RESEARCH

QUARTERLY MONITOR OF CANADA'S ICT LABOUR MARKET

The Information and Communications Technology Council | 2018 Q1

ICTC CTIC

RESEARCH BY:

THE INFORMATION AND COMMUNICATIONS TECHNOLOGY COUNCIL (ICTC)

FUNDING PROVIDED BY:

Canada

THE GOVERNMENT OF CANADA'S SECTORAL INITIATIVES PROGRAM

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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. In so doing, this data will support the continued development of a more prosperous Canadian ICT workforce and industry in a global digital economy.

This study was funded by the Government of Canada's Sectoral Initiatives Program. The authors made all reasonable efforts to ensure accuracy in compiling the document. The opinions and interpretations in this publication are those of the authors and do not necessarily reflect those of the Government of Canada.

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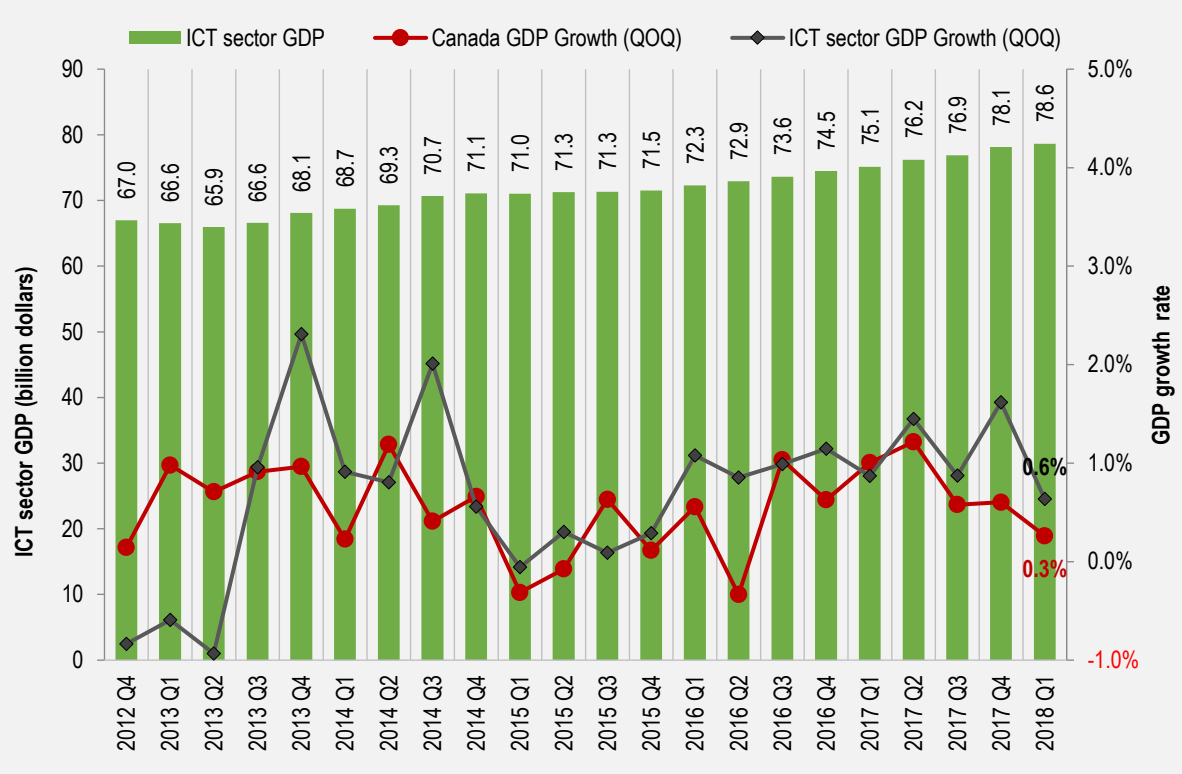
GDP Growth

Figure 1 – ICT sector GDP



Source: ICTC; Statistics Canada

Analysis and Insights

- The ICT sector continues to play an important role in the overall growth of the Canadian economy, by means of its direct contribution to Canada's GDP[1,2], as well as the indirect economic impact that is generated through its strong sectoral linkages with other industries within the economy.
- Overall, the ICT sector directly contributes approximately $78.6 billion in GDP to the national economy, and now accounts for approximately 4.5% of Canada's total economic output (GDP).
- Real GDP in the ICT sector increased by 0.6% in the first[3] quarter of 2018 when compared to the previous quarter, with both the ICT manufacturing[4] and ICT services[5] sub-sectors recording growth of 7.0 and 1.6% respectively.
- The ICT sector continued to expand at a slightly faster pace relative to the broader Canadian economy, with the latter registering modest growth of a mere 0.3% in the first quarter of 2018.

