

Calgary Economic Development

KEY SECTOR REPORT: PROFESSIONAL SERVICES

January 2008

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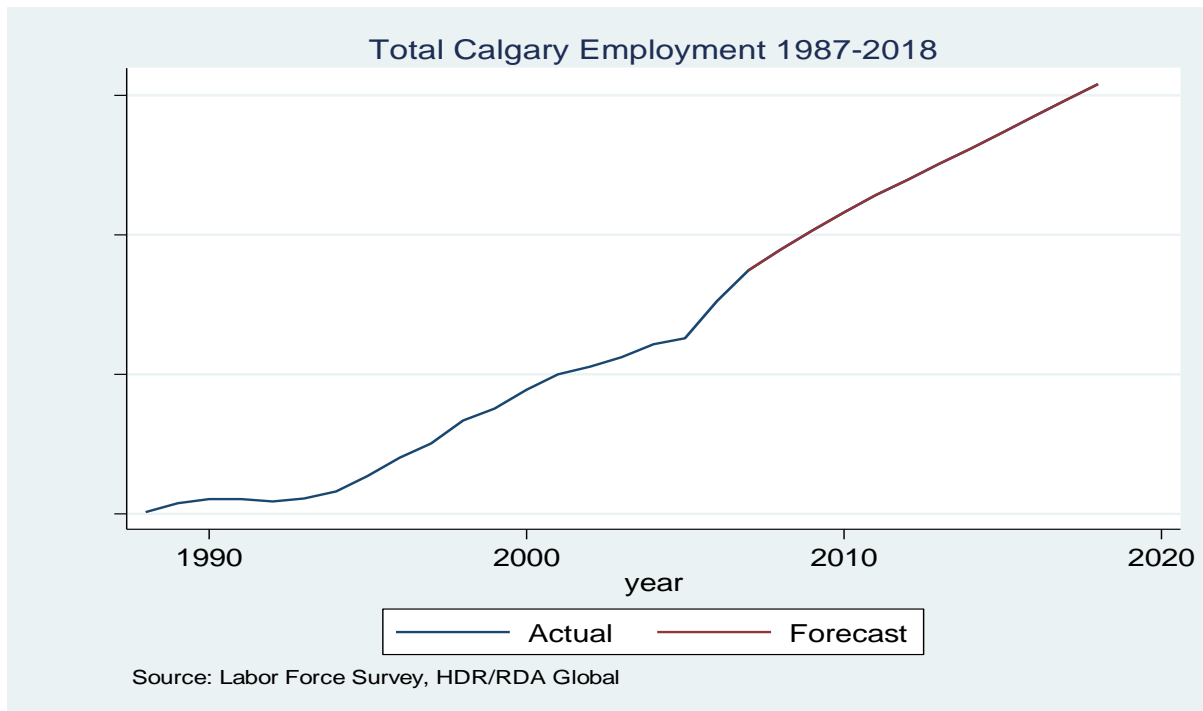
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Figure 1: Total Calgary Employment Forecast (All Industries)



The Calgary economy has seen tremendous growth in labour demand over the previous decade with employment growth reaching an all-time high of 8.1%¹ in 2006. The recent strong growth in the Calgary economy has been driven by a combination of economic factors spurring growth in specific sectors and generally throughout the Calgary economy. Energy prices are a significant driver with West Texas Intermediate oil price rising 17%² in 2006. Investment levels in major construction projects have risen significantly compared to historical levels. Housing starts have risen from 13,700³ starts in 2005 to 17,000 starts in 2006, an increase of 25%. Calgary GDP grew at 7.7% in 2006.

Recent increases in employment levels have been highest in sectors of the Calgary economy which are related to energy, in particular in the professional services sector. However, overall growth has been relatively balanced among industries with significant growth in most sectors of the economy.

As Figure 1 shows, labour demand in the Calgary Economic Region is expected to continue to grow at a healthy rate throughout the forecast, albeit at a lower, more sustainable level. The overall growth in employment in Calgary is expected to decline over the next several years settling at a more sustainable long-term employment growth rate of 2.4%, in line with historical average growth. However, this lower growth rate will continue to result in strong job creation. Over the previous ten years (1996-2006) Calgary employment increased adding 224,000 new

¹ Source: Labor Force Survey

² Source: US Energy Information Administration

³ Source for housing starts statistics and Metro GDP at basic prices was the Conference Board of Canada

jobs. Over the ten year forecast period (2007-2017) Calgary employment growth will result in the creation of an additional 244,000 new jobs. This growth in the Calgary economy will be driven by a number of factors including expectations that oil prices will remain at or near historically high levels. Energy prices are expected to be volatile in the near term, with possible spikes in prices, partially due to the declining value of the US dollar. However, for the long-term forecast, an average annual 1.7% growth rate in oil prices has been forecasted, which is consistent with conservative expectations of energy analysts⁴. Calgary GDP growth will moderate to a strong long term compound annual real growth rate of 3.8%.

