monitoring and wireless gas detection and received a \$1 million purchase order for G7x wearables featuring satellite communication and service plans

The logo for Eavor Technologies, featuring the word 'Eavor' in a bold, black sans-serif font with a trademark symbol (TM) to its upper right.

Eavor Technologies has invented a new geothermal power generation technology that overcomes all the traditional roadblocks of geothermal and has raised \$15 million in Series A



Ingu Solutions' technology disrupts the pipeline inspection industry and recently raised capital from Energy Innovation Capital and Chevron Technology Ventures

RECENT

AGRIBUSINESS EXPANSIONS



Sleeman Breweries, Canada's third-largest brewery and a subsidiary of the Japanese multinational beer giant Sapporo Breweries, acquires Calgary-based Wild Rose Brewery



Chemical giant BASF Corporation has relocated its Agricultural Solutions headquarters operations from its existing Mississauga office to Calgary



Following the merger with Monsanto, Bayer CropScience has chosen Calgary, AB as its new Canadian headquarters

RECENT NOTABLE

FINTECH INVESTMENTS



Shareworks
BY MORGAN STANLEY

US bank Morgan Stanley's acquired Calgary-based Solium Capital for \$1.1 billion, and rebranded to Shareworks



Clio, a cloud-based legal technology company raises \$330 million in Series D and has offices in Dublin, Calgary, Toronto, and Los Angeles



Benevity, a global software social enterprise that develops workplace giving and volunteer management software solutions, has raised \$40 million in a Series C round of funding



ZayZoon, a leading provider of Wages On-Demand and employee financial payroll features, raises \$15 million in financing

RECENT

HEALTH INVESTMENTS



Calgary-born Parvus Therapeutics partners with Genentech, a San Francisco-based biotechnology company in a deal with \$1 billion to develop and commercialize drugs for the treatment of inflammatory bowel disease, autoimmune liver diseases, and celiac disease



Life Sciences Innovation Hub receives \$8.5 million for programming that will support turning advanced research into commercial ventures and is forecast to incubate 20 to 40 life sciences companies per year



HATCH-YYC is Calgary's first health technology accelerator to provide companies a platform to accelerate market access and improve patient care. With \$1 million in funding over three years, HATCH-YYC expects to graduate 20 companies by Sept 2022

RECENT

OFFICE OPENINGS IN TECH



**FINGER
FOOD** | ADVANCED
TECHNOLOGY
GROUP



Finger Food Advanced Technology Group will open a centre in Calgary, providing 200 full-time jobs by 2023 for highly-skilled design, software development and management professionals



CISCO



Cisco Canada is investing \$15 million in Western Canada's secure digital transformation



