

CALGARY: MANUFACTURING FORCE

MANUFACTURING SECTOR PROFILE



JUNE 2009

CALGARY
ECONOMIC
DEVELOPMENT

CALGARY ECONOMIC DEVELOPMENT



Calgary Economic Development (CED) is working to make Calgary the undisputed choice for people and business.

As Calgary's lead economic development agency, we work with businesses to facilitate growth, expedite local, national and international business investment and trade development opportunities to promote sustainable economic growth in the Calgary region.

Calgary is Western Canada's business centre and has more head offices per capita than any other Canadian city. Its key economic drivers are Financial Services, Energy, Transportation and Logistics, Information and Communication Technology, Manufacturing, Film and Creative Industries.

CED concentrates its activities on developing these sectors; an experienced economic development professional is dedicated to each sector. Using a hands-on approach, we are furthering the success and growth of existing businesses, helping businesses grow their markets globally and promoting the Calgary Region as the ideal location for business investment.

By working with business and partners proactively and collaboratively, we will be able to achieve higher levels of success for Calgary and the surrounding region.

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CALGARY MANUFACTURING SERVICES SECTOR

A Flourishing Sector

Manufacturing in Calgary is a dynamic sector comprising a variety of consumer and industrial products. The sector is reaping the benefits of continuing strong economic growth in Calgary and Alberta, considered among the fastest growing economies in North America.

The well-established oil and gas industry has attracted people and capital from around the world, creating business opportunities and fuelling innovation in every economic sector. In particular, several of Calgary's manufacturing sub-sectors have found strong markets within the resource sector.

The city's exceptional business climate offers manufacturers well developed infrastructure, good access to capital, head office concentration of buyers, a large skilled labour pool and an entrepreneurial community.

Compared to other major North American cities, Calgary's manufacturing companies have competitive costs in key areas, such as research and development (R&D), industrial land and taxes. Calgary's highly trained, well educated, and motivated labour force provides the sector with the human capital to thrive and innovate.

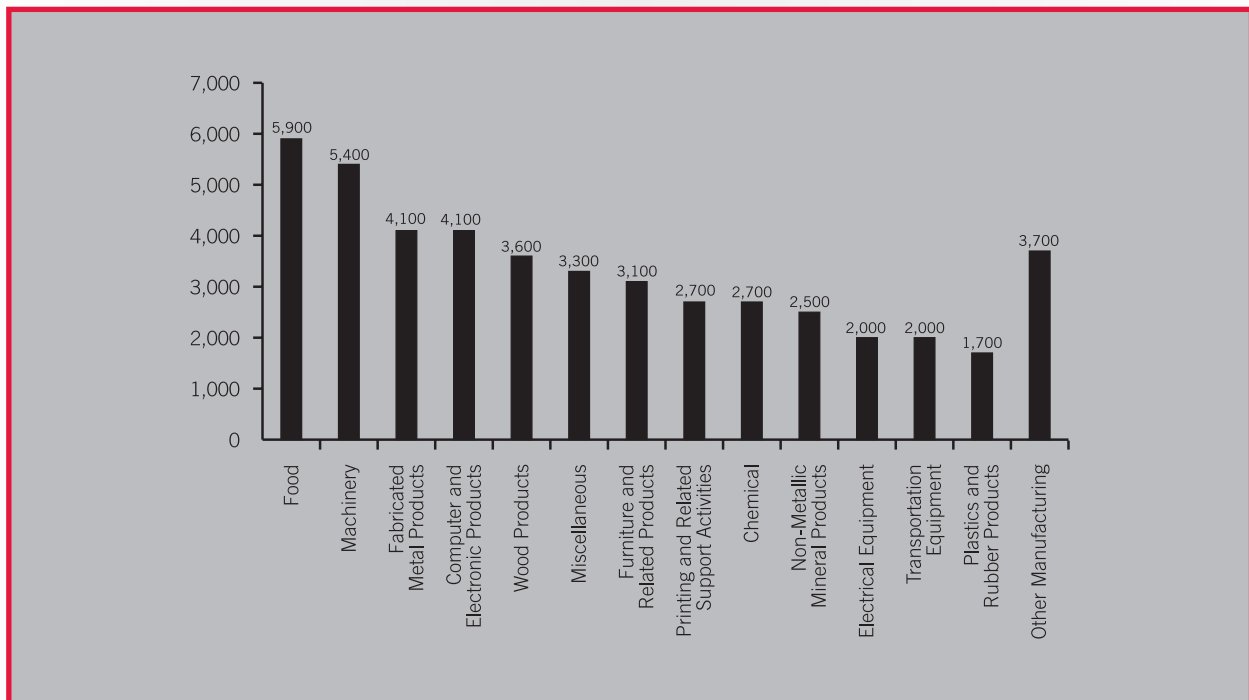
True to the entrepreneurial spirit of the city, Calgary manufacturers have made substantial investments in the most current technology and are more modern and efficient than many of their competitors.

Calgary's Manufacturing Industry Growth

The manufacturing sector in Calgary has grown over the last 10 years. This reflects the economic and population growth in the region. Thanks to the success of the energy sector, the Calgary-Edmonton corridor is one of the fastest growing economic regions in Canada and North America. Access to rail, road and air transportation offers manufacturers flexibility in shipping modes. This provides markets, infrastructure and employees to allow manufacturing companies to prosper.

Increasing focus on research and technology, coupled with a business-oriented provincial government, provides the manufacturing sector with a strong foundation on which to continue to innovate to remain competitive in the global market.

FIGURE 1 – CALGARY 2007 MANUFACTURING EMPLOYMENT BY SUB-SECTOR



Source: Labour Force Survey

Over the past decade, Calgary's manufacturing sector has been a strong contributor to Alberta's job market. About one quarter of Alberta's 142,900 manufacturing workers are employed in Calgary, a total of 46,800 manufacturing employees in 2007. Manufacturing represents 7.2 per cent of Calgary's total employment. The sector created 6,100 new jobs from 1997-2007. Recent growth in the industry has been driven by machinery manufacturing, primary metal manufacturing, fabricated metal manufacturing and wood products manufacturing.

Over the past 10 years, the top job creating sub-sectors were:

- Machinery Manufacturing – 2,700 new jobs
- Wood Products Manufacturing – 1,400 new jobs
- Miscellaneous Manufacturing – 1,200 new jobs
- Primary Metal Manufacturing – 1,000 new jobs
- Fabricated Metal Products – 1,000 new jobs

As well, several sub-sectors of Calgary's manufacturing industry are in the process of becoming established and have room to develop, offering opportunities for new business start-ups and business investment. Calgary's diverse manufacturing sector is highly represented by these sub-sectors:

- Food Manufacturing
- Wood Products Manufacturing
- Printing and Related Support Activities
- Chemical Manufacturing
- Primary Metal Manufacturing
- Fabricated Metal Products
- Machinery Manufacturing
- Computer and Electronic Products
- Furniture and Related Products
- Miscellaneous Manufacturing

TABLE 1 – CALGARY MANUFACTURING SUB-SECTOR EMPLOYMENT, 1997-2007

(In 000s)	Employment		Percent of Calgary Manufacturing		Jobs Created	Percent Change	LQ*
	1997	2007	1997	2007			
NAICS (2002) Categories	1997	2007	1997	2007	1997-2007	1997-2007	2007
Total Manufacturing	40,700	46,800	100.0%	100.0%	6,100	15.0%	0.57
Food Manufacturing	5,100	5,900	12.5%	12.6%	800	15.7%	0.59
Wood Products Manufacturing	2,200	3,600	5.4%	7.6%	1,400	63.6%	0.61
Printing And Related Support Activities	3,700	2,700	9.1%	5.7%	-1,000	-27.0%	0.71
Chemical Manufacturing	2,200	2,700	5.4%	5.8%	500	22.7%	0.65
Primary Metal Manufacturing	1,600	2,600	3.9%	5.6%	1,000	62.5%	0.09
Fabricated Metal Products	3,100	4,100	7.6%	8.7%	1,000	32.3%	0.55
Machinery Manufacturing	2,700	5,400	6.6%	11.5%	2,700	100.0%	1.12
Computer & Electronic Products	3,200	4,100	7.9%	8.8%	900	28.1%	0.90
Furniture and Related Products	4,700	3,100	11.5%	6.6%	-1,600	-34.0%	0.63
Miscellaneous Manufacturing	2,100	3,300	5.2%	7.1%	1,200	57.1%	0.63
Total accounted for in these sub-sectors	30,600	37,500	75.2%	80.1%	6,900	22.5%	-
Other Sectors**	10,100	9,300	24.8%	19.9%	-800	-7.9%	-

Source: Statistics Canada, Labour Force Survey

* Location quotients greater than 1 indicate concentrations of activity that support export opportunities.

** Note: Other Sectors include beverage and tobacco product manufacturing, textile mills, textile product mills, clothing manufacturing, leather and allied product manufacturing, paper manufacturing, plastics and rubber products, non-metallic mineral product manufacturing and electrical equipment manufacturing.

Strong growth has occurred in the machinery, primary metals and fabricated metal manufacturing segments. Together, these three sub-sectors represent 29.1 per cent of Calgary's manufacturing sector. Machinery manufacturing employment has grown by 73.9 per cent over the past decade (a compound annual growth of 7.2 per cent) and primary metal manufacturing has grown by 41.3 per cent (compound annual growth of 5.0 per cent). Growth has also been robust in the smaller manufacturing segments of wood products (42.3 per cent 10-year growth) and miscellaneous manufacturing (36.7 per cent 10-year growth).