Figure 2 Calgary Job Creation in Each Industry

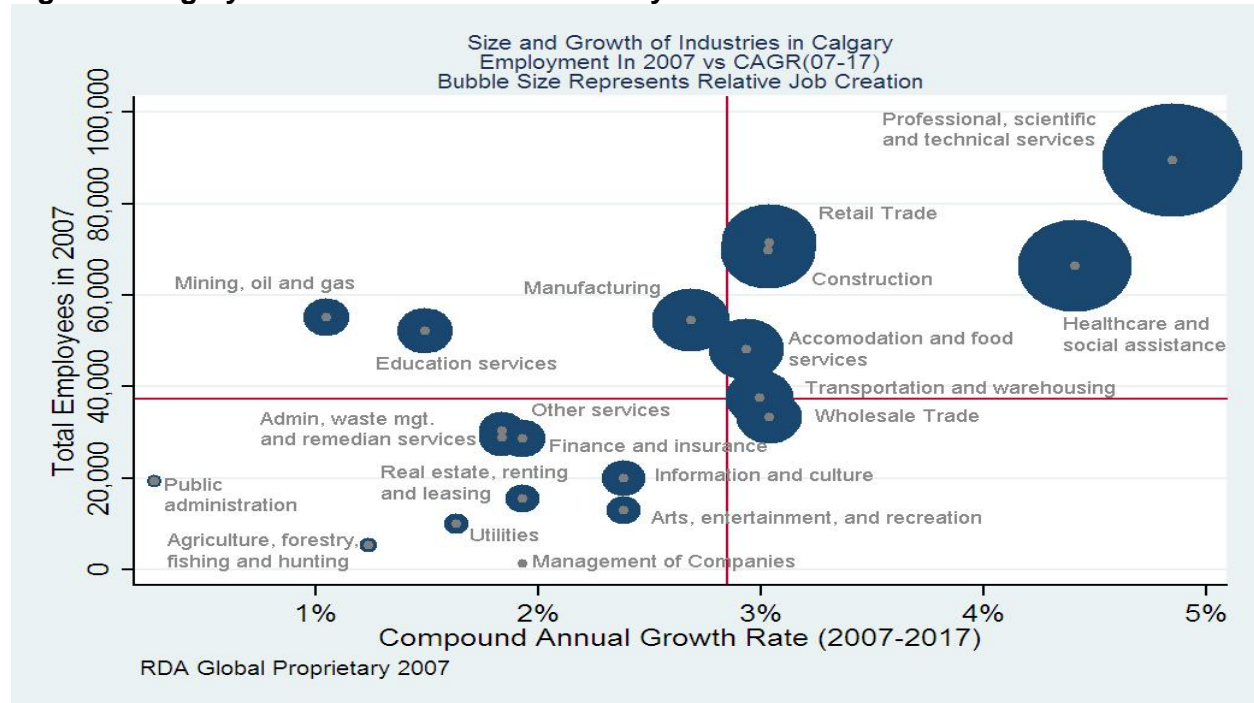


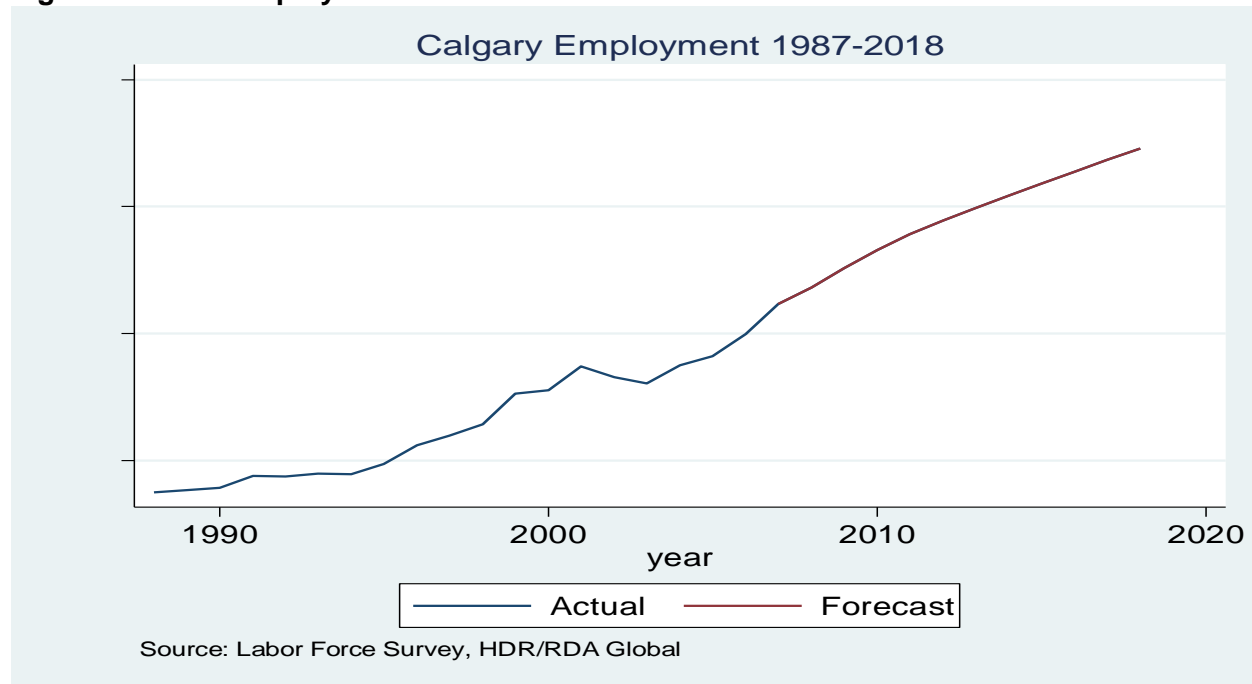
Figure 2 highlights the differences in job creation across industries in Calgary, with the larger circles representing industries with more job creations. Significant gains in employment will be somewhat distributed among economic sectors. However, there will be particularly strong expansion in the professional services sector, which is tied to continued demand for technical and engineering services in the energy sector. There will also be strong job growth in healthcare, driven by overall population growth and growth in the older segments of the population. Job expansion will also continue to be robust in retail, construction, accommodation & food services, transportation, manufacturing, and wholesale. Population growth is expected to drive up demand for education services. Most segments of the economy are expected to continue to see positive growth with employment growth rates in the 1% to 2.5% long-term growth range. However, total job creation in niche industries will be constrained by the relatively smaller size of these segments.

⁴ In development of this forecast, oil price forecasts of the Energy Information Administration and Sproule and Associates were consulted, however, final assumptions in the forecast model were based on a nominal annual growth rate of 1.7%.

PROFESSIONAL SERVICES KEY SECTOR

The Professional Services Sector is expected to continue to expand at a compound annual growth rate of 4.5% over the next ten years. This growth will outpace the overall employment growth in Calgary of 2.9%. Growth in the key sector will result in an additional 42,000 jobs added to the sector over the forecast period.

Figure 3: Total Employment in the Professional Services Sector 1987-2018



The Professional Services Sector ranks second in total employment among the Calgary Economic Development Key Sectors. In terms of jobs created, the sector ranked second over the 1997-2007 period, creating over 37,100 jobs. The sector will be the second largest contributor to job creation in the 2007-2017 forecast period, creating about 42,100 new jobs. One in every six new jobs created in the next ten years will be in the Professional Services Sector.

