



RESEARCH

**QUARTERLY MONITOR  
OF CANADA'S ICT LABOUR MARKET**

The Information and Communications Technology Council | 2016 Q2





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ICTC's labour market research captures critical economic and labour market indicators to inform competitive business and human resource strategy planning, decision-making and career development in ICT, thereby driving the development of a more prosperous Canadian ICT workforce and industry in a global digital economy.

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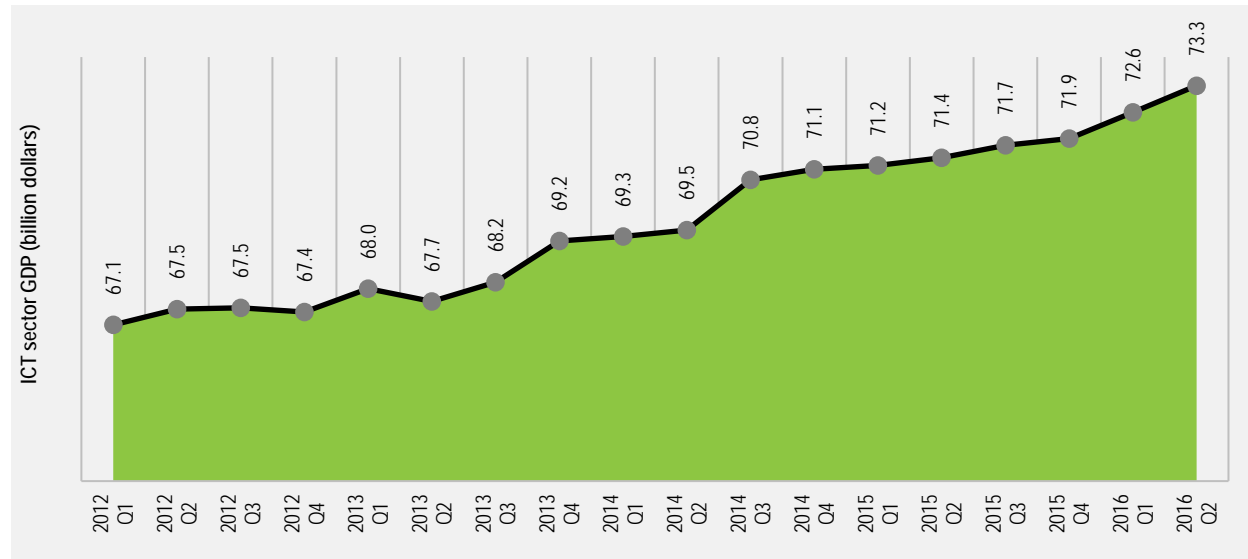
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## OUTPUT AND OUTLOOK

### GDP Growth

Figure 1 – ICT sector GDP (in billion dollars)



Source: ICTC; Statistics Canada

#### Analysis and Insights

- ❖ A gradual increase in adoption of ICT products and services across all economic sectors is the driving force behind the encouraging growth of the ICT sector.
- ❖ In the second quarter (Q2) of 2016 the ICT sector continued to grow contributing \$73.3 billion to Canadian GDP<sup>1,2</sup> which makes up approximately 4% of total Canadian GDP. The ICT sector increased by 1% or contributed an additional \$693 million to the economy compared to Q1 of 2016 and increased by 2.6% or an additional \$1.9 billion compared to a year ago. The ICT sector performed quite well when compared to the overall Canadian economy which declined by 0.3% in Q2 vs Q1 of 2016 and only increased by 1.2% compared to a year ago.
- ❖ ICT services<sup>3</sup> which contributed 95% to the total Canadian ICT sector GDP in Q2 quarter of 2016 increased by 3% or \$2.1 billion compared to a year ago, while ICT manufacturing<sup>4</sup> which contributes the other 5% to the total Canadian ICT sector GDP decreased by 6% or \$211 million compared to a year ago.

<sup>1</sup> In 2007 chained dollars. Chained dollars are real dollar amounts adjusted for inflation

<sup>2</sup> The underlying concepts, methods, classification systems, and data sources of the Canadian System of Macroeconomic Accounts (CSMA) have been recently updated, and these modifications are reflected in the GDP levels compared to previous editions of this research series