TABLE 2 – COMPOUND ANNUAL EMPLOYMENT GROWTH, 1997-2007: CALGARY, ALBERTA & CANADA

Sub-Sector	Calgary	Alberta	Canada
Total Manufacturing	1.4%	1.8%	0.2%
Food Manufacturing	1.5%	2.2%	1.4%
Wood Products Manufacturing	5.0%	1.6%	0.5%
Printing and Related Support Activities	-3.1%	3.0%	-0.2%
Chemical Manufacturing	2.1%	-0.1%	0.9%
Primary Metal Manufacturing	5.0%	-7.7%	-3.1%
Fabricated Metal Product Manufacturing	2.8%	4.7%	2.0%
Machinery Manufacturing	7.2%	5.3%	1.5%
Computer & Electronic Products	2.5%	1.0%	0.4%
Furniture and Related Products	-4.1%	-2.0%	3.1%
Miscellaneous Manufacturing	4.6%	3.3%	1.2%

Source: Statistics Canada, Labour Force Survey

Over the past decade the compound annual growth rate of manufacturing employment in Calgary was 1.4 per cent, well outpacing overall flat growth in Canada at 0.2 per cent growth. Manufacturing employment compound annual growth in Alberta was 1.8 per cent over the past ten years.

Industry Outlook

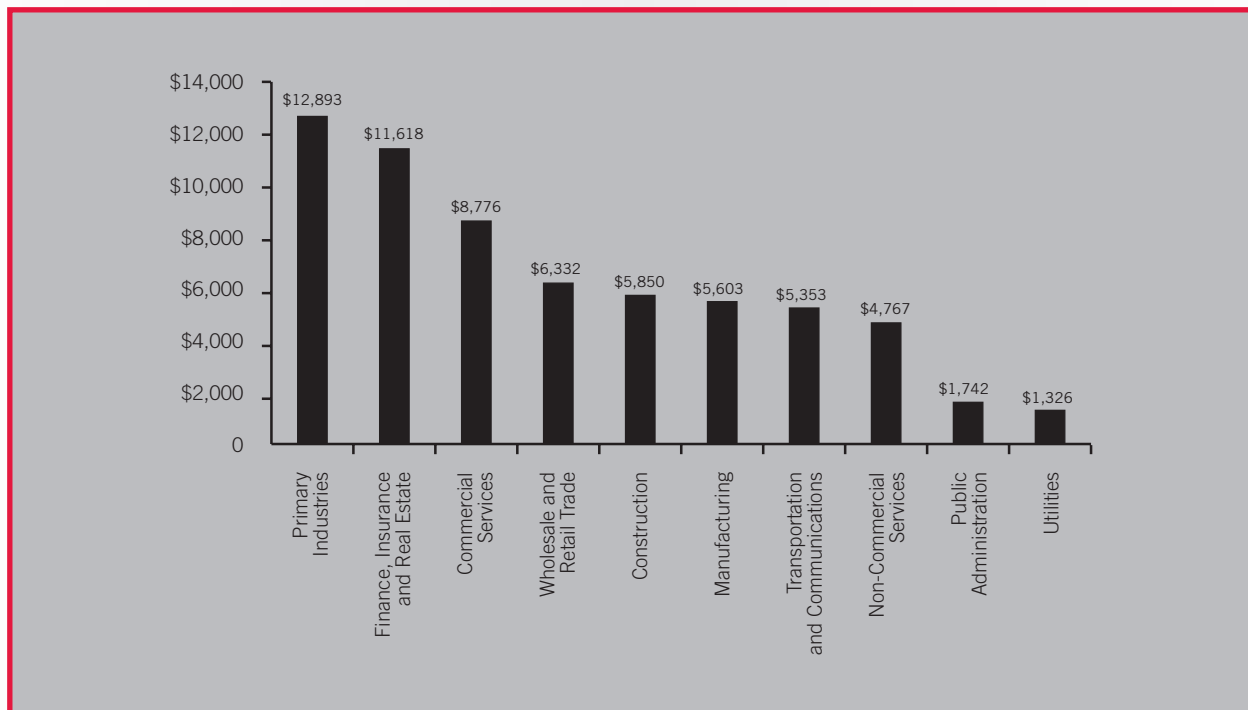
Over the past decade, Calgary's manufacturing industry output has experienced real growth of nearly 40 per cent. This equates to a compound annual growth of 3.4 per cent each year. The industry contributes to multiplied growth throughout the Calgary economy as growth in the manufacturing sector affects growth in transportation, commercial services, wholesale, retail and other industries that play a role in the supply chain.

TABLE 3 – CHANGE IN GDP BY INDUSTRY, 1997-2007

	1997 (\$ in Millions, 2002)	2007 (\$ in Millions, 2002)	1997-2007 GDP Growth
Industry	42,432	64,260	51.4%
Goods Producing	20,380	25,673	26.0%
Primary Industries	12,874	12,893	0.1%
Manufacturing	4,009	5,603	39.8%
Construction	2,564	5,850	128.2%
Utilities	933	1,326	42.1%
Services	22,052	38,588	75.0%
Transport & Communication	3,336	5,353	60.5%
Wholesale & Retail Trade	3,352	6,332	88.9%
Finance, Insurance & Real Estate	6,463	11,618	79.8%
Commercial Services	4,724	8,776	85.8%
Non-Commercial Services	2,899	4,767	64.4%
Public Admin & Defense	1,278	1,742	36.3%

Source: Conference Board of Canada

FIGURE 2 – CALGARY 2007 GDP BY INDUSTRY



Source: Conference Board of Canada

The manufacturing industry represents about 8.1 per cent of Calgary's GDP, generating over \$5.6 billion in annual output. The economy in Calgary and Alberta continues to expand and attract interest, employees and businesses.

Over three million potential customers for consumer product manufacturers live in Alberta. This is good news for manufacturers because the trend of high, and growing, transportation and energy costs is driving a shift in focus for local companies who want to buy manufactured goods from domestic markets to avoid paying these costs. That said, exporting opportunities exist for several manufacturing sub-sectors, including primary metals, computer and electronic products, and furniture and related products.

TABLE 4 – MANUFACTURING INDUSTRY REAL GDP GROWTH IN CALGARY

	2001	2002	2003	2004	2005	2006	2007	2008f	2009f	2010f	2011f	2012f
Growth	-5.2%	-3.6%	-3.5%	11.3%	7.9%	7.9%	-1.3%	-2.3%	2.6%	3.6%	3.7%	3.7%

Source: Conference Board of Canada

In 2007, Calgary's manufacturing GDP growth declined by 1.3 per cent and is expected to decline slightly again in 2008 due in part to the strength of the Canadian dollar adversely affecting exports to US markets and in part due to increased global competition. The government of Alberta is committed to keeping Alberta's manufacturing firms cost competitive with global markets. The province is implementing an initiative designed to increase productivity among manufacturing firms. The program will directly assist firms with consulting for best practices to lower costs, implement Lean manufacturing processes, and take related action to remain competitive. In addition, the province is committed to investment in infrastructure to support transportation, lower US-border crossing times and keeping Alberta competitive for exports.

More information about Alberta's program for productivity can be found at:
<http://www.albertacanada.com/productivity/about/index.html>

Manufacturing Establishments

**TABLE 5 – CHANGE IN THE NUMBER OF MANUFACTURING BUSINESS ESTABLISHMENTS
IN CALGARY, 2005-2008**

	2005	2008	Change	% Change
All Manufacturing	1,931	1,743	-188	-9.7%
Food	150	125	-25	-16.7%
Wood Products	94	87	-7	-7.4%
Printing & Support	199	171	-28	-14.1%
Chemicals	83	52	-31	-37.3%
Primary Metals	22	22	0	0.0%
Fabricated Metals	295	277	-18	-6.1%
Machinery	216	235	19	8.8%
Computer & Electronic	92	84	-8	-8.7%
Furniture & Related	114	127	13	11.4%
Miscellaneous	251	230	-21	-8.4%

Source: Canadian Business Patterns, 2005 & 2008

As of July of 2008, there were 1,743 manufacturing establishments in Calgary. Over the past three years, most Calgary manufacturing start-ups have been in machinery manufacturing, where the number of establishments increased by 19 to bring the total number of firms to 235. The number of furniture manufacturing establishments also increased by 13 bringing the total number of firms to 127.

Small firms with less than 10 employees represent 53 per cent of Calgary's manufacturing establishments. There are 123 establishments that employ over 100 people. Of these large establishments, 26 are in machinery manufacturing, five of which employ over 500 workers. Seventeen of these firms are in food manufacturing, 13 in fabricated metal manufacturing, 9 in wood products and 9 in computer and electronics manufacturing.

The manufacturing industry throughout North America has been undergoing consolidation over the past decade as the industry achieves gains in productivity. Manufacturing in Calgary has also consolidated and evolved with key consolidation occurring in chemicals manufacturing, printing and food manufacturing.