Table 1: Professional Services Sector Compared with Other CED Key Sectors

Key Sector	Total Employment				Compound Annual Growth			Jobs Added		
	1987	1997	2007	2017	1987-97	1997-07	2007-17	1987-97	1997-07	2007-17
Creative Industries	19,048	29,408	51,459	78,309	4.4%	5.8%	4.3%	10,360	22,050	26,850
Energy	37,811	36,371	63,148	70,909	-0.4%	5.7%	1.2%	(1,440)	26,777	7,762
Film	1,949	2,837	3,438	4,354	3.8%	1.9%	2.4%	889	600	917
Financial Services	26,201	33,679	45,185	54,695	2.5%	3.0%	1.9%	7,478	11,506	9,509
Health & Wellness	47,734	68,830	116,345	177,895	3.7%	5.4%	4.3%	21,096	47,515	61,550
ICT	17,724	26,373	40,273	57,709	4.1%	4.3%	3.7%	8,649	13,900	17,435
Manufacturing	30,500	42,900	54,380	70,890	3.5%	2.4%	2.7%	12,400	11,480	16,510
Professional Services	24,200	39,494	76,610	118,726	5.0%	6.9%	4.5%	15,294	37,116	42,116
Transportation & Logistics	39,762	49,062	65,958	88,751	2.1%	3.0%	3.0%	9,300	16,896	22,793
Other (Not a Key Sector)	191,766	243,914	359,958	465,549	2.4%	4.0%	2.6%	52,148	116,044	105,591
Grand Total	389,800	500,700	749,368	993,298	2.5%	4.1%	2.9%	110,900	248,668	243,930