[1] In 2007 chained dollars. Chained dollars are real dollar amounts adjusted for inflation

[2] 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

[3] January 2018-April 2018

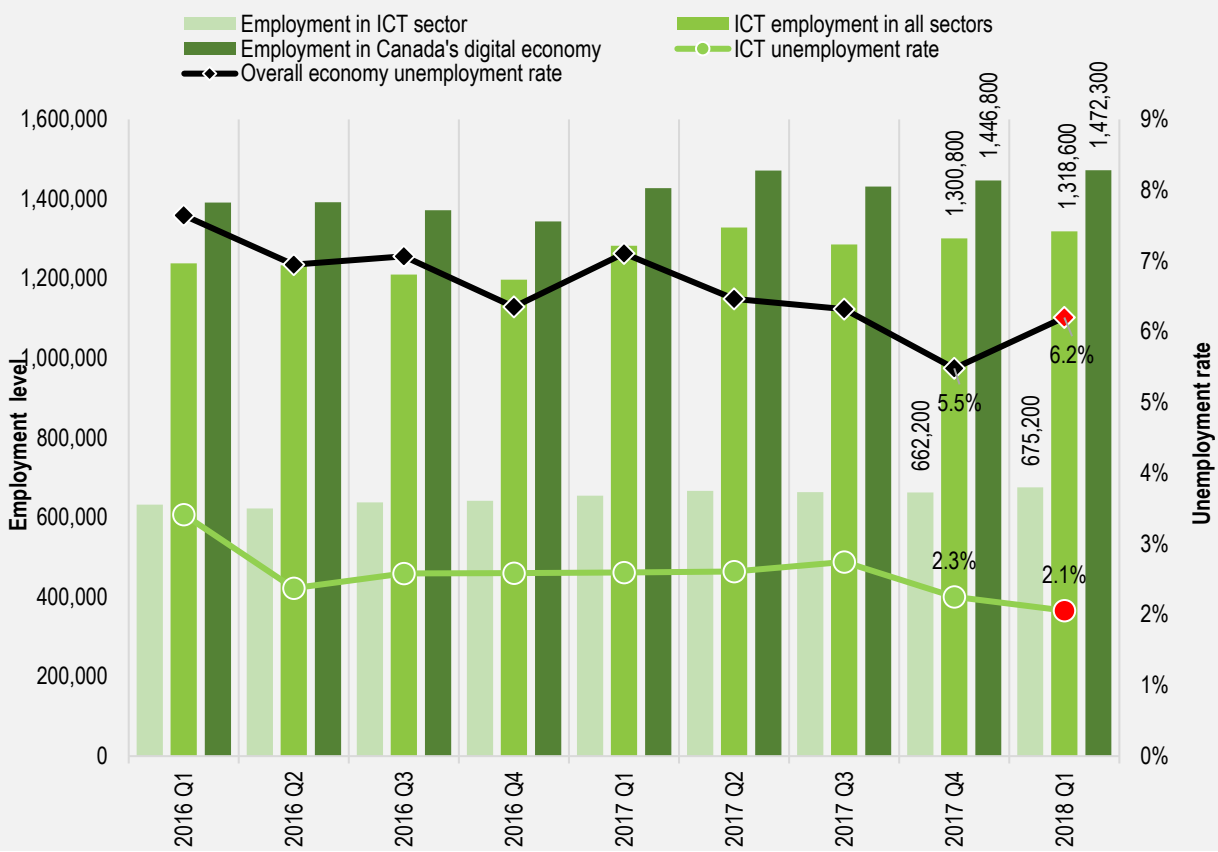
[4] This combines the North American Industry Classification System (NAICS) codes 3341, 3342, 3343, 3344, 3346. See Appendices