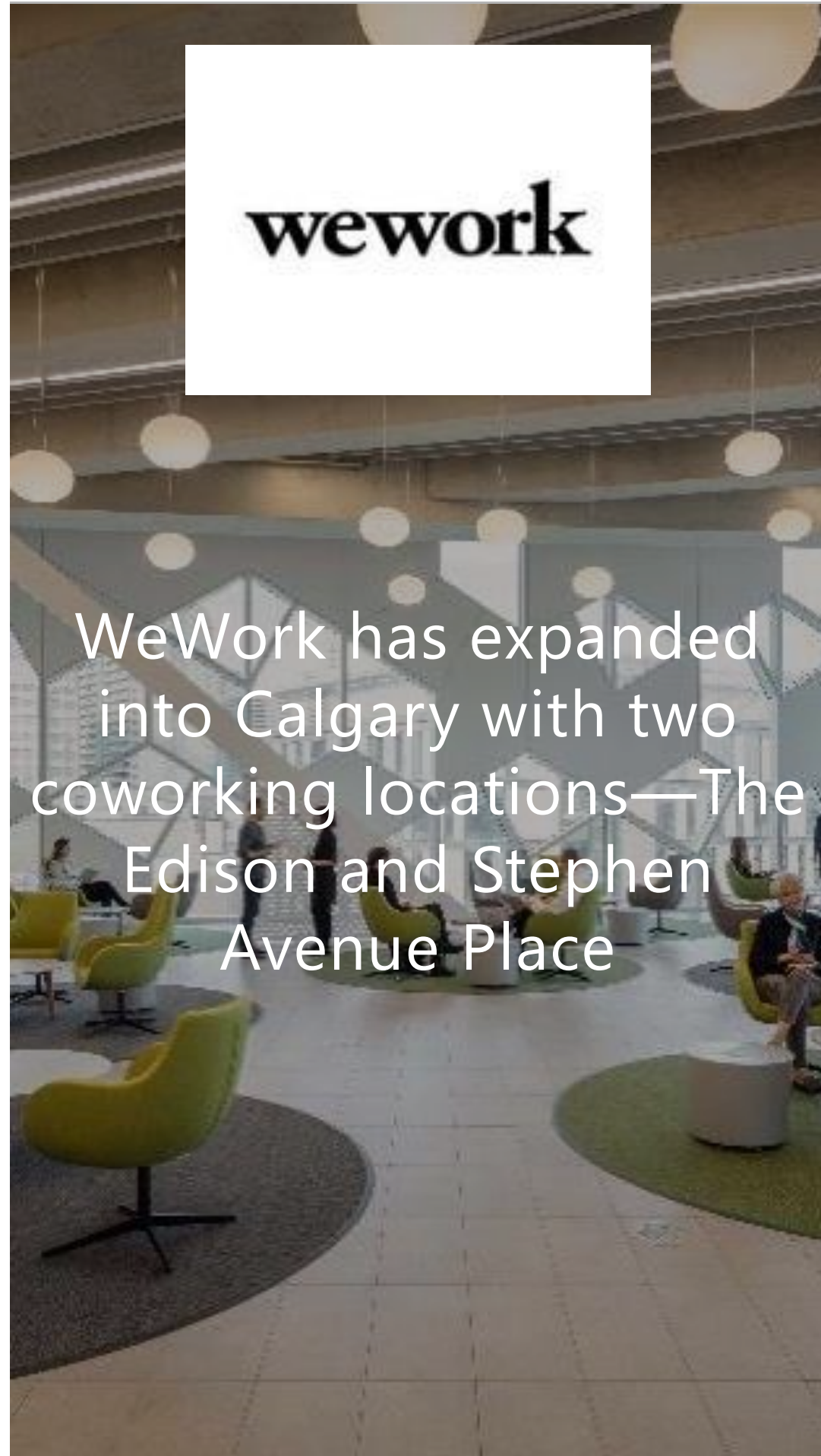
AMD



AMD, an American multinational semiconductor company based in Santa Clara expands to Calgary focusing on the development of its GPU software engineering talent



wework



WeWork has expanded into Calgary with two coworking locations—The Edison and Stephen Avenue Place

Labour Demand



ICTC forecasts Alberta will see demand for nearly 9,000 **digital jobs** by 2023.

- ICTC, *A Digital Future for Alberta*, June 2019



The **Logistics** sector in Alberta will grow by about 7,470 workers from 2016 to 2025.

- APGC, 2016



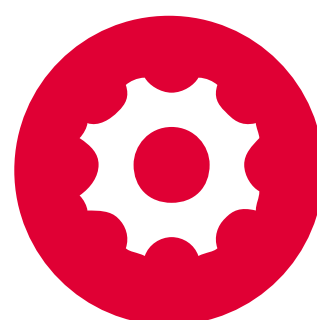
Finance, Insurance & Real Estate will grow by 1.6% annually, reaching 4.8% of total employment in 2019 and gain 68,100 jobs by 2024.

- Government of Alberta, 2016; Statistics Canada, 2016



Oil and Gas employment in Canada is expected to shrink by 7%, or 12,500 positions, to 173,300 workers in 2019 from 185,800 workers in 2018.

- 2019 Oil and Gas Labour Market Update, PetroLMI, April 2019



Manufacturing accounts for 5.2% of total employment in Alberta and is expected to grow at an average rate of 1.0% from 2017 to 2021.

- *Industry Profiles 2018, Manufacturing*, Government of Alberta, 2018



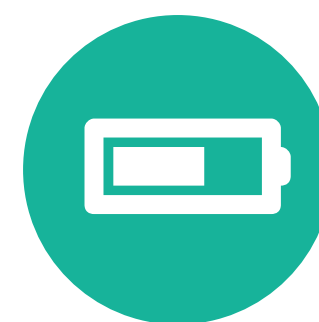
Clean Tech and Clean Resources in Canada will see a demand for approximately 25,500 and 10,500 workers respectively, by 2023.

- *Canada's Growth Currency: Digital Talent Outlook 2023*, ICTC, 2019



Agriculture will need to fill 23,300 potential jobs in Alberta by 2025.

- AgriLMI CAHRC, 2016



Energy Efficiency employed 436,000 permanent workers in Canada in 2018, with expected growth of 8.3% in 2019, creating over 36,000 jobs.