JOBS CREATED BY OCCUPATION – PROFESSIONAL SERVICES KEY SECTOR

Figure 4: Total Jobs by Occupation 2007 and 2017 – Professional Services Sector

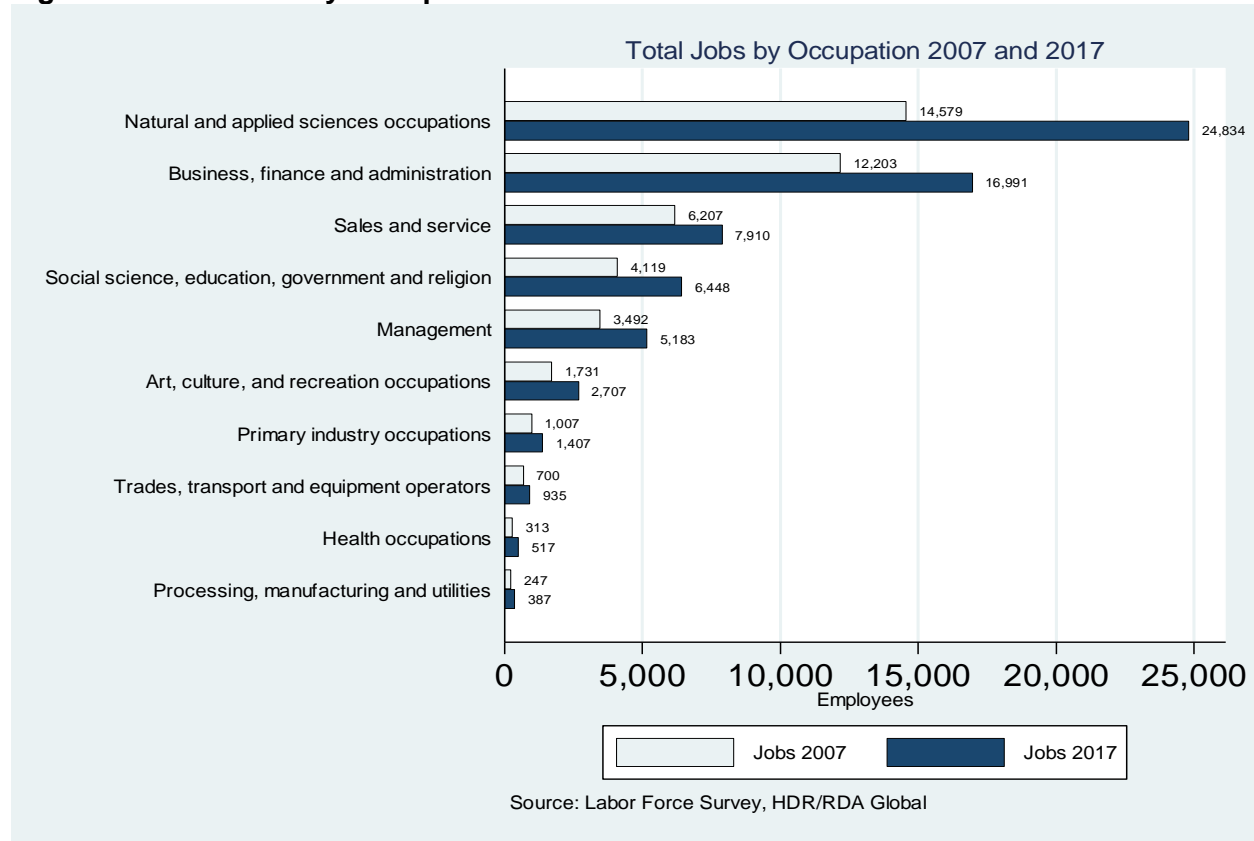


Table 2: 30-Year Occupational Growth for the Professional Services Sector

Occupation (1 Digit NOC)	Total Employees				Compound Annual Growth		
	1987	1997	2007	2017	1987-97	1997-07	2007-17
A Management occupations	1,878	3,452	6,014	9,151	4.3%	7.1%	3.6%
B Business, finance and administration occupations	7,069	10,729	21,288	30,344	4.3%	7.1%	3.6%
C Natural and applied sciences and related occupations	8,395	13,543	27,919	47,706	4.9%	7.5%	5.5%
D Health occupations	170	258	606	1,002	4.3%	8.9%	5.2%
E Occupations in social science, education, government service and religion	2,144	3,860	7,861	12,350	6.1%	7.4%	4.6%
F Occupations in art, culture, recreation and sport	1,187	1,844	3,329	5,215	4.5%	6.1%	4.6%
G Sales and service occupations	2,672	4,387	7,165	9,413	5.1%	5.0%	2.8%