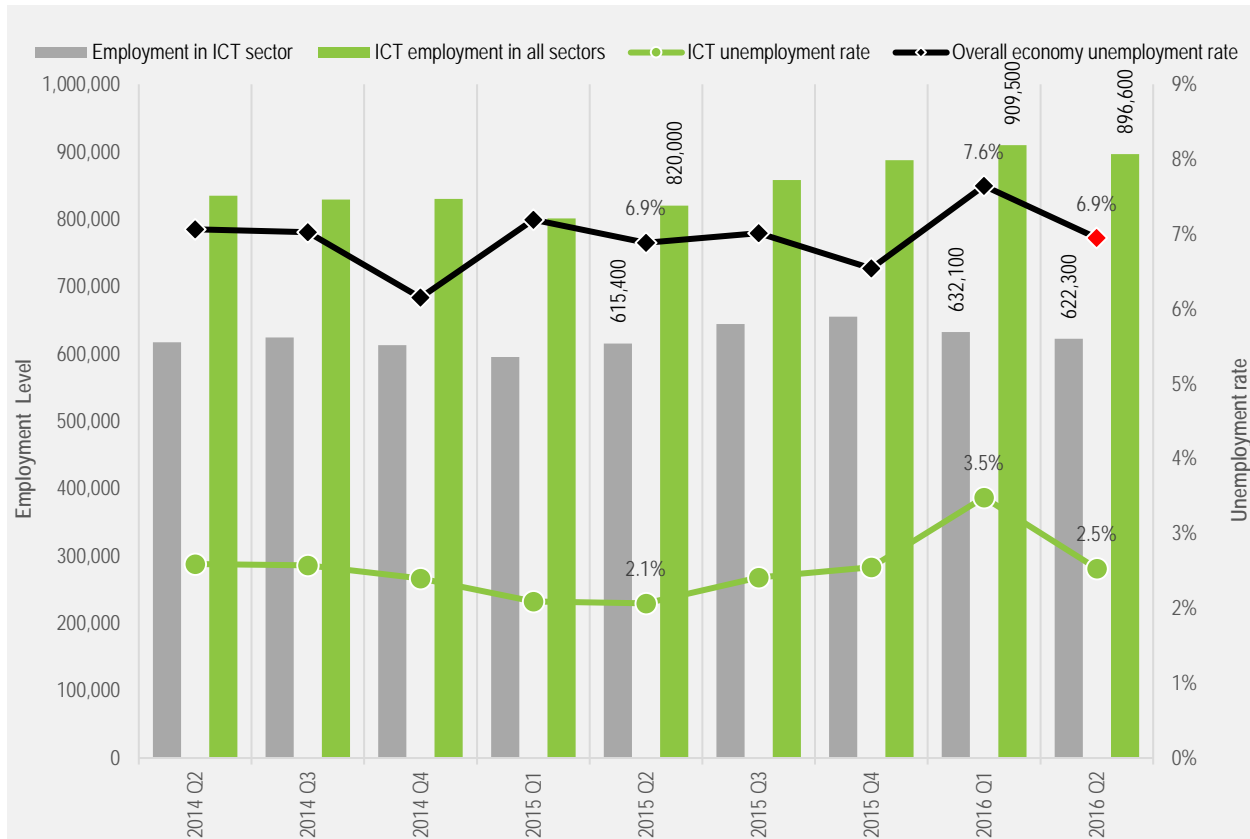
<sup>3</sup> This combines the North American Industry Classification System (NAICS) codes 4173, 5112, 517, 518, 5415, 8112. See Appendices

<sup>4</sup> This combines the North American Industry Classification System (NAICS) codes 3341, 3342, 3343, 3344, 3346. See Appendices

## LABOUR MARKET TRENDS

### Employment

Figure 2 – Employment in Canada's digital economy



Source: ICTC; Statistics Canada

#### Analysis and Insights

- ❖ 896,600 ICT professionals were employed across all sectors of the Canadian digital economy in Q2 of 2016.
- ❖ 76,600 new ICT jobs were created across all sectors in Canada over the past four quarters measured from Q2 2015 to Q2 2016, representing a 9.3% rate of growth over Q2 2015.
- ❖ The 2.5% ICT unemployment rate in Q2 is significantly lower than the 6.9% unemployment rate in the overall economy.
- ❖ The ICT unemployment rate declined to 2.5% in Q2 from 3.5% in Q1 mainly as a result of 22,400 people or 2% of the participants having left the ICT labour force in Q2.
- ❖ 6,900 new jobs were created in the ICT sector in Canada in 2016. That brings the total number of ICT sector jobs at the end of Q2 to 622,300, which represents a 1.1% rate of growth over Q2 of 2015.