[5] This combines the North American Industry Classification System (NAICS) codes 4173, 5112, 517, 518, 5415, 8112. See Appendices

LABOUR MARKET TRENDS

Employment

Figure 2 – Employment in Canada's digital economy



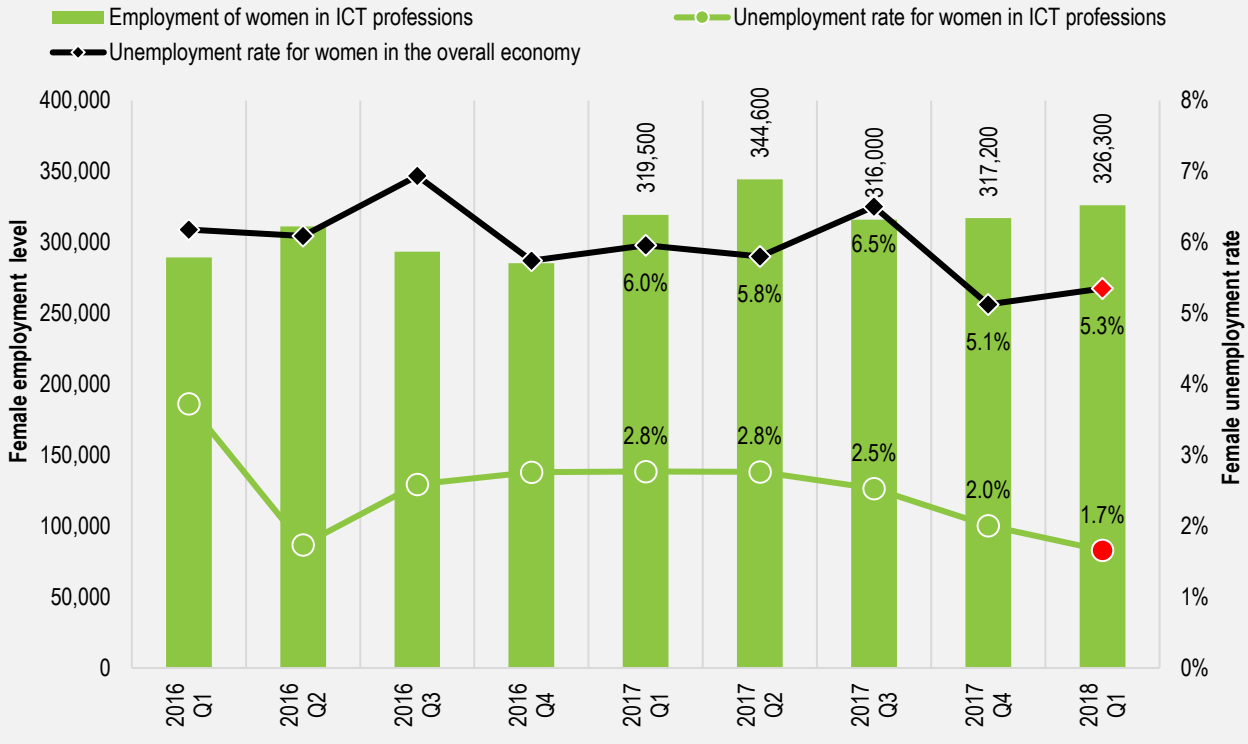
Source: ICTC; Statistics Canada

Analysis and Insights

- A total of 1,472,300 individuals were employed in the Canadian digital economy in the first quarter of 2018. This included approximately 521,500 ICT professionals working in the ICT sector, 797,100 ICT professionals working in non-ICT sectors along with another 153,700 non-ICT professionals working in the ICT sector.
- An estimated 1,318,600 ICT professionals were employed across all sectors of the Canadian economy in Q1 of 2018. In Q1 of 2018, ICT employment across all sectors of the economy increased by 17,800 jobs, representing a growth rate of 1.4% when compared to Q4 of 2017. Year over year ICT employment across all sectors of the economy grew by 36,000, a 2.8% increase when compared to Q1 of 2017.
- An additional 13,000 net new jobs were created in the Canadian ICT sector during Q1 of 2018, representing an increase of 2% from Q4 in 2017. Year over year employment growth came in a bit stronger with approximately 21,100 jobs being created, which represents an increase of 3.2% when compared to Q1 of 2017.
- The unemployment rate among ICT workers averaged 2.1% throughout the first three months of 2018. This is a modest decline from the 2.3% registered in the last quarter of 2017. The national unemployment rate on the other hand increased by 0.7 percentage points to 6.2%