H Trades, transport and equipment operators and related occupations	365	625	954	1,338	5.5%	4.3%	3.4%
I Occupations unique to primary industry	209	629	1,129	1,637	11.7%	6.0%	3.8%
J Occupations unique to processing, manufacturing and utilities	111	168	345	571	4.2%	7.4%	3.8%
Grand Total	24,200	39,494	76,610	118,726	5.0%	6.9%	4.5%

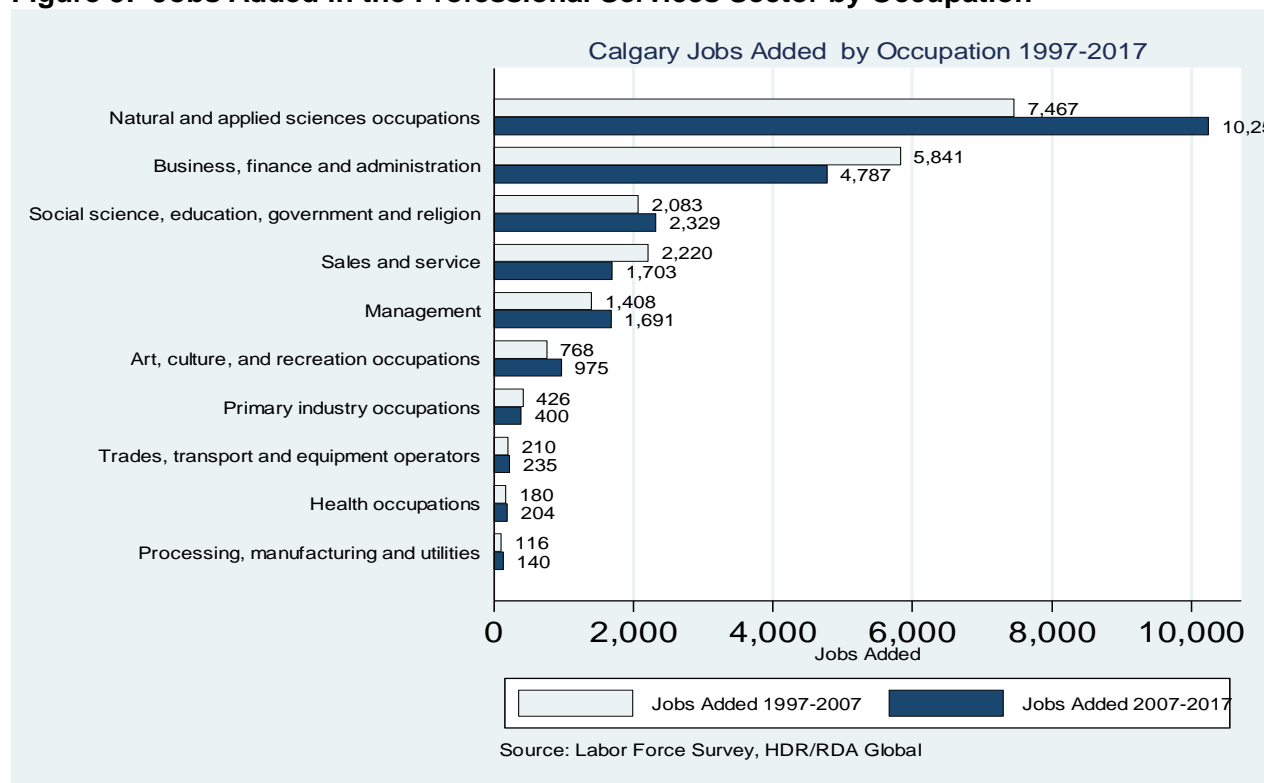
There are nearly 77,000 employees in the Professional Services Sector today. Nearly 28,000 of these workers have natural and applied sciences and related occupations, representing the largest share of occupations. Demand for these jobs will rise from 28,000 workers to nearly 48,000 workers over the forecast period. The next largest occupational category is business, finance, and administration jobs, which currently employ about 21,300 workers and will employ about 30,400 workers in 2017. Occupations in social science, education, government service