TABLE 6 – CALGARY BUSINESS ESTABLISHMENTS BY NUMBER OF EMPLOYEES, 2008

	Total Firms	1-4	5-9	10-19	20-49	50-99	100-199	200-499	500+
All Manufacturing	1,743	595	325	296	263	141	71	33	19
Food	125	36	20	23	20	9	11	5	1
Beverage & Tobacco	12	1	2	0	2	1	4	0	2
Textile Mills	11	5	1	4	1	0	0	0	0
Textile Product Mills	30	13	6	8	2	1	0	0	0
Clothing	33	13	13	4	2	1	0	0	0
Leather & Allied Products	4	3	0	0	1	0	0	0	0
Wood Products	87	24	7	22	16	9	5	4	0
Paper	16	2	4	2	4	0	3	1	0
Printing & Support	171	77	39	20	20	9	5	1	0
Petroleum & Coal	23	8	2	5	1	3	0	2	2
Chemicals	52	14	10	10	13	3	1	0	1
Plastic & Rubber	57	10	5	13	17	6	3	1	2
Non-Metallic Mineral	66	14	14	8	12	14	3	0	1
Primary Metals	22	7	4	2	1	3	3	1	1
Fabricated Metal	277	66	60	60	51	27	9	3	1
Machinery	235	68	41	37	40	23	14	7	5
Computer & Electronic	84	21	17	14	12	11	4	4	1
Electric Equipment, Appliance & Components	35	11	5	7	9	2	1	0	0
Transportation Equipment	46	20	7	9	6	3	0	1	0
Furniture Products	127	47	27	17	19	10	3	2	2
Miscellaneous	230	135	41	31	14	6	2	1	0

Source: Canadian Business Patterns, June 2008

Industry Breakdown by Sector

The manufacturing sector is diverse and supplies a large and varied number of industries and consumer groups with products. The following is an overview of the key sub-sectors of the manufacturing industry.

Food Manufacturing

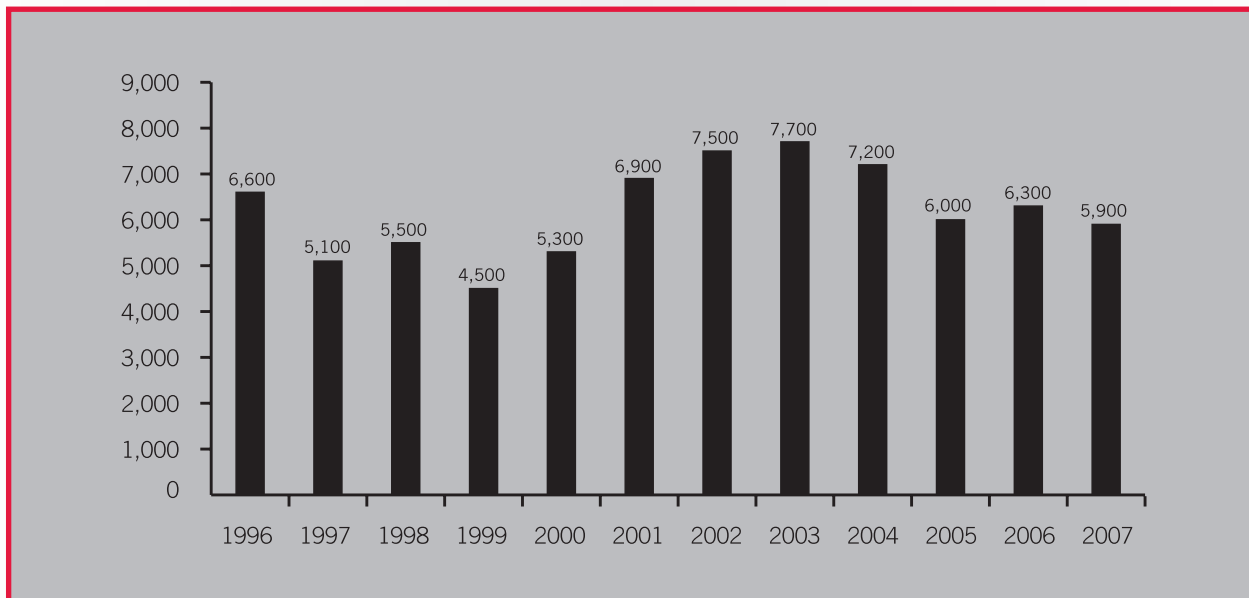
TABLE 7 – FOOD MANUFACTURING EMPLOYMENT STATISTICS

Employment, 1997	5,100
Employment, 2007	5,900
Jobs Created, 1997-2007	800
Compound Annual Rate of Employment Growth, 1997-2007	1.5%
Sub-Sector Portion of Manufacturing Employment, 2007	12.6%
Location Quotient – Calgary, 2007	0.59
Number of Business Establishments, 2008	125
Change in Number of Business Establishments, 2005-2008	-25

Source: Labour Force Survey, Canadian Business Patterns

Employment in Calgary’s food manufacturing sector has fluctuated over the past decade from a low of 4,500 workers in 1999 to a high of 7,700 in 2003. Since 2003, employment in the sector has moderated to 5,900 workers in 2007. Food manufacturing is the largest of the manufacturing sub-sectors in Calgary. Several successful businesses have been built by Calgarians, adding value to the abundant supply of top quality products raised by Alberta’s strong agricultural base.

FIGURE 3 – CALGARY FOOD MANUFACTURING EMPLOYMENT



For example, Sunterra is a family-run business that combines a farming tradition with food processing and retail outlets. The popular Sunterra Market sells fresh produce and pork and beef products, raised and processed in-house to ensure quality control. The business also exports some of its products.

Others, like Cargill Foods with operations in 61 countries, are international conglomerates, which have chosen the Calgary area because of its prime location and favourable business environment.

With 5,900 employees, representing 12.6 per cent of all manufacturing employees, food manufacturing is the largest sub-sector of the 21 manufacturing sub-sectors. Over the last decade Calgary's food manufacturing sub-sector experienced an average annual growth in employment of 1.5 per cent, slightly outpacing that of Canada (1.4 per cent) but below that of Alberta (2.2 per cent).

TABLE 8 – FOOD MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		
	1997-2007	Compound Average	1997-2007	Compound Average	Annual Average Proportion of Sub-Sector Employment
Calgary	11.3%	1.1%	15.0%	1.5%	12.8%
Alberta	23.0%	2.1%	25.0%	2.2%	14.9%
Canada	13.0%	1.2%	15.0%	1.4%	11.3%

Calgary area food manufacturing employers include:

- ADM Agri-Industries Co.
- Alberta Processing Co.
- Burnbrae Farms
- Byblos Bakery
- Cargill Foods Ltd.
- Lillydale Foods
- Lucerne Foods Ltd.
- Maple Leaf Consumer Foods
- McCain Foods
- New Food Classics
- Parmalat Canada Ltd.
- Sunterra
- XL Meats

Wood Products Manufacturing

TABLE 9 – WOOD PRODUCTS MANUFACTURING EMPLOYMENT STATISTICS

Employment, 1997	2,200
Employment, 2007	3,600
Jobs Created, 1997-2007	1,400
Compound Annual Rate of Employment Growth, 1997-2007	5.0%
Sub-Sector Portion of Manufacturing Employment, 2007	7.7%
Location Quotient – Calgary, 2007	0.61
Number of Business Establishments, 2008	87
Change in Number of Business Establishments, 2005-2008	-7

Calgary's growing housing and commercial building market provides many opportunities for wood products manufacturing companies.

Calgary companies are also active in the export market. Nascor Ltd. is a Calgary-based company that exports energy-efficient, pre-engineered structural components for home building across North America, Europe and South America. Nascor has developed a solid reputation that is recognized by builders around the world as the supplier of Advanced Housing Technology. For over 25 years, Nascor has been producing highly energy efficient building envelopes using their innovative, high quality building products.

With 3,600 employees and 7.7 per cent of manufacturing employment in 2007, wood products manufacturing is a small sub-sector of Calgary's manufacturing sector.

Over the past decade Calgary's wood products manufacturing sub-sector experienced compound annual employment growth of 5.0 per cent, tripling that of Alberta (1.6 per cent) and well outpacing national growth of 0.5 per cent.

TABLE 10 – WOOD PRODUCTS MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		
	1997-2007	Annual Average	1997-2007	Annual Average	Annual Average Proportion of Sub-Sector Employment
Calgary	60.9%	4.9%	63.6%	5%	5.4%
Alberta	17.4%	1.6%	17.1%	1.6%	14.9%
Canada	5.2%	0.5%	4.7%	0.5%	7.5%

Calgary area wood products manufacturing employers include:

- All Span Building Ltd.
- ATCO Structures
- BPB Canada Inc.
- Gienow Windows and Doors
- Haworth Calgary
- Multiwood Inc.
- Nose Creek Forest Products Ltd.
- Palliser Lumber Sales Ltd.
- Rona Timbertech Truss
- Sander Moldings
- Shanahan's Manufacturing Ltd.
- Sundry Forest Products Ltd.
- Tech-Wood Building Components Ltd.