Gender Diversity

Figure 3 – Women's employment in ICT and the overall economy

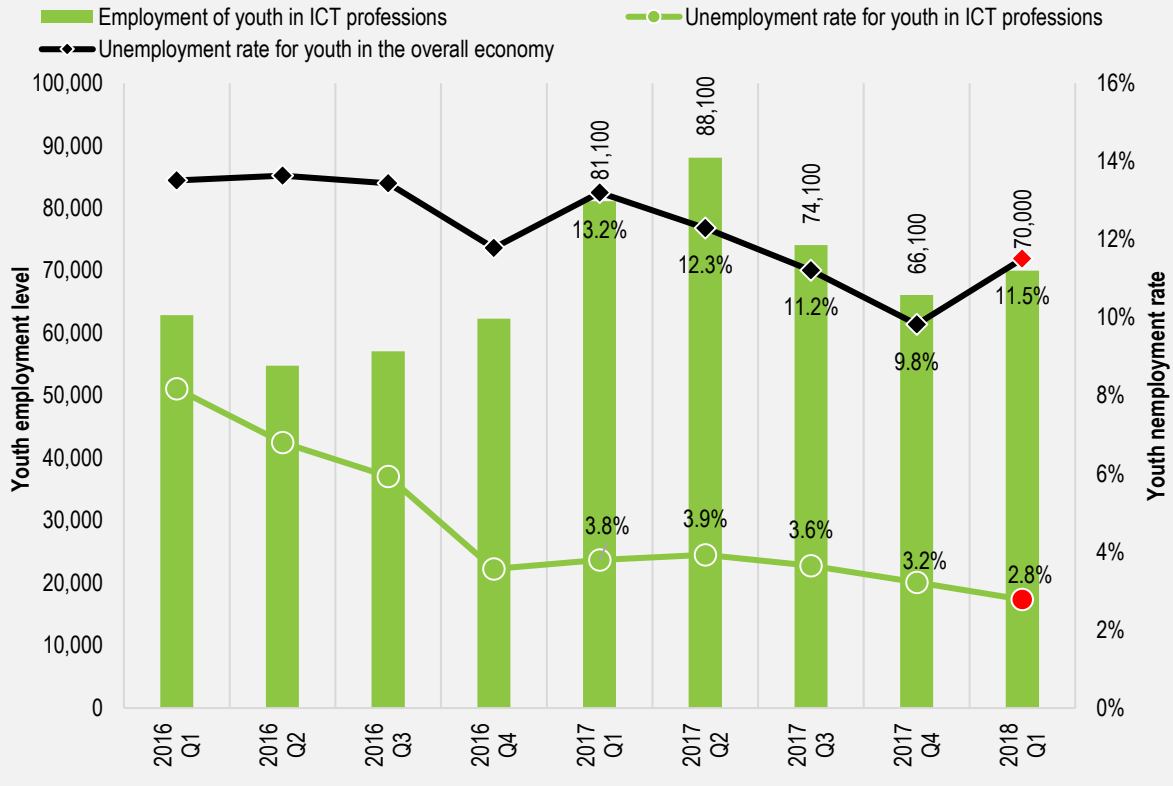


Source: ICTC; Statistics Canada

Analysis and Insights

- The number of women employed as ICT professionals increased by 2.9% in the first quarter of 2018 - when compared to the previous quarter - and now stands at 326,300. Year over year growth however, was slightly more subdued at 2.1%.
- An additional 9,100 women were employed in ICT-related jobs in the first quarter of the year and this accounted for a little more than half of the total new ICT job that were created in the quarter.
- Although women account for 48% of the employed workforce in Canada, they continue to be underrepresented in the ICT sector, representing only 25% of all the employed ICT professionals in Q1 2018. This figure has remained relatively constant over the past few years.
- The unemployment rate among women in ICT related professions fell to 1.7% in Q1 of 2018. This is the lowest level it has been since Q2 of 2016. More, the unemployment rate of women in ICT professions continues to be well below the national unemployment rate among women (across all occupations), which averaged 5.3% over that same period.