## Gender Diversity

Figure 3 – Women's employment and unemployment



Source: ICTC; Statistics Canada

### Analysis and Insights

- ❖ Women's participation in ICT professions have been gradually increasing.
- ❖ Q2 2016 is proving to be a strong quarter for growth of women's employment in ICT.
- ❖ 12,900 new jobs were added in Q2 of 2016 pushing the total number of women employed as ICT professionals up 6% to 229,700 versus Q1 of 2016, and up 14% versus Q2 of 2015.
- ❖ Women are increasingly interested in ICT as a career. 7,900 more women joined the ICT labour force in Q2 of 2016, which is a 3.5% increase compared to Q1 of 2016, or 13.7% YoY growth.
- ❖ Newly created ICT jobs occupied by women in Q2 pushed the female unemployment rate down from 4% in Q1 to a mere 1.8%.
- ❖ The unemployment rate of 1.8% among women in ICT professions in Q2 of 2016 is much lower than 6.1% unemployment rate among women in the overall Canadian economy.

## Youth Inclusion

Figure 4 – Youth employment and unemployment



Source: ICTC; Statistics Canada

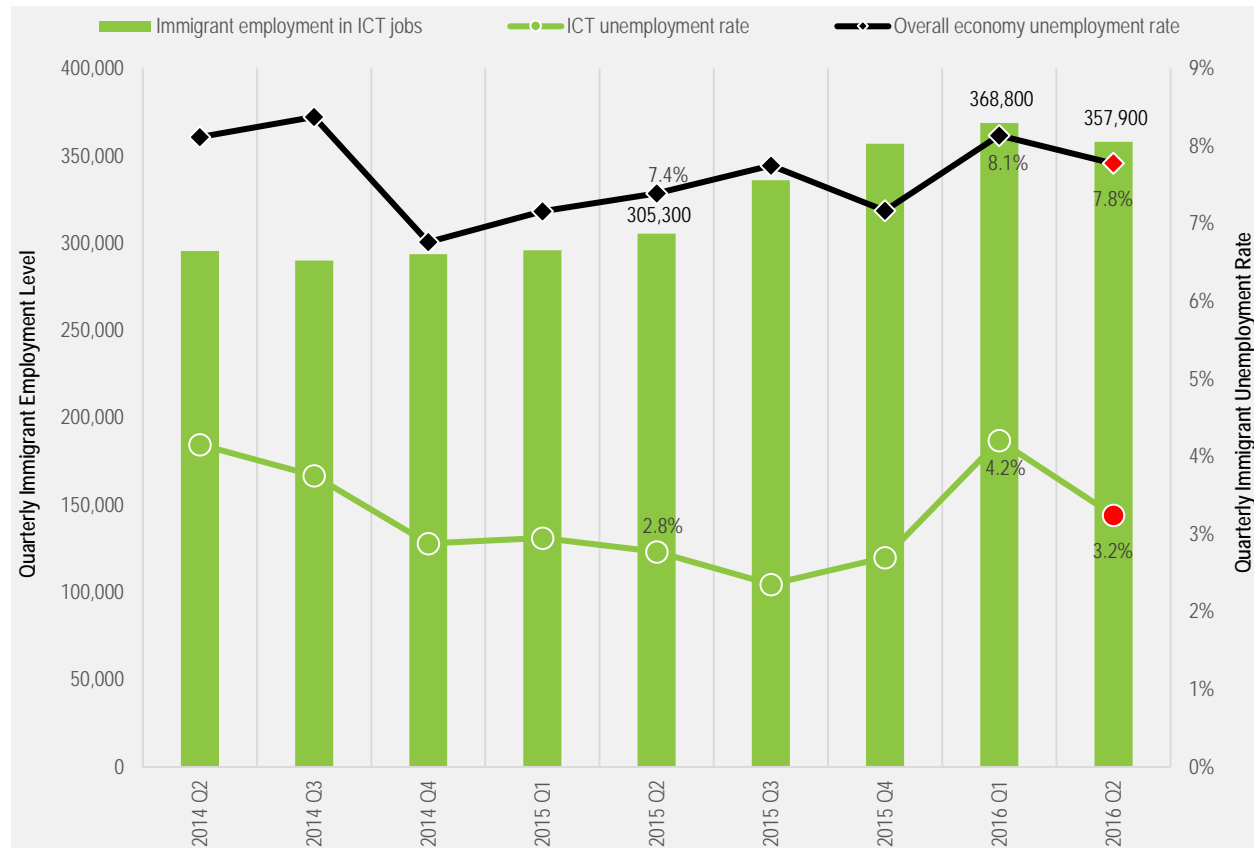
### Analysis and Insights

- ❖ ICT employment among youth (15-24 years old) decreased by 6,400 or 14.5% to reach 37,600 in Q2 of 2016 versus Q1 of 2016.
- ❖ Youth represented 4.2% of the total number of ICT workers in Canada in Q2 of 2016, which is down from 6.3% in Q2 of 2015. The decline in youth ICT workers between Q2 2016 and Q2 2015 can be partially explained by 9,000 youth who exited the ICT labour force over that timeframe.
- ❖ The ICT unemployment rate among Canada's youth dropped to 6.5% in Q2 of 2016 compared to 10.6% recorded in Q1 of 2016, this is higher however than the 2.8% rate recorded from Q2 of 2015.
- ❖ The 6.5% youth unemployment rate among ICT workers is lower than the youth unemployment rate in the overall Canadian economy which currently sits at 13.6%.