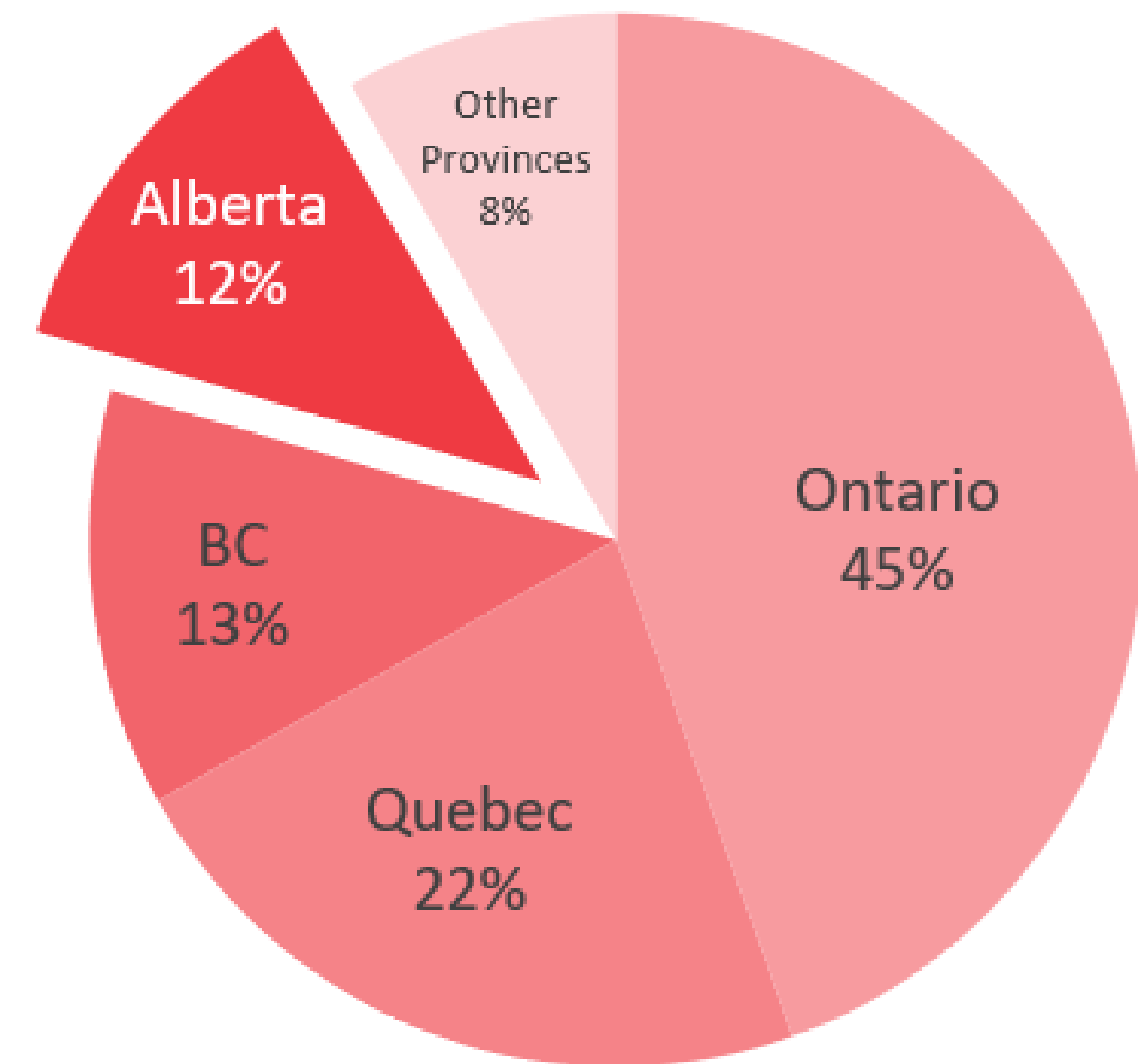
- *Energy Efficiency Employment in Canada*, ECO Canada, April 2019

Market Demand

- “Canada’s digital economy is predicted to continue to grow significantly over the next five years.”
- “By 2021, employment in Canada’s digital economy will reach 1.63 million jobs, creating approximately 216,000 new vacancies which will need to be filled with qualified talent.
- If AB’s share of the Canadian ICT sector stays constant (or grows), that equates to at least **35,000 new jobs by 2021**

The Digital Talent Dividend: Shifting Gears in a Changing Economy. Information and Communications Technology Council (ICTC), Ottawa, Canada. Cutean, A., Ivus, M. (2017).

ICT Sector Segmentation



Calgary Companies Hiring Tech



Software Engineer / Developer		Computer Programmer
January 2020		January 2020
Glassdoor	Indeed	Glassdoor
Cisco Systems	Attabotics	Arcane
Clio	Boast Capital	Autodata Solutions
Decisive Farming	Circle Cardiovascular Imaging	Brightsquid Secure Communications Corp
Hexagon	Collage.com	Evans Hunt
Nasdaq	H.B. Studios Multimedia Limited	Languages in Motion (LIM)
P2 Energy Solutions	Localintel	Pason Systems Corp
RS Energy Group	LodgeLink	The Professional Petroleum Data Management Association
Sercel	Pangea Global, LLC	Routeique Inc.
Suncor Energy Inc.	Streamsim Technologies, Inc.	Vantix Systems
Sunnyfuture Group	Trimac	Vista Projects Limited

Glassdoor

Indeed

Market Demand

From  and  (as of Sept. 15, 2019)