Printing and Related Support Activities

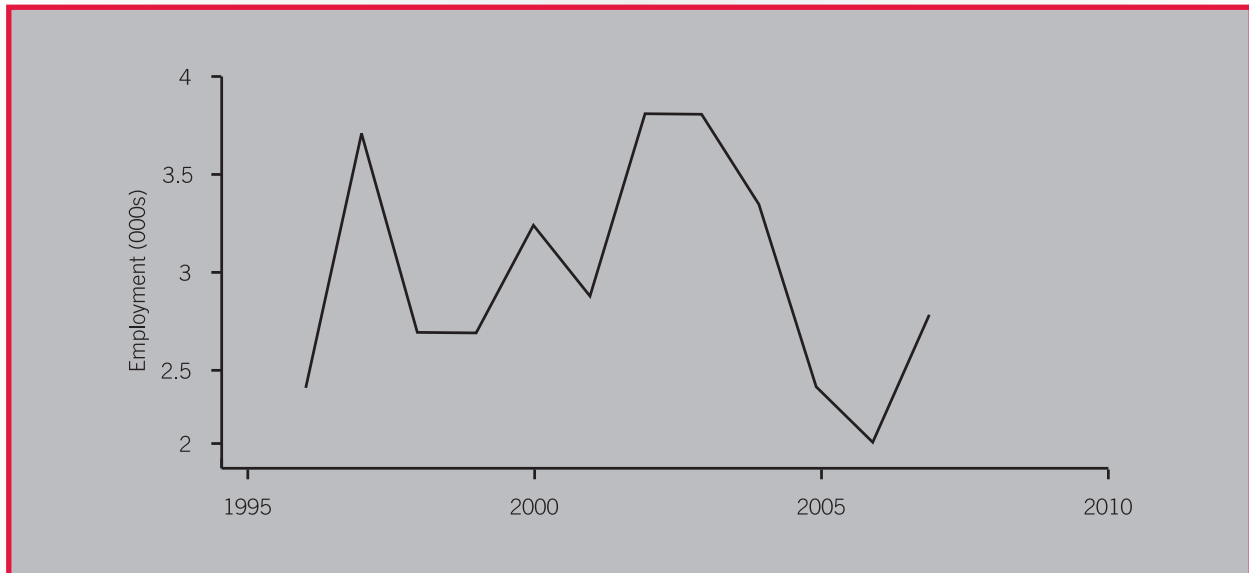
TABLE 11 – PRINTING & SUPPORT MANUFACTURING EMPLOYMENT STATISTICS

Employment, 1997	3,700
Employment, 2007	2,700
Jobs Created, 1997-2007	-1,000
Compound Annual Rate of Employment Growth, 1997-2007	-3.1%
Sub-Sector Portion of Manufacturing Employment, 2007	5.8%
Location Quotient – Calgary, 2007	0.71
Number of Business Establishments, 2008	171
Change in Number of Business Establishments, 2005-2008	-28

Companies in the printing and related support activities sub-sector print products like newspapers, books, labels and business cards, among others. Support activities include data imaging, platemaking services, and bookbinding.

Calgary's printing and related support activities sub-sector has a diverse range of companies that service the area's strong demand for printing, particularly from the corporate sector. Calgary has Canada's second highest concentration of corporate head offices, following Toronto and the highest concentration of professional services employment in Canada, resulting in high demand for the services of printing and related manufacturers.

FIGURE 4 – CALGARY EMPLOYMENT IN PRINTING & RELATED SUPPORT MANUFACTURING



Source: Statistics Canada, Labour Force Survey Estimates

Among the well-established companies in Calgary is West Canadian Graphics. It has a rich history and innovative approach to printing and is one of Alberta's largest and most advanced digital imaging centres. The company opened its doors in Calgary in 1952 and West Canadian's outsourcing division currently has 16 On-Site print and imaging centres across Canada with central production facilities in the Calgary head office, Edmonton, Fort McMurray and Sarnia. West Canadian employs 230 people.

Bolder Graphics is another home-grown company that provides packing and display products for its clients. Bolder has grown with the market by acquiring several companies over its 40-year history in Calgary.

Technological improvements over the past decade have resulted in slightly negative growth of the industry nationally. Over the past decade, employment in the industry has varied between 2,000 and 3,700 workers. The sub-sector represents 6.2 per cent of Calgary manufacturing employment, above that of Canada where the industry represents 4.6 per cent of manufacturing employment.

TABLE 12 – PRINTING & SUPPORT MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		Annual Average Proportion of Sub-Sector Employment
	1997-2007	Compound Average	1997-2007	Compound Average	
Calgary	-28.2%	-3.3%	-27%	-3.1%	6.2%
Alberta	26.6%	2.4%	33.9%	3%	4.9%
Canada	-1.6%	-0.2%	-1.5%	-0.2%	4.6%

Calgary area printing and related support manufacturing employers include:

- Bolder Graphics
- Calgary Colorpress
- Data Business Forms Ltd.
- Datamark Systems
- Grafikom printpak
- McAra Printing
- North Hill News Inc.
- Quebecor World Inc.
- Riley’s Reproductions and Printing
- Sundog Printing
- West Canadian Graphics

Chemical Manufacturing

TABLE 13 – CHEMICAL MANUFACTURING EMPLOYMENT STATISTICS

Employment, 1997	2,200
Employment, 2007	2,700
Jobs Created, 1997-2007	500
Compound Annual Rate of Employment Growth, 1997-2007	2.1%
Sub-Sector Portion of Manufacturing Employment, 2007	5.8%
Location Quotient – Calgary, 2007	0.65
Number of Business Establishments, 2008	52
Change in Number of Business Establishments, 2005-2008	-31

Calgary’s chemical manufacturing sub-sector has grown with Alberta’s oil industry. Adding value to the province’s commodities, chemical manufacturing companies in Calgary contribute to the ongoing sustainability of the city’s economy.

Based in Calgary, Dow Chemical Canada Inc. is a subsidiary of The Dow Chemical Company, a global publicly traded company that provides innovative chemical and plastic products and services to consumer markets.

E.L.P. Products Division is a small firm, but it has a reach that circles the globe. The company manufactures and exports custom-moulded solid cast polyurethane products and cleaning systems for the pulp and paper industry around the world.

Chemical manufacturing represents 5.8 per cent of Calgary's manufacturing sector and is the fifth largest contributor to growth. Over the past decade Calgary's chemical manufacturing sub-sector experienced average annual employment growth at 2.1 per cent, which is strong compared to Alberta (-0.1 per cent) and the Canadian average (0.9 per cent).

TABLE 14 – CHEMICAL MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		Annual Average Proportion of Sub-Sector Employment
	1997-2007	Compound Average	1997-2007	Compound Average	
Calgary	-8%	0.8%	22.7%	2.1%	4.4%
Alberta	-6.3%	-0.6%	-1.1%	-0.1%	6.8%
Canada	10%	1%	9.2%	0.9%	5.2%

Calgary area chemical manufacturing employers include:

- AAA Enterprise
- Agrium Inc.
- Baker Petrolite
- Chemtron Manufacturing
- Dow Chemicals Canada Inc.
- E.L.P Products Division
- Exxon Mobil Chemicals Canada
- Ingenia Polymers Corp.
- Nova Chemicals Corp.
- Polymer Science Corp.
- Praxair

Primary Metal Manufacturing

TABLE 15 – PRIMARY METAL MANUFACTURING EMPLOYMENT STATISTICS

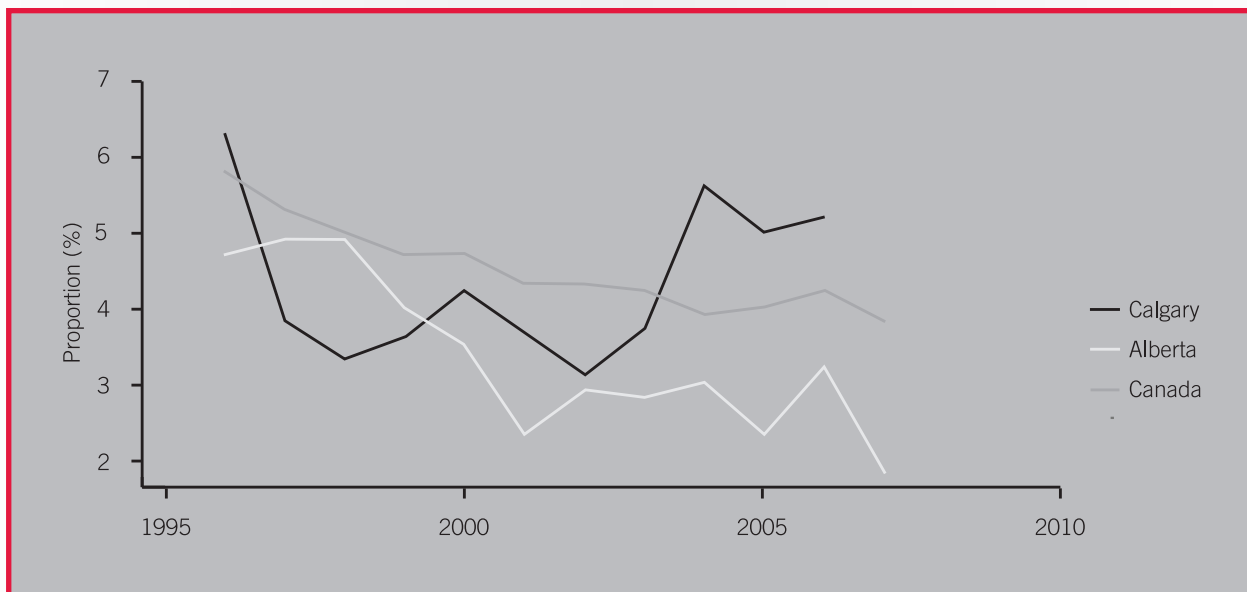
Employment, 1997	1,600
Employment, 2007	2,600
Jobs Created, 1997-2007	1,000
Compound Annual Rate of Employment Growth, 1997-2007	5.0%
Sub-Sector Portion of Manufacturing Employment, 2007	5.6%
Location Quotient – Calgary, 2007	0.09
Number of Business Establishments, 2008	22
Change in Number of Business Establishments, 2005-2008	0

Primary metal manufacturing in Calgary benefits from the active energy industry and the growth the province is experiencing, which requires additional and upgraded infrastructure. The sub-sector includes iron and steel mills, steel pipe and tube mills, iron foundries and primary manufacturers of non-ferrous metals.