Figure 4 – Youth employment in ICT and the overall economy



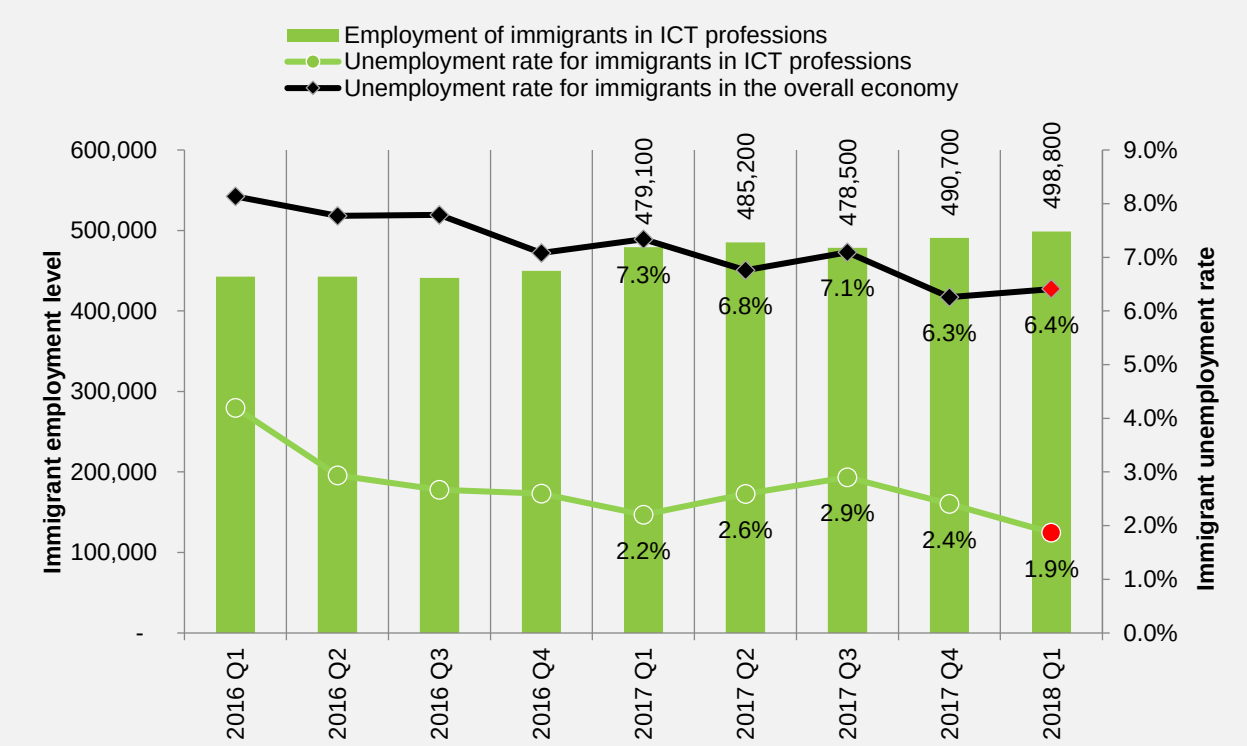
Source: ICTC; Statistics Canada

Analysis and Insights

- Youth (15-24 years old) accounted for approximately 13% of the employed workforce in Canada in Q1 of 2018. Notwithstanding, only 3% of the total number of youths employed were working in ICT related jobs over that period, a modest increase from the 2.7% that was recorded in Q4 of 2017. There were approximately 70,000 youths working in ICT related jobs in Q1 of 2018.
- During Q1 of 2018, ICT employment among youth increased by 3,900 jobs or 5.9%. However, on a year over year basis, employment declined by 13.7%, translating to a net job loss of approximately 11,100 positions.
- Youth accounted for a little over 5% of the total number of ICT workers in Canada during Q1 of 2018. This represents a modest decline from the 6.3% that was observed in Q1 of 2017.
- Despite some job losses among youths working as ICT professionals over the past year, the unemployment rate among these individuals fell to 2.8% in Q1 2018. Compare this to the overall unemployment rate among youth across all sectors of the Canadian economy, which totaled 11.5% over that same time period.