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and religion is the third largest category with over 7,800 employees today growing to about 12,300 workers in 2017.

Figure 5: Jobs Added in the Professional Services Sector by Occupation



About 40% of all jobs created in this sector will be natural and applied sciences and related occupations (a total of about 20,000 new jobs by 2017). The sector will generate about 9,000 jobs for workers in business and finance occupations and about 4,000 jobs for occupations in social science, education, government service and religion.

Table 3: Ten-Year Forecast of Jobs by Major Occupational Group – Professional Services Sector

Occupation (1 Digit NOC)	Annual Employment											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
A Management occupations	5,194	6,014	6,442	6,883	7,343	7,730	8,008	8,251	8,499	8,736	8,948	9,151
B Business, finance and administration occupations	18,659	21,288	22,732	24,088	25,578	26,752	27,549	28,179	28,820	29,402	29,896	30,344
C Natural and applied sciences and related occupations	25,915	27,919	30,552	33,324	35,507	37,303	39,235	41,081	42,732	44,339	46,028	47,706
D Health occupations	581	606	621	647	684	724	761	802	848	897	948	1,002
E Occupations in social science, education, government service and religion	7,021	7,861	8,336	8,827	9,396	9,909	10,314	10,701	11,122	11,543	11,947	12,350
F Occupations in art, culture, recreation and sport	2,897	3,329	3,289	3,623	3,778	4,048	4,202	4,403	4,594	4,807	5,005	5,215
G Sales and service occupations	6,313	7,165	7,322	7,442	7,772	8,069	8,303	8,496	8,734	8,970	9,195	9,413
H Trades, transport and equipment operators and related occupations	825	954	965	1,018	1,068	1,115	1,154	1,194	1,233	1,271	1,305	1,338
I Occupations unique to primary industry	1,032											
J Occupations unique to processing, manufacturing and utilities	290	1,129	1,141	1,215	1,275	1,329	1,380	1,434	1,485	1,536	1,586	1,637
		345	367	398	426	452	473	493	513	533	552	571
Grand Total	68,728	76,610	81,768	87,464	92,829	97,431	101,379	105,035	108,580	112,034	115,412	118,726