APEL Extrusions is an independent aluminum extruder located in Calgary. The company was founded in 1972 and has grown to serve several Western Canadian manufacturers. APEL completed a major expansion in 2001. The expansion included adding to overall production capacity and APEL is working to meet ISO requirements in an effort to be registered ISO 9001:2000 compliant.

Alix Machining, a division of Sur-Flor, is a complete fabrication facility, which offers welding, assembly, power coating, anodizing, silk-screening and other manufacturing services. Its state-of-the-art milling, lathe turning and machining equipments service diverse industries and companies of all sizes throughout the Calgary region.

FIGURE 5 – PRIMARY METAL MANUFACTURING AS A PERCENTAGE OF TOTAL MANUFACTURING



Source: Statistics Canada, Labour Force Survey Estimates

Primary metal manufacturing is representing an increasing percentage of Calgary's manufacturing employment while the industry is seeing ongoing declines in employment nationally.

Primary metal manufacturing represents 3.9 per cent of all manufacturing employment or 2,600 jobs. Over the past decade the average annual employment growth of Calgary's primary metal manufacturing sub-sector was 5.0 per cent, far outpacing Alberta (-7.7 per cent) and Canada (-3.1 per cent), which both shrank.

TABLE 16 – PRIMARY METAL MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		Annual Average Proportion of Sub-Sector Employment
	1997-2007	Compound Average	1997-2007	Compound Average	
Calgary	62.5%	5%	62.5%	5%	3.9%
Alberta	-52.5%	-7.2%	-55%	-7.7%	3.3%
Canada	-26.1%	-3%	-27%	-3.1%	4.5%

Calgary area primary metal manufacturing employers include:

- Algoma Steel Inc.
- APEL Extrusions
- Alix Machining Inc.
- Armtec Ltd.
- Daebonn Metal Works
- Electromec Manufacturing
- Grant Prideco Canada
- JP Metal Manufacturing
- MA Steel Foundry Ltd.
- Nardei Fabricators Ltd.
- Tenaris
- Sovereign Castings Ltd.
- Tarpon Energy
- Triton Manufacturing Inc.

Fabricated Metal Products Manufacturing

TABLE 17 – FABRICATED METAL PRODUCTS MANUFACTURING EMPLOYMENT STATISTICS

Employment, 1997	3,100
Employment, 2007	4,100
Jobs Created, 1997-2007	1,000
Compound Annual Rate of Employment Growth, 1997-2007	2.8%
Sub-Sector Portion of Manufacturing Employment, 2007	8.8%
Location Quotient – Calgary, 2007	0.55
Number of Business Establishments, 2008	277
Change in Number of Business Establishments, 2005-2008	-18

Fabricated metal products manufacturing serves the new construction industry, the major renovations industry, as well as the machinery manufacturing industry.

Indutech Canada Ltd. has found its niche serving the bulk handling market with its abrasion resistant steel piping products; and supplying the oil and gas market with its induction and cold bending service. The company has been established for over 15 years.

Standen's is a large North American manufacturer of leaf springs, suspension components, trailer axles and agricultural tillage components. The company was established in 1924 to support vehicle components which included: cultivators, shanks, tillage and tools for the agricultural implement industry. Standen's also manufactures trailer axles with up to 10,000 lb. capacity and is OEM, TS 16949 and ISO-9001:2000 compliant.

The fabricated metal products sub-sector is tied with primary metal manufacturing as the fourth largest contributor to manufacturing employment in Calgary (1,000 jobs), representing 8.8 per cent of all manufacturing employment.

Over the past decade, Calgary's fabricated metal products sub-sector experienced average annual employment growth of 2.8 per cent, behind Alberta (4.7 per cent) but surpassing the Canadian average (2.0 per cent).

TABLE 18 – FABRICATED METAL PRODUCTS MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		
	1997-2007	Compound Average	1997-2007	Compound Average	Annual Average Proportion of Sub-Sector Employment
Calgary	27.3%	2.4%	32.3%	2.8%	8.8%
Alberta	57.8%	4.7%	58.5%	4.7%	11.5%
Canada	23%	2.1%	22.3%	2.0%	7.8%

Calgary area fabricated metals manufacturing employers include:

- A.C.T. Machine Works Ltd.
- Advance Engineered Products
- Brimark Metal Manufacturing Ltd.
- Century Valve & Machine Ltd.
- Ferguson Corporation
- GKD Industries
- Ilko Steel Fabricators Co. Ltd.
- Indutech Canada Ltd.
- International Utility Structures
- Oncore Coil Products
- Palcor Constructors Inc.
- Red Rock Enterprises
- RIMK Industries
- Standen's

Machinery Manufacturing

TABLE 19 – MACHINERY MANUFACTURING EMPLOYMENT STATISTICS

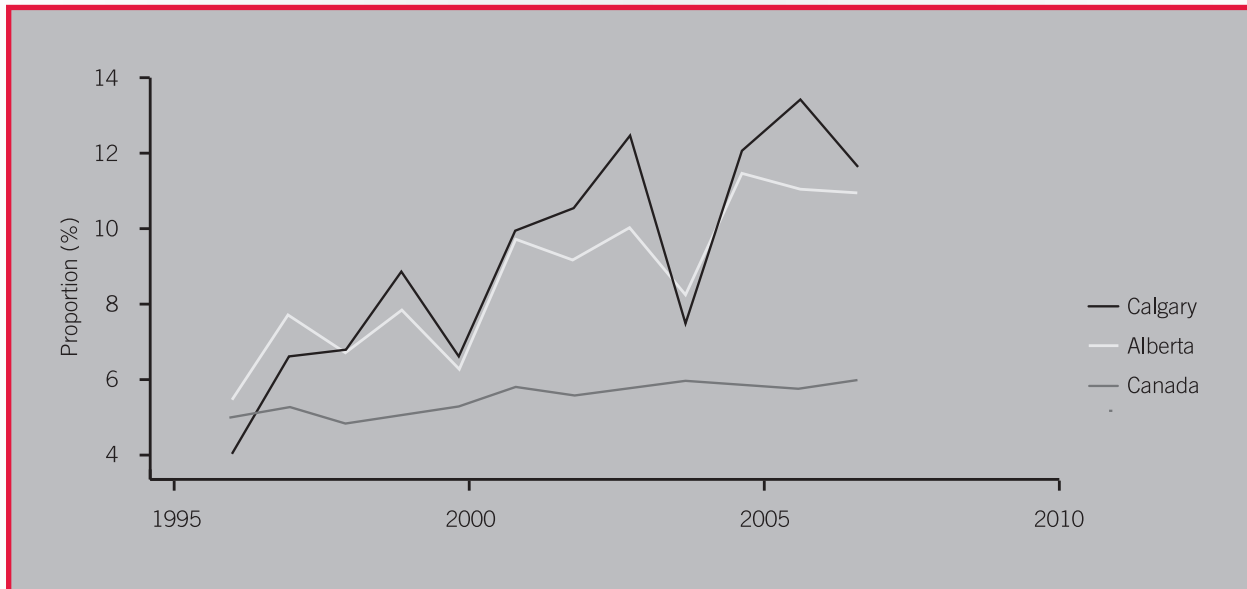
Employment, 1997	2,700
Employment, 2007	5,400
Jobs Created, 1997-2007	2,700
Compound Annual Rate of Employment Growth, 1997-2007	7.2%
Sub-Sector Portion of Manufacturing Employment, 2007	11.5%
Location Quotient – Calgary, 2007	1.12
Number of Business Establishments, 2008	235
Change in Number of Business Establishments, 2005-2008	19

Machinery manufacturing includes companies that manufacture industrial and commercial machinery. The continuing strong oil and gas industry, and the spin-off activity it creates, will sustain demand for machinery and promote growth in the sub-sector, already the fastest growing sub-sector in manufacturing employment in Calgary. Demand for specialty manufactured metal products such as valves, pressure vessels and other parts required for Alberta's upgrader projects has driven recent strong growth in the machinery manufacturing sub-sector.

Calgary-based Enerflex Systems Ltd. is a publicly traded global leader in the custom design, manufacture, servicing and leasing of compression systems for the production and processing of natural gas. The company employs 2,200 people and exports its products around the globe.

Working in the housing market, Conematic is a privately owned company whose heating systems are utilized extensively in Western Canada. Conematic is an industry leader in packaged heating technology particularly suitable for residential, multi-family, small commercial and 'packaged' housing.

FIGURE 6 – MACHINERY MANUFACTURING AS A PERCENTAGE OF TOTAL MANUFACTURING



Source: Statistics Canada, Labour Force Survey Estimates

Machinery manufacturing is the second largest contributor to Calgary's manufacturing employment at 11.5 per cent of all Calgary manufacturing employment in 2007, up from 6.6 per cent of employment in 1997.