## Immigrant Integration

Figure 5 – Immigrant employment and unemployment



Source: ICTC; Statistics Canada

### Analysis and Insights

- ❖ 357,900 or 40% of all the employed ICT professionals in Q2 of 2016 were immigrants<sup>5</sup>. In contrast, immigrants represent 25.5% of the workforce in the overall economy which is evidence of a strong demand for ICT talent throughout the economy.
- ❖ Employment of immigrants in ICT professions decreased by 10,900 or 3% in Q2 of 2016 versus Q1 of 2016 and increased by 52,600 or 17.2% versus Q2 of 2015.
- ❖ YoY growth implies that the demand for talent and skills is strong in the digital economy and as a result, immigrants are finding more opportunities in ICT jobs than in other occupations across the economy.
- ❖ The unemployment rate for immigrants in ICT professions decreased to 3.2% in Q2 of 2016 versus 4.2% in Q1 of 2016.
- ❖ The unemployment rate for immigrants in ICT professions is much lower compared to the unemployment rate of 7.8% amongst immigrants in the overall Canadian economy.

<sup>5</sup> Immigrants are defined as persons who were not born in Canada and who were not Canadian citizens by birth.



## In-Demand jobs

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The demand for ICT talent and skills remains very high in Canada and is expected to increase significantly over the next five years. To understand the ICT talent and skills supply-demand dynamics in Canada in the medium term, please refer to [ICTC's 2015-2019 Labour Market Outlook](#).

In Q2 of 2016 versus Q1, the employment growth was strongest in these ICT professions:

- ❖ telecommunications services/operations/facilities managers - 22% increase
- ❖ electronics technicians – 8% increase
- ❖ information systems managers – 8% increase
- ❖ multimedia designers / graphic illustrators – 5% increase
- ❖ data analytics / database architects/administrators – 1% increase

To review live job postings by occupation, please [click here](#).



## APPENDICES

### Digital Economy Labour Force

ICTC's labour market research captures critical economic and labour market indicators to inform competitive business and human resource strategy planning, decision-making and career development in ICT, thereby driving the development of a more prosperous Canadian ICT workforce and industry in a global digital economy.

The sum total of workers (workers that are employed in these occupations as well as workers that are currently unemployed, but actively looking for work) in these occupations and workers in all other (non-ICT) occupations in the ICT sector (ICTC's framework of Canada's ICT sector is explained below) is the total digital economy labour force in Canada. The table below summarizes the core ICT occupations:

Index	National Occupational Classification (NOC)	Occupation Title
1	0131	Telecommunication carrier managers
2	0213	Computer and information system managers
3	2133	Electrical and electronics engineers
4	2147	Computer engineers
5	2171	Information systems analysts and consultants
6	2172	Database analysts and data administrators
7	2173	Software engineers
8	2174	Computer programmers and interactive media developers
9	2175	Web designers and developers
10	2241	Electrical and electronics engineering technologists and technicians
11	2281	Computer network technicians
12	2282	User support technicians
13	2283	Systems testing technicians
14	5224	Broadcast technicians
15	5241	Graphic designers and illustrators



## ICT Sector

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The table below summarizes the ICT sector:

Index	North American Industry Classification System (NAICS)	ICT Sub-sector
1	3333	Commercial & Service Industry Mach. Manuf.
2	3341	Computer & Peripheral Equip. Manuf.
3	3342	Communications Equip. Manuf.
4	3343	Audio & Video Equip. Manuf.
5	3344	Semiconductor & Other Electronic Component Manuf.
6	3345	Navigational, Medical & Control Instruments Manuf.
7	4173	Computer & Comm. Equip. & Supplies Wholesale distribution
8	5112	Software Publishers
9	5171	Wired Telecommunications Carrier
10	5172	Wireless Telecommunications Carrier (except satellite)
11	5174	Satellite Telecommunications
12	5179	Other Telecommunications
13	5182	Data Processing, Hosting, and Related Services
14	5415	Computer Systems Design & Related Serv.
15	8112	Electronic & Precision Equip. Repair & Maintenance



## ABOUT ICTC

The Information and Communications Technology Council (ICTC) is a leading not-for-profit national centre of expertise conducting research, policy development, and creating talent solutions for the digital economy.

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