Software Developer jobs

- Indeed – 302
- LinkedIn – 432

Data Analyst jobs

- Indeed – 244
- LinkedIn – 102

IT Project Manager

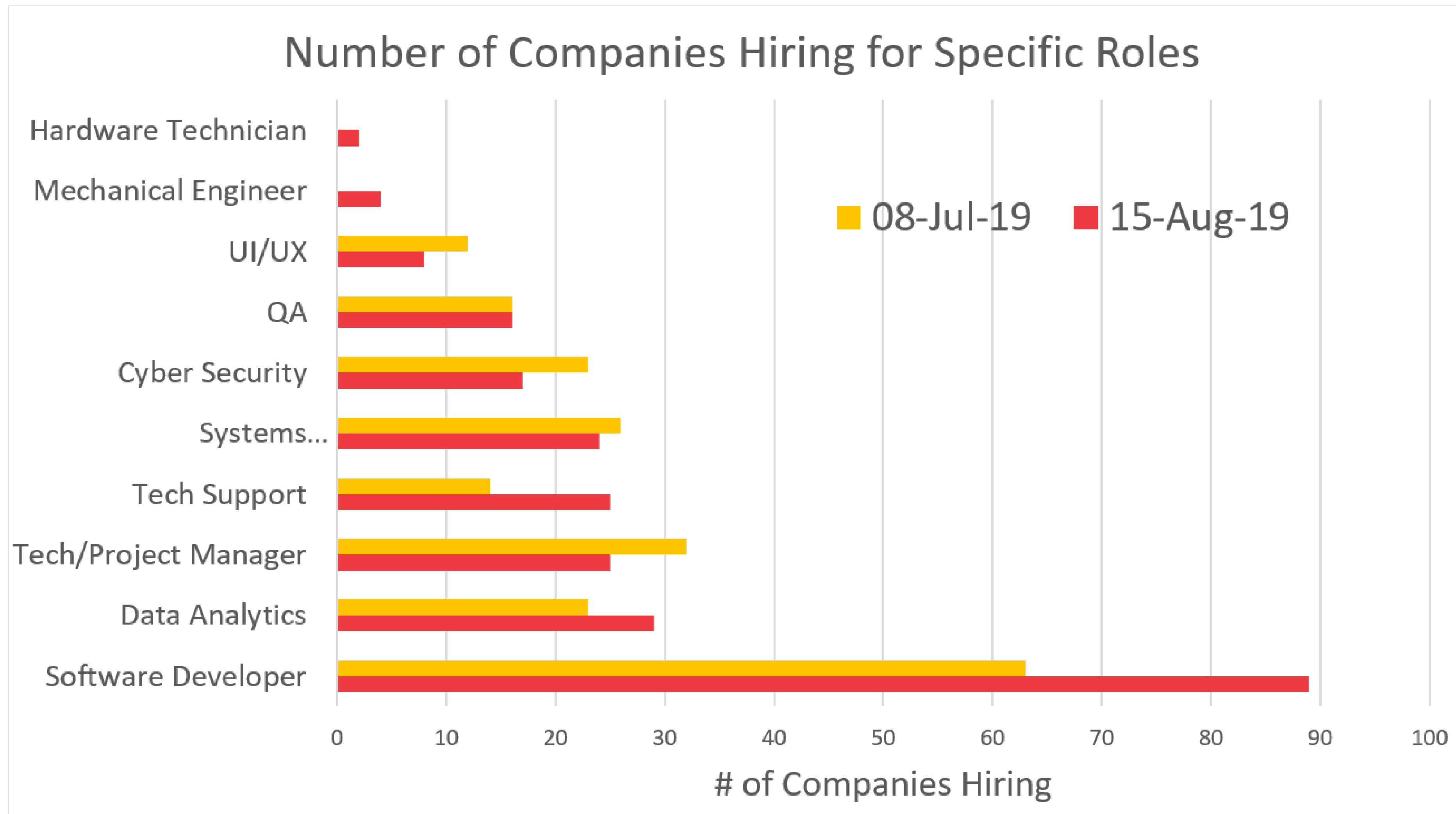
- LinkedIn – 548 9thoug

Information Technology jobs

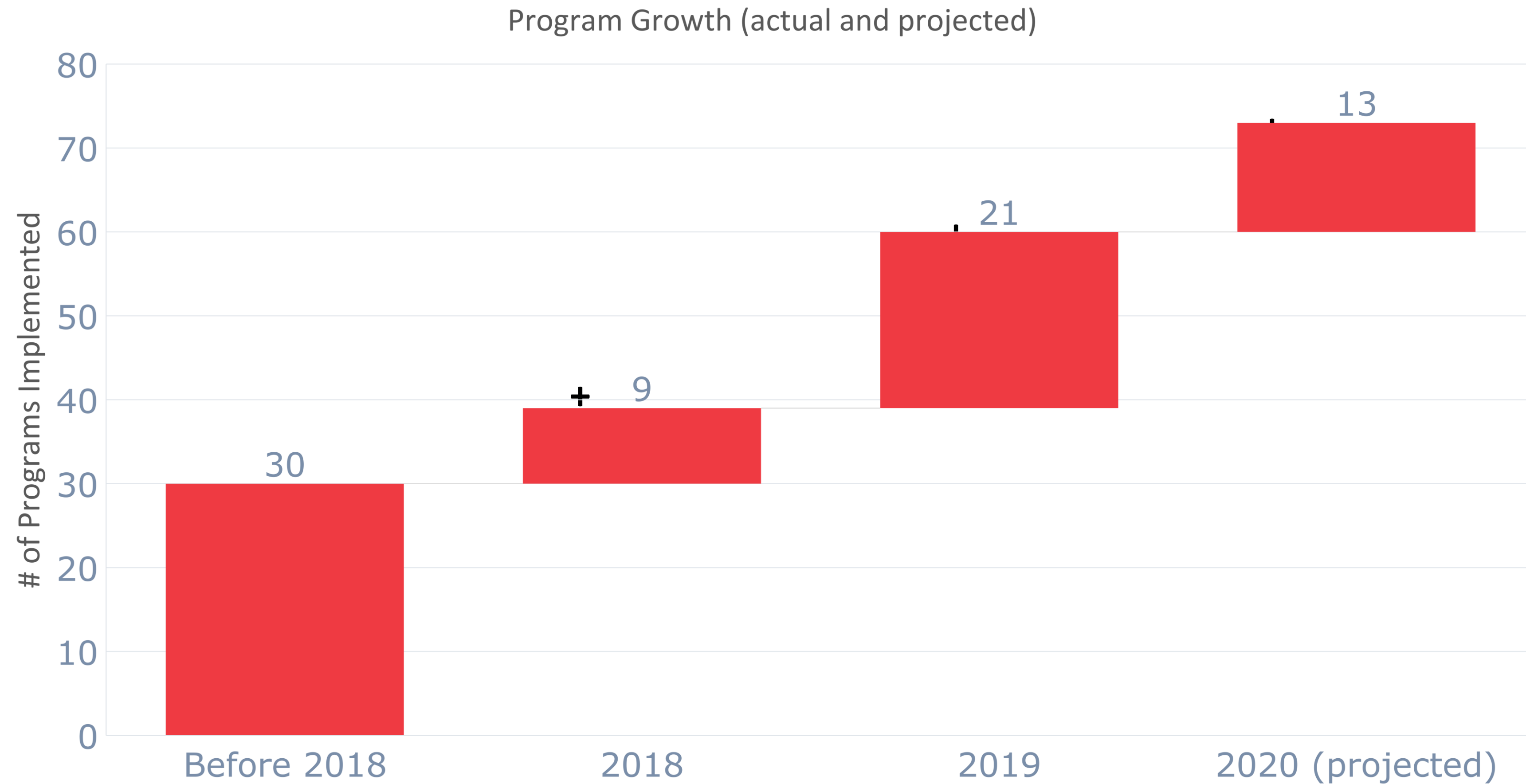
- Indeed – 858
- LinkedIn - 427

Market Demand