Over the past decade Calgary's machinery manufacturing sub-sector was the fastest growing manufacturing sub-sector, experiencing a compound annual employment growth of 7.2 per cent, surpassing Alberta (5.3 per cent) and tripling Canada's average (1.5 per cent). The sub-sector created the largest number of jobs (2,700), representing 44 per cent of new manufacturing jobs in Calgary.

TABLE 20 – MACHINERY MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		Annual Average Proportion of Sub-Sector Employment
	1997-2007	Compound Average	1997-2007	Compound Average	
Calgary	96.4%	7%	100%	7.2%	9.6%
Alberta	67%	5.3%	67.4%	5.3%	8.9%
Canada	16.6%	1.5%	15.8%	1.5%	5.6%

Calgary area machinery manufacturing employers include:

- ABB
- Baraka
- Coax Technology Inc.
- Conematic
- Diecut Dies
- Enerflex
- Emersul Inc.
- Elrus Aggregates Systems
- Kudu Industries
- Jalco Industries
- Orbital Machining and Manufacturing Ltd.
- Paintearth
- Plains Fabrication and Supply
- Sagin Enterprises
- Southport Truck and Trailer Ltd.
- Tesco Manufacturing Division
- Top-Co Industries Ltd.
- Toromont Energy

Computer and Electronic Products Manufacturing

TABLE 21 – COMPUTER AND ELECTRONIC PRODUCTS MANUFACTURING EMPLOYMENT STATISTICS

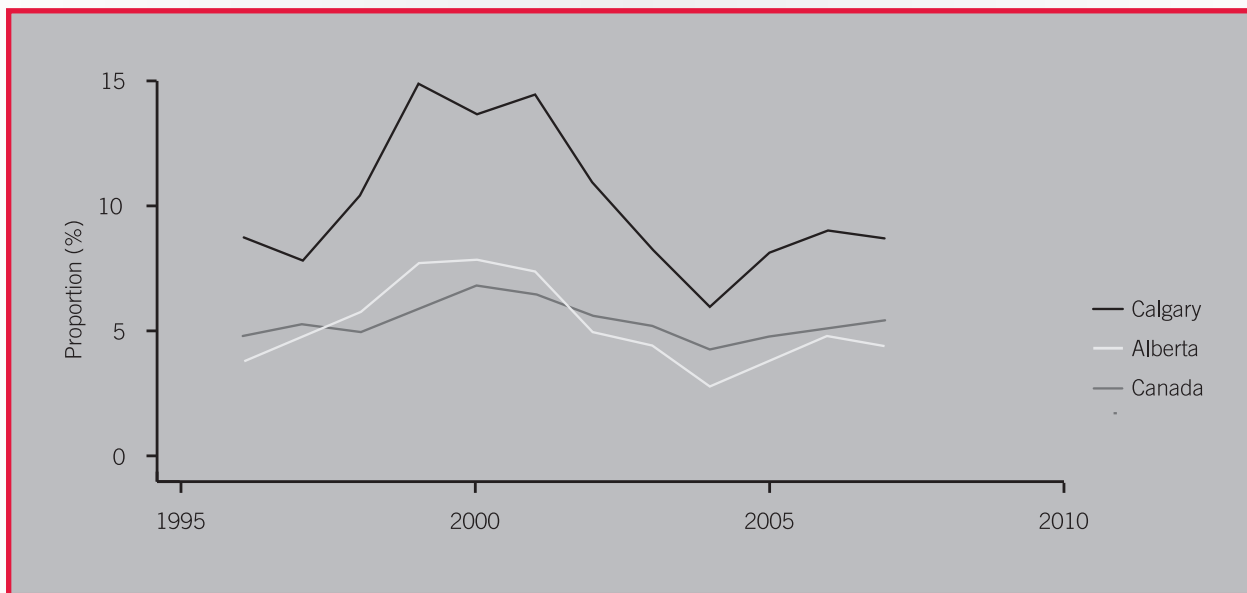
Employment, 1997	3,200
Employment, 2007	4,100
Jobs Created, 1997-2007	900
Compound Annual Rate of Employment Growth, 1996-2007	2.5%
Sub-Sector Portion of Manufacturing Employment, 2007	8.8%
Location Quotient – Calgary, 2007	0.9
Number of Business Establishments, 2008	84
Change in Number of Business Establishments, 2005-2008	-8

This sub-sector comprises companies that manufacture computers, computer-peripheral equipment, communications equipment and similar electronic products, and components for those products.

Headquartered in Calgary, CSI Wireless is one of North America's fastest-growing technology companies. The company is a leading international designer, manufacturer and marketer of global positioning systems (GPS), wireless and products, and a combination of the two. Founded in 1990, CSI is publicly traded and has three major facilities in the United States and has customers in almost 50 countries.

Established in 1948, General Dynamics Canada is Canada's premiere defense company with offices in Ottawa, Halifax and Calgary. It provides land, airborne and maritime systems, software and hardware to the armed forces in over 20 countries – from NATO to the Pacific Rim.

FIGURE 7 – COMPUTER & ELECTRONIC MANUFACTURING AS A PERCENTAGE OF TOTAL MANUFACTURING EMPLOYMENT



Source: Statistics Canada, Labour Force Survey Estimates

Throughout North America, the computer and electronic products manufacturing industry underwent strong growth leading up to the year 2000, followed by sharp declines in employment. Calgary's computer and electronics products manufacturing sub-sector has begun a recovery over the past few years after hitting a low in 2004. This trend is consistent with national recovery of the industry beginning in 2004-2005.

On a percentage basis, the computer and electronics products manufacturing sub-sector has represented a larger share of Calgary's manufacturing employment when compared with Alberta and Canada. The sub-sector has historically represented 9 per cent to 12 per cent of Calgary manufacturing employment. In the past decade, Calgary's computer and electronic products manufacturing sub-sector experienced annual average employment growth of 2.5 per cent, surpassing Alberta (1.0 per cent) and far outpacing Canada (0.4 per cent).

TABLE 22 – COMPUTER AND ELECTRONIC PRODUCTS MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		
	1997-2007	Compound Annual	1997-2007	Compound Annual	Annual Average Proportion of Sub-Sector Employment
Calgary	17.1%	1.6%	28.1%	2.5%	10.3%
Alberta	4.8%	0.5%	10.3%	1%	5.3%
Canada	4.4%	0.4%	4.3%	0.4%	5.4%

Calgary area computer and electronic product manufacturing employers include:

- Acer Canada
- Alberta Printed Circuits
- Ametek Canada Inc.
- CSI Wireless
- Dynamic Source Manufacturing
- Ergotron Canada
- GE Canada Inc.
- General Dynamics Canada Ltd.
- Guardian Telecom Inc.
- Harris Canada Inc.
- Sabre Instrument Services Ltd.
- Spartan Controls Ltd.
- Tital Logix Corp

Furniture and Related Products Manufacturing

TABLE 23 – FURNITURE & RELATED PRODUCTS MANUFACTURING EMPLOYMENT STATISTICS

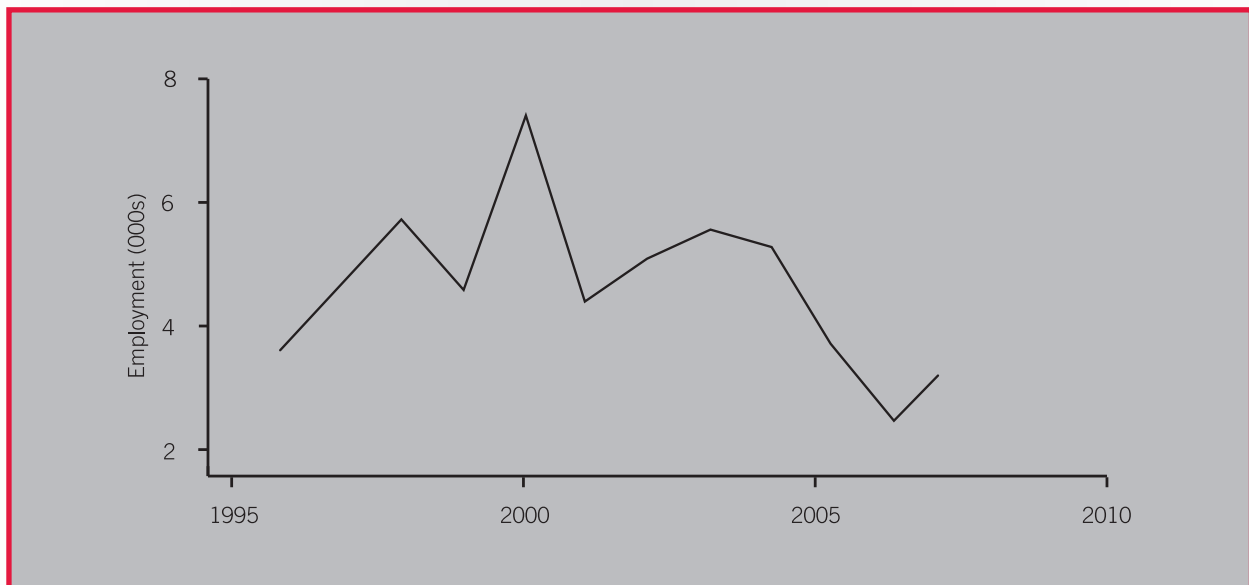
Employment, 1997	4,700
Employment, 2007	3,100
Jobs Created, 1997-2007	1,600
Compound Annual Rate of Employment Growth, 1997-2007	-4.1%
Sub-Sector Portion of Manufacturing Employment, 2007	6.6%
Location Quotient – Calgary, 2007	0.63
Number of Business Establishments, 2008	127
Change in Number of Business Establishments, 2005-2008	13

Companies in the furniture and related product manufacturing sub-sector make furniture and related articles, such as mattresses, window blinds, cabinets, modular offices and fixtures.