Table 4: Top 50 Occupations Adding Jobs From 2007-2017⁵

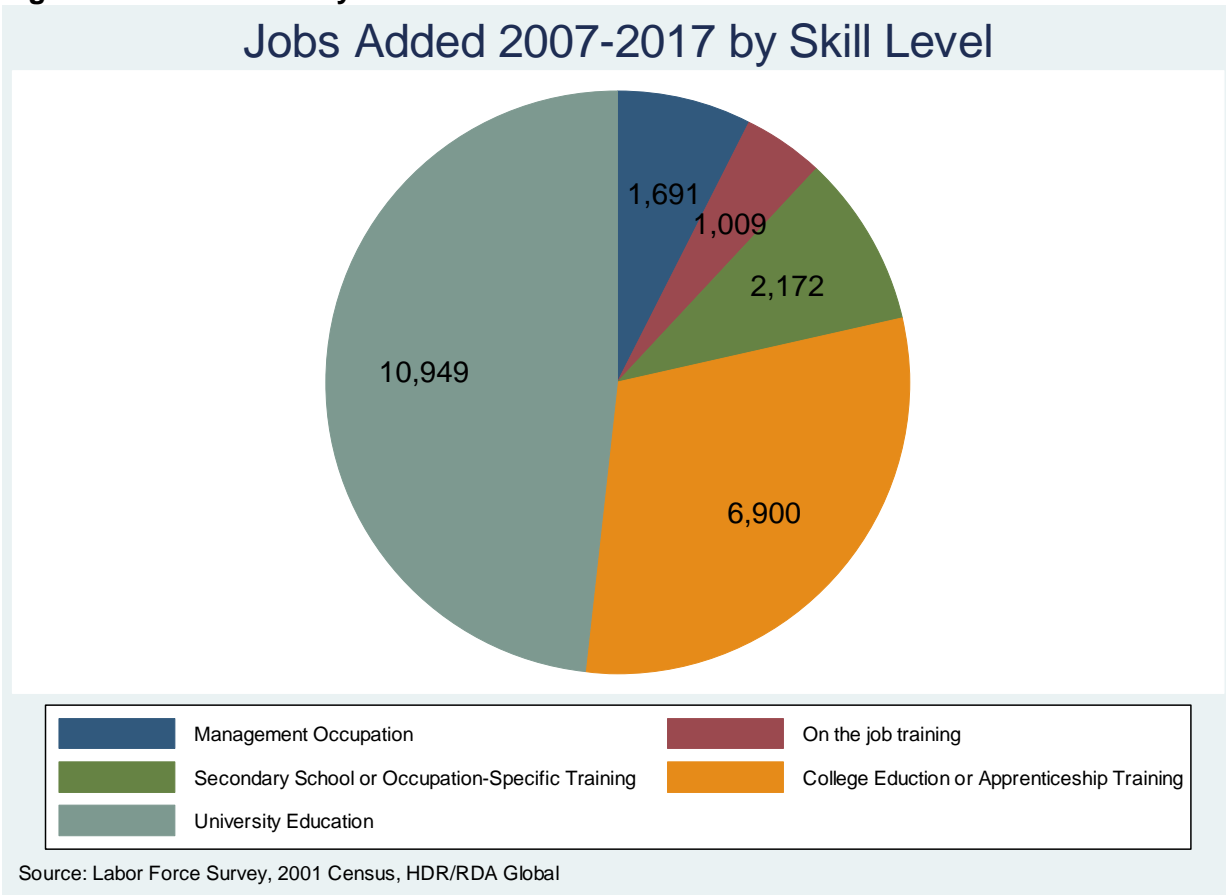
Rank	Occupation (4 Digit NOC)	Employees				Jobs Created
		1987	1997	2007	2017	2007-2017
1	A012 Senior government managers and officials	0	0	1	2	1
2	A013 Senior managers - Financial, communications and other business services	240	347	639	931	291
3	A015 Senior managers - Trade, broadcasting and other services, n.e.c.	12	19	26	31	5
4	A111 Financial managers	140	263	468	758	290
5	A112 Human resources managers	72	136	240	381	141
6	A113 Purchasing managers	19	35	65	103	38
7	A114 Other administrative services managers	71	138	225	344	119
8	A121 Engineering managers	169	313	572	878	306
9	A122 Computer and information systems managers	291	539	985	1,493	507
10	A123 Architecture and science managers	80	148	269	392	123
11	A131 Sales, marketing and advertising managers	282	532	937	1,454	517
12	A141 Facility operation and maintenance managers	44	87	138	204	66
13	A211 Retail trade managers	101	199	315	450	135
14	A221 Restaurant and food service managers	2	3	5	7	2
15	A222 Accommodation service managers	1	1	2	2	0
16	A302 Banking, credit and other investment managers	19	41	54	69	15
17	A303 Other business services managers	94	184	286	404	117
18	A311 Telecommunication carriers managers	17	32	60	97	37
19	A332 Government managers, economic analysis, policy development and program administration	14	25	48	84	36
20	A361 Other services managers	62	129	178	247	68
21	A371 Construction managers	78	145	252	393	141
22	A372 Residential home builders and renovators	1	2	2	3	0
23	A373 Transportation managers	11	21	42	65	23
24	A381 Primary production managers (except agriculture)	40	74	140	255	115
25	A391 Manufacturing managers	18	33	60	97	37
26	A392 Utilities managers	1	2	4	8	3
27	B011 Financial auditors and accountants	1,381	2,676	5,756	8,439	2,684
28	B012 Financial and investment analysts	65	126	277	434	157
29	B013 Securities agents, investment dealers and brokers	16	31	69	112	43
30	B014 Other financial officers	64	124	274	432	158
31	B021 Specialists in human resources	68	133	282	431	149
32	B022 Professional occupations in business services to management	435	844	1,793	2,422	629
33	B111 Bookkeepers	336	424	739	1,054	315
34	B112 Loan officers	5	7	10	14	4
35	B115 Assessors, valuers and appraisers	27	34	63	100	37
36	B211 Secretaries (except legal and medical)	481	615	1,046	1,525	479
37	B212 Legal secretaries	735	920	1,601	2,066	464
38	B214 Court recorders and medical transcriptionists	6	9	12	12	0
39	B311 Administrative officers	678	873	1,463	2,072	609
40	B312 Executive assistants	121	152	268	409	142
41	B313 Personnel and recruitment officers	156	207	317	421	104
42	B314 Property administrators	80	103	174	262	88
43	B315 Purchasing agents and officers	85	106	192	296	103
44	B316 Conference and event planners	32	45	62	80	18
45	B411 Supervisors, general office and administrative support clerks	93	134	274	378	104
46	B412 Supervisors, finance and insurance clerks	31	45	90	132	42
47	B413 Supervisors, library, correspondence and related information clerks	52	78	142	185	43
48	B415 Supervisors, recording, distributing and scheduling occupations	4	7	13	17	4
49	B511 General office clerks	520	739	1,562	2,288	726
50	B513 Records management and filing clerks	49	70	148	206	58
	Others	235,978	253,622	286,810	325,257	31,817
	Grand Total	243,375	265,578	309,449	358,194	42,116