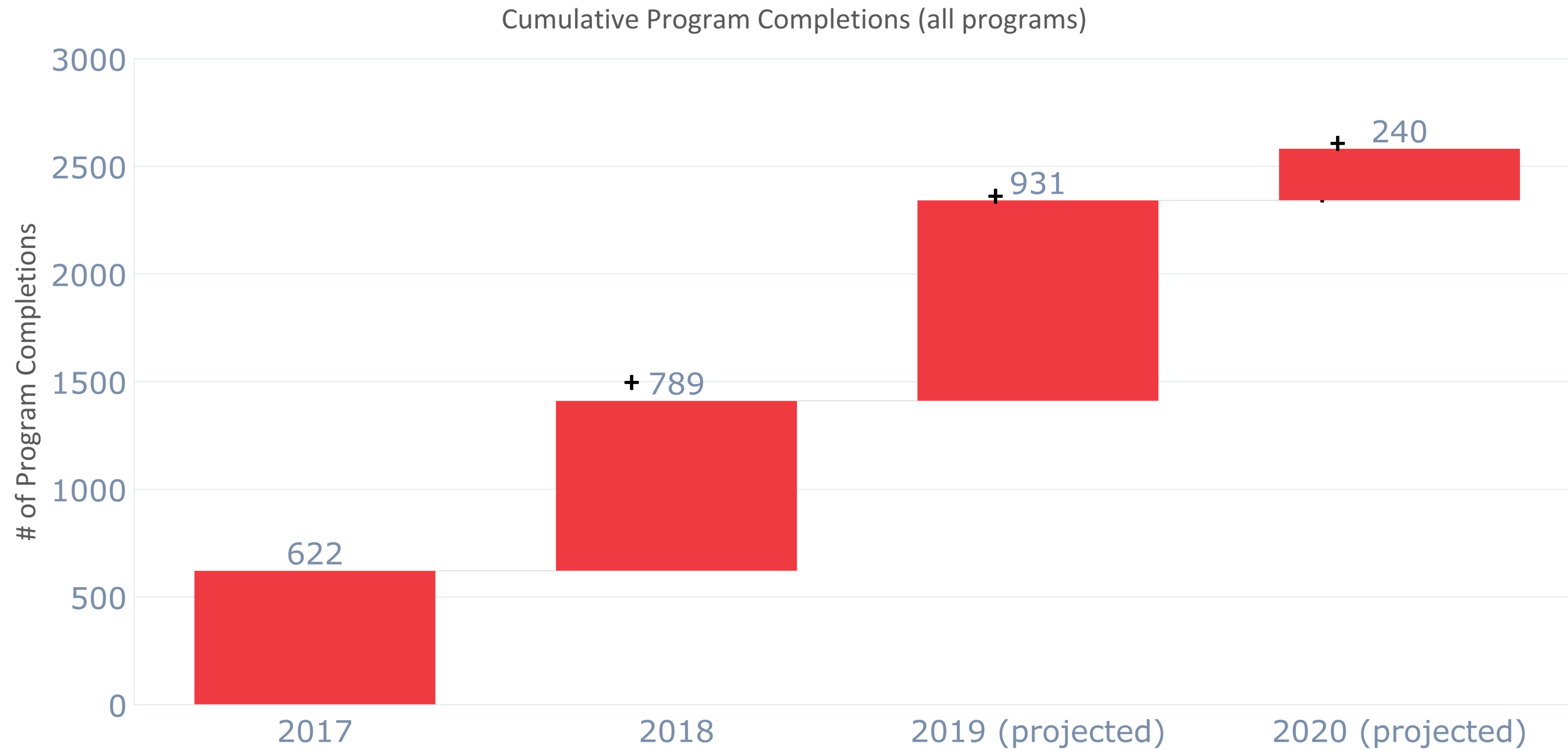
Summer 2019 career portal snapshot supports this trend (125 company websites)



Uptick in New Tech Training



Technical Workforce is Growing



Employment Outcomes

of Programs Resulting in Graduates Finding Jobs within 6 months of Program Completion

Graduates Finding Jobs in 6 months (%)