Immigrant Integration

Figure 5 – Immigrant employment in ICT and the overall economy



Source: ICTC; Statistics Canada

Analysis and Insights

- In Q1 of 2018, there were approximately 498,800 immigrants[6] working as ICT professionals across Canada. These individuals accounted for approximately 38% of the employed ICT workforce. However, immigrants represented only 26.8% of the overall employed workforce across all sectors of the Canadian economy. This is a modest increase from the 26.2% that was observed in Q4 of 2017.
- In Q1 of 2018, an additional 8,100 immigrants were employed in ICT professions, representing a 1.7% increase from Q4 of 2017. On a year over year basis, employment growth was somewhat stronger, increasing by 4.1%, which resulted in a net jobs gain of approximately 19,700 positions.
- As the ICT sector expands, immigration continues to play an important role as a supply stream for talent, as well as bridging the gap with respect to the availability or lack thereof of the highly skilled workers that are in demand across all segments of the digital economy.
- The uptick in employment among immigrants in ICT professions contributed to a further decline in the unemployment rate among these individuals, totaling 1.9% in Q1 of 2018. This represents a 0.5 percentage point decline when compared to the previous quarter. This figure continues to be well below the unemployment rate for immigrants across all sectors of the Canadian economy, which totaled 6.4% in Q1 of 2018.

[6] Immigrants are defined as persons who were not born in Canada and who were not Canadian citizens by birth.

In-Demand jobs

The demand for ICT talent and skills remains very high in Canada, and is expected to increase significantly over the next five years. For a detailed understanding of medium-term supply and demand dynamics related to ICT talent and skills in Canada, please refer to ICTC's 2021 Labour Market Outlook.

In Q1 of 2018, employment growth was strongest among the following ICT professions:

- User support technicians – 14,670 jobs, 16.2% increase from Q4 2017.
- Technical sales specialists-wholesale trade – 11,770 jobs, 9.1% increase from Q4 2017.
- Software engineers and designers – 10,600 jobs, 22% increase from Q4 2017.
- Electronic service technicians (household and business equipment) – 5,700 jobs, 8.9% increase from Q4 2017.
- Web designers and developers – 5,330 jobs, 18.1% increase from Q4 2017.

To review live job postings by occupation, please click here.

APPENDICIES

Digital Economy Labour Force

ICTC's labour market research captures critical economic and labour market indicators, helping to inform competitive business planning, as well as strong human resource strategies and decision-making related to the ICT sector. Combined, this research forms the foundation for driving the development of a more prosperous Canadian ICT sector, and a highly-skilled workforce able to compete in the 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 seeking employment) in these occupations and all other (non-ICT) occupations in the ICT sector (ICTC's framework of Canada's ICT sector is explained below) represent the total digital economy labour force in Canada. The table below summarizes the core ICT occupations:

Index	National Occupational Classification (NOC)	Occupation Title
1	131	Telecommunication carriers managers
2	211	Engineering managers
3	911	Computer and information systems managers
4	911	Manufacturing managers
5	1252	Health information management occupations
6	2133	Electrical and electronics engineers
7	2147	Computer engineers (except software engineers and designers)
8	2171	Information systems analysts and consultants
9	2172	Database analysts and data administrators
10	2173	Software engineers and designers
11	2174	Computer programmers and interactive media developers
12	2175	Web designers and developers
13	2241	Electrical and electronics engineering technologists and technicians
14	2242	Electronic service technicians (household and business equipment)
15	2243	Industrial instrument technicians and mechanics
16	2281	Computer network technicians
17	2282	User support technicians
18	2283	Information systems testing technicians
19	5222	Film and video camera operators
20	5223	Graphic arts technicians
21	5225	Audio and video recording technicians
22	5241	Graphic designers and illustrators
23	6221	Technical sales specialists - wholesale trade
24	9222	Supervisors, electronics manufacturing
25	9523	Electronics assemblers, fabricators, inspectors and testers

ICT Sector

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