Gunnar Manufacturing Inc. was established in 1979. It has become one of the dominant manufacturers of office furnishings in Calgary and Western Canada, occupying over 130,000 square feet of production space and utilizing some of the best equipment and technology available in the industry.

Simo Corporation is a family-owned manufacturer of office and institutional furniture. Established in 1971, Simo manufactures high-quality seating and casegoods from two modern facilities in Calgary. It employs over 100 people and exports its products to the United States.

FIGURE 8 – CALGARY'S FURNITURE MANUFACTURING EMPLOYMENT



Source: Statistics Canada, Labour Force Survey Estimates

Calgary's furniture and related products manufacturing sub-sector employed 3,100 workers in 2007. The industry has seen 4.1 per cent compound annual decline in employment over the last decade; however, in the past three years from 2005-2008, the sub-sector has seen an 11 per cent increase in new furniture manufacturing establishments.

The sub-sector represents 6.6 per cent of Calgary's manufacturing employment, down from 11.5 per cent in 1997. Employment declines were also seen in Alberta (2.0 per cent compound annual decline) while the industry has grown nationally (3.1 per cent growth).

TABLE 24 – FURNITURE & RELATED PRODUCTS MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		Annual Average Proportion of Sub-Sector Employment
	1997-2007	Compound Annual	1997-2007	Compound Annual	
Calgary	-34%	-4.1%	-34%	-4.1%	9.8%
Alberta	-18.2%	-2%	-18.2%	-2%	5.9%
Canada	34.9%	3%	35.9%	3.1%	8.3%

Calgary area furniture and related products manufacturing employers include:

- Angel Upholstery
- Birchwood Furniture Co. Inc.
- Contract Furnishings
- Dynamic Furniture Corp.
- Gunnar Manufacturing Inc.
- Halstead Mattress
- Haworth
- Heartwood Design
- Marx Artwood Ltd.
- Old Hippy Wood Products
- Rocky Mountain Woodcrafters
- Simo Corporation
- Simmons Canada Ltd.
- Squire Fabrication Ltd.

Miscellaneous Manufacturing

TABLE 25 – MISCELLANEOUS MANUFACTURING EMPLOYMENT STATISTICS

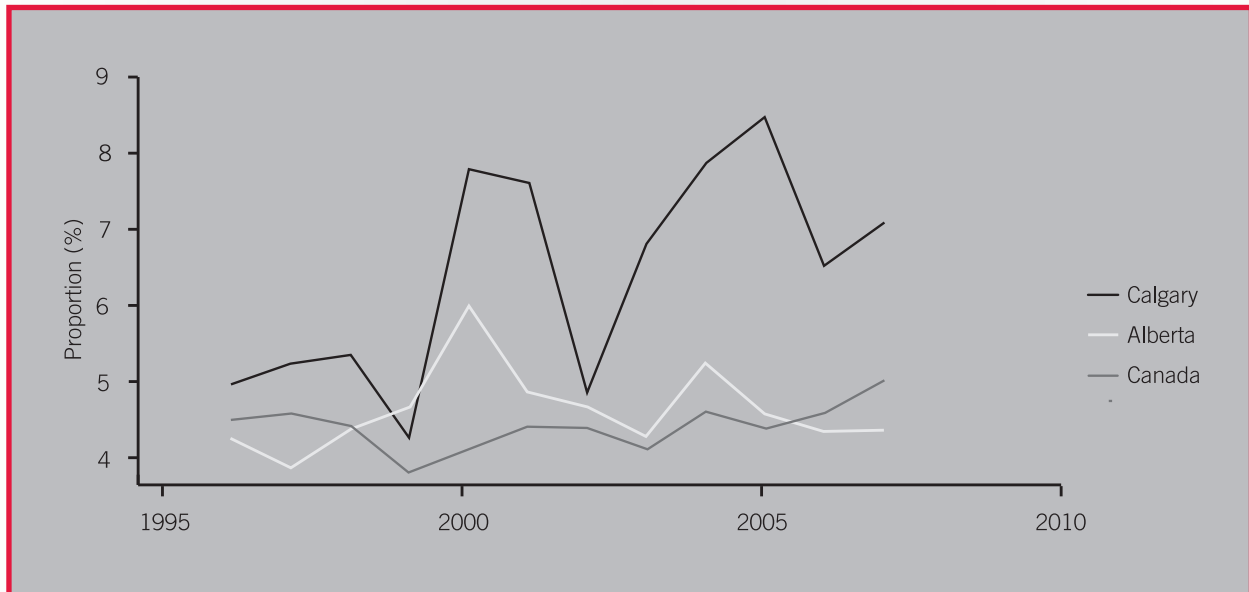
Employment, 1997	2,100
Employment, 2007	3,300
Jobs Created, 1997-2007	1,200
Compound Annual Rate of Employment Growth, 1997-2007	4.6%
Sub-Sector Portion of Manufacturing Employment, 2007	7.1%
Location Quotient – Calgary, 2007	0.63
Number of Business Establishments, 2008	230
Change in Number of Business Establishments, 2005-2008	-21

This sub-sector comprises companies that manufacture a diverse range of products, such as medical equipment and supplies, jewellery, sporting goods, toys and office supplies. It is the fourth fastest growing manufacturing sub-sector in Calgary, behind wood, metal, and machinery manufacturing with a 10-year compound annual growth rate of 4.6 per cent.

Topmade Plastics and Neon Signs Ltd. was founded in 1979 in a 1,700 square-foot shop in Calgary. It is now one of Western Canada’s busiest sign manufacturing facilities, with over 30,000 square feet of manufacturing space, offering a broad range of sign manufacturing and plastic fabrication services.

Westbridge PET Containers is a privately owned company specializing in custom PET preforms and bottles for food, beverage and personal care markets throughout North America. It has been in operation for over 10 years and the plant employs over 60 skilled workers in an 80,000 square foot facility, which operates 24 hours a day, 7 days a week

FIGURE 9 – MISCELLANEOUS MANUFACTURING AS A PERCENTAGE OF TOTAL MANUFACTURING



Source: Statistics Canada, Labour Force Survey Estimates

Miscellaneous manufacturing includes 230 companies in Calgary, most employing fewer than 50 people. Only 9 companies have between 50 and 499 employees. The sub-sector represents 7.1 per cent Calgary manufacturing employment.

Over the past decade Calgary’s miscellaneous manufacturing sub-sector growth (4.6 per cent) has outpaced Alberta (3.3 per cent) and Canada (1.2 per cent). The sector has created 1,200 new jobs.

TABLE 26 – MISCELLANEOUS MANUFACTURING GROWTH STATISTICS, 1997-2007

	Labour Force Growth		Employment Growth		Annual Average Proportion of Sub-Sector Employment
	1997-2007	Compound Annual	1997-2007	Compound Annual	
Calgary	57.1%	4.6%	57.1%	4.6%	6.5%
Alberta	37%	3.2%	37.8%	3.3%	4.6%
Canada	11.4%	1.1%	35.9%	1.2%	4.3%

Calgary area miscellaneous manufacturing employers include:

- Alwest Neon Signs Ltd.
- Aurum Ceramic/Classic Dental
- Brandon Ornamental Iron Ltd.
- Custom Dental Lab
- Exposign Ltd.
- Kantech Dental Lab
- Intergold Limited
- Siemens Building Technologies Ltd.
- Sign Solutions Ltd.
- Springbrook Manufacturing
- Supersign Supply Co Ltd.
- Topmade Plastics and Neon Signs Ltd.
- Venus Giftwares
- Westbridge PET Containers

MANUFACTURING SECTOR OPPORTUNITIES

Alberta has one of the strongest economies in Canada and arguably, in North America and as a result, a variety of industries are growing rapidly. Calgary manufacturers have opportunities to exploit the growth by supplying needed products quickly and cost effectively, as the speed of delivery and quality of products is critical when undertaking industrial purchases.