90% - 100%

75% - 89%

50% - 74%

<50%

0

1

2

3

4

5

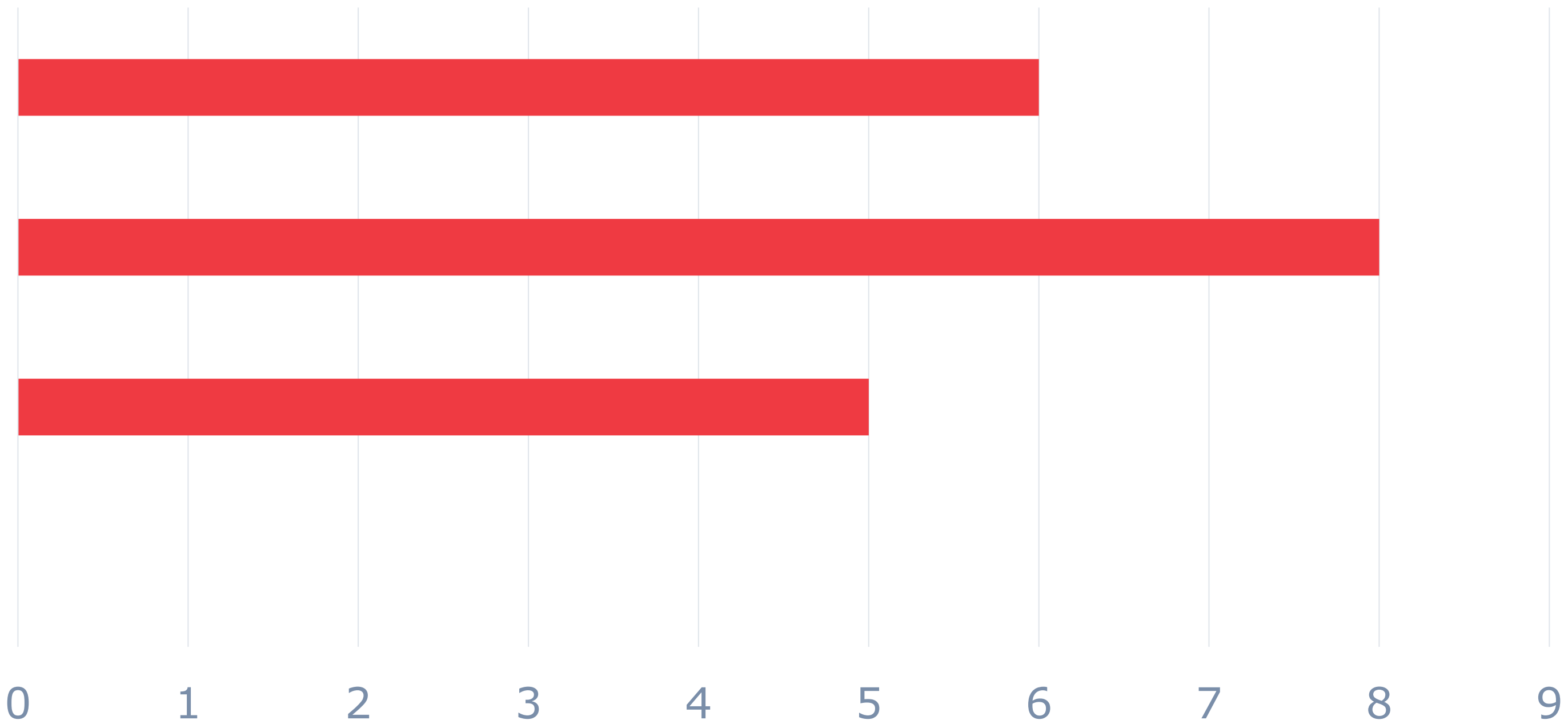
6

7

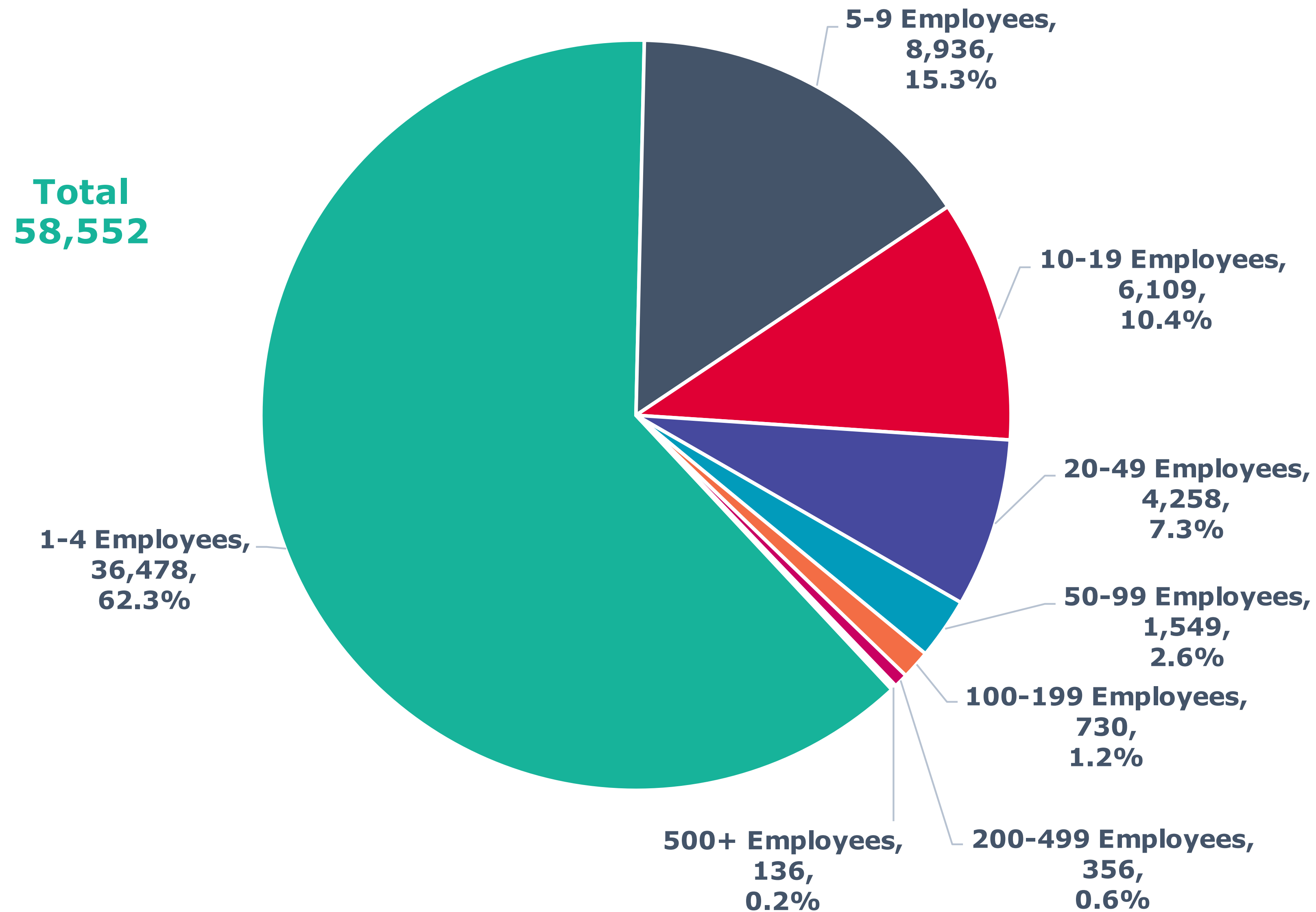
8

9

of Programs

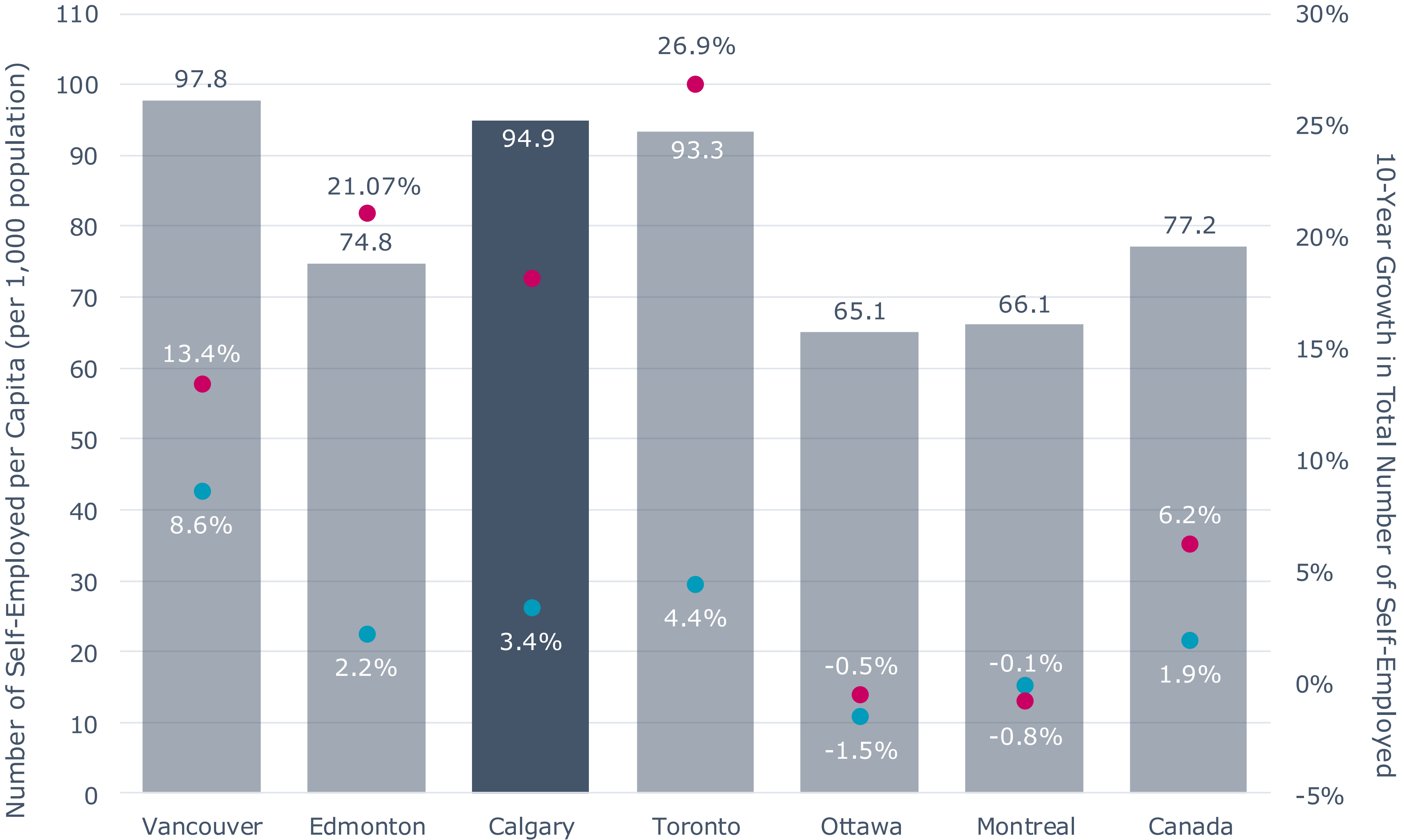


Calgary CMA Business Establishments by Number of Employees



All Industries
58,552
Small Business (1-49)
55,781

Self-Employed per Capita and 10-Year Growth



■ Self-Employed per Capita (per 1,000 population) ● 2018 Growth Rate ● 10-Year Total Growth (2009-2018)

The
Economist

Lifelong learning

How to survive in the age of
automation





CALGARY IN THE NEW ECONOMY

INNOVATI
ON

PLACE

BUSINESS
FRIENDLY

TALENT

Keep in Touch



Court Ellingson
cellingson@calgaryeconomicdevelopment.com
calgaryeconomicdevelopment.com
3200, 500 Centre St SE, Calgary, AB T2G 0E3

Facebook.com/calgaryeconomic
Twitter.com/calgaryeconomic
Youtube.com/calgaryeconomic
LinkedIn.com/calgaryeconomic