⁵ Note that these job creations in Table 4 capture only jobs created in the Professional Services Sector and do not represent total job creations for all of Calgary. Jobs with these occupations will also be created in other industries.

EMPLOYMENT GROWTH BY SKILL LEVEL – PROFESSIONAL SERVICES SECTOR

From a skill level perspective, there will be about 1,700 new management occupations, 6,900 jobs requiring some college education or apprenticeship training, nearly 2,200 jobs which require secondary school or occupation-specific training, over 10,900 that require university training and about 1,000 that require only on-the-job training.

Figure 6: Jobs Added by Skill Level in the Professional Services Sector



APPENDIX 1: SECTOR DEFINITION – PROFESSIONAL SERVICES

The Professional Services Sector is comprised of selected industry segments from the NAICS 54 Professional, Scientific and Technical Services (*excluding Specialized Design Services, Computer Systems Design and Related Services Advertising*), and NAICS 56 Administrative and Support Services (*including only Office Administrative Services, Facilities Support Services and Employment Services, Business Support Services and Travel Arrangement and Reservation Services*). Definitions of the two industries are listed below.

Professional, Scientific and Technical Services (NAICS 54)

This sector comprises establishments primarily engaged in activities in which human capital is the major input. These establishments make available the knowledge and skills of their employees, often on an assignment basis. The individual industries of this sector are defined on the basis of the particular expertise and training of the service provider.

The main components of this sector are legal services industries, accounting and related services industries, architectural, engineering and related services industries, surveying and mapping services industries, design services industries, management, scientific and technical consulting services industries, scientific research and development services industries, and advertising services industries.

The distinguishing feature of this sector is the fact that most of the industries grouped in it have production processes that are almost wholly dependent on worker skills. In most of these industries, equipment and materials are not of major importance. Thus, the establishments classified in this sector sell expertise. Much of the expertise requires a university or college education, though not in every case.

Establishments primarily engaged in providing instruction and training in a wide variety of subjects and those primarily engaged in providing health care by diagnosis and treatment are not included in this sector.

Administrative and Support, Waste Management and Remediation Services (NAICS 56)

This sector comprises two different types of establishments: those primarily engaged in activities that support the day-to-day operations of other organizations; and those primarily engaged in waste management activities.

The first type of establishment is engaged in activities such as administration, hiring and placing personnel, preparing documents, taking orders from clients, collecting payments for claims, arranging travel, providing security and surveillance, cleaning buildings, and packaging and labelling products. These activities are often undertaken, in-house, by establishments found in many sectors of the economy. The establishments classified to this sector specialize in one or more of these activities and can therefore provide services to clients in a variety of industries and, in some cases, to households.

Waste management establishments are engaged in the collection, treatment and disposal of waste material, the operation of material recovery facilities, the remediation of polluted sites and the cleaning of septic tanks.