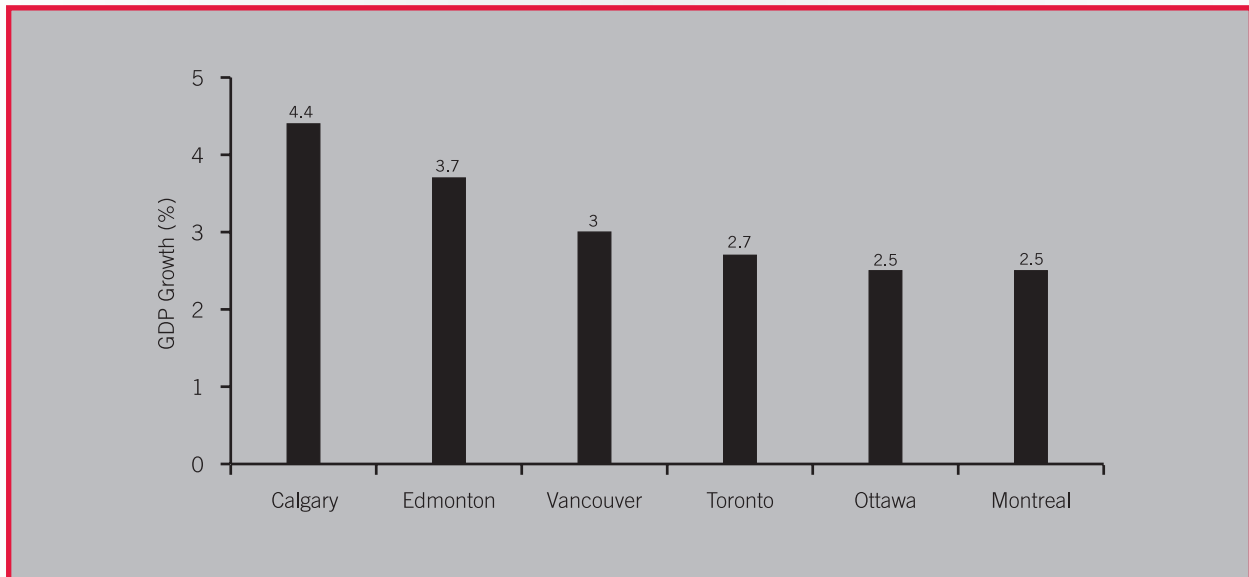
The global investment community understands the favourable economic forecasts for Alberta and is looking for areas in which to invest, providing opportunities for Calgary manufacturers with expansion plans.

Solid Economic Performance

Calgary is Canada's fastest growing economy, with an estimated 4.4 per cent growth in real GDP in 2007. It has also had the highest labour force growth of any major Canadian city: 40.2 per cent from 1997-2007.

In addition, Calgary has had the highest total population growth in Canada over the past ten years (1997-2007) at a rate of 30.6 per cent overall and 35.6 per cent among the working age population. Calgary was a migrant workforce magnet between 1997-2007, with overall net migration of over 36,000 people in 2006, up from 9,900 migrants in 2003. Due to this strong growth, the Calgary Region's population has topped 1.1 million.

FIGURE 10 – REAL GDP GROWTH IN MAJOR METRO AREAS, 2007



Source: Conference Board of Canada

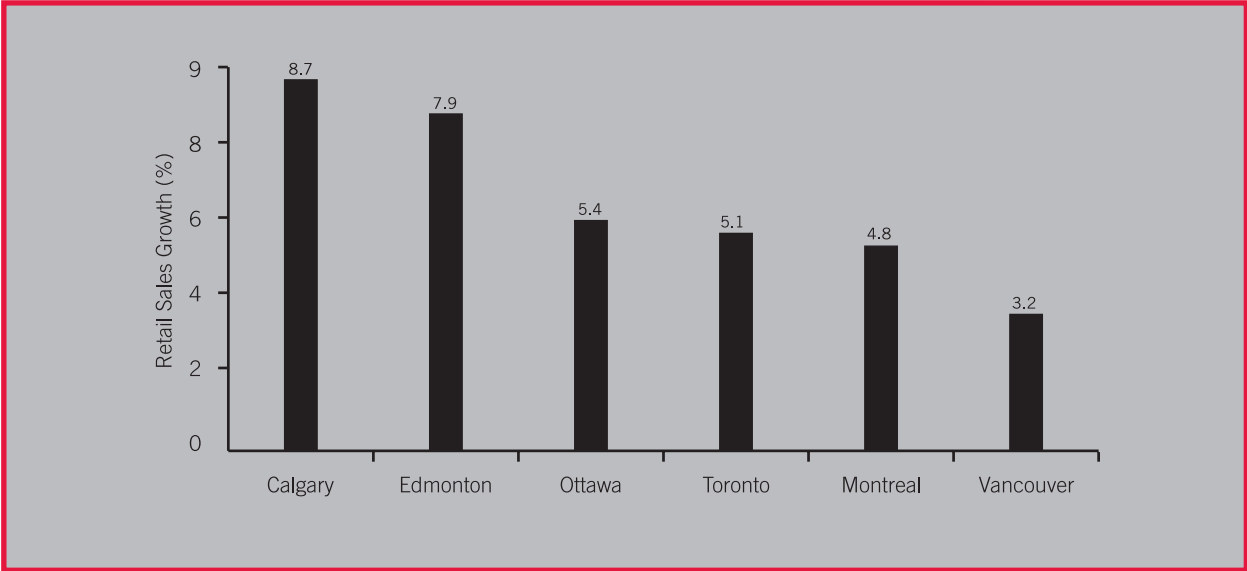
Competitive Advantage

Calgary manufacturers are entrepreneurial. They are early adopters of new technology and have modern facilities, providing them with competitive efficiencies in a business climate of labour force challenges and sometimes-unfavourable international trading regulations.

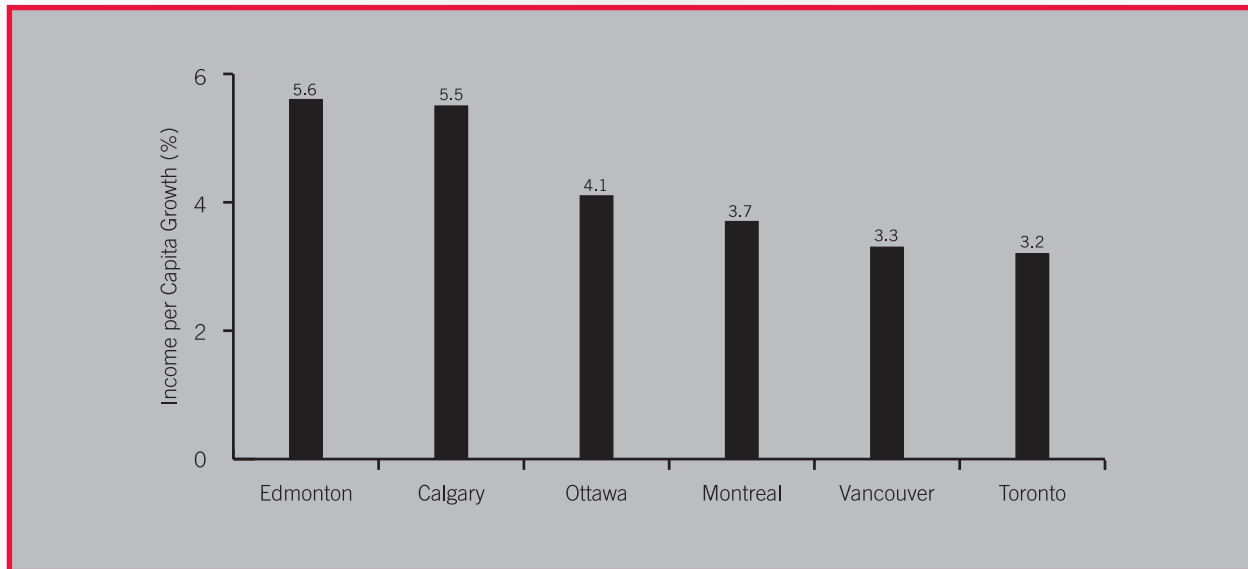
Consumer Products

Manufacturers of consumer products have a market of almost 3.3 million people in Alberta. The strong economic growth of the Calgary region means that consumers have a greater disposable income than those in many other urban centres in Canada. Compared to other metropolitan areas in Canada, Calgary has shown the highest retail sales growth over the past decade. Calgarians also have the highest income in Canada, with a per capita income of \$52,922 in 2007, representing one of the strongest rates of income growth since 1997.

FIGURE 11 – RETAIL SALES GROWTH IN MAJOR METRO AREAS, 1997-2007



Source: Conference Board of Canada

FIGURE 12 – COMPOUND ANNUAL GROWTH IN INCOME PER CAPITA, 1997-2007

Source: Conference Board of Canada

Transportation and Infrastructure

Calgary is strategically located with its central position in the growing Western Canadian market of nine million people. It has emerged as the western North American warehouse and distribution hub for Canada and the Pacific Northwest region of the United States.

Alberta is the only western province that offers overnight, or less than 24-hour, delivery service to all of Western Canada and the U.S. Pacific Northwest – a market of more than 50 million consumers. Two of the largest highways in North America intersect in Calgary, which makes the city a major distribution hub for people, products and services. The CANAMEX Highway, a trade corridor of some 6,000 kilometres, links Western Canada, the United States and Mexico. With direct connections to two of North America's largest highway trade corridors, quick and efficient access to the enormous markets of the Pacific Northwest, California and Central Canada is available.

The Pacific Rim is easily accessible thanks to an excellent inter-modal system linking Calgary to the tide-water port of Vancouver. There is great scope for expanded transportation of goods and people, and very little threat of congestion.

Increasing transportation and energy costs are creating opportunities for manufacturers to supply local markets, as buyers increasingly look for cost efficiencies. Calgary manufacturers can use the dynamic Calgary marketplace – consumer, business and industrial – to their business advantage by selling to local companies.



The Government of Alberta is committed to investment in infrastructure to support the distribution of manufactured goods. There are over 350 major infrastructure projects, each over \$5 million, planned, announced, or currently being implemented in Alberta. These projects total over \$21 billion in investment in roads, air, rail and related infrastructure, which is more than three times the annual GDP of manufacturing in the province.

Calgary has highly integrated air, rail, road and transit infrastructures to meet the needs of the region's business and commuter needs. The Calgary International Airport (YYC), the third busiest in the country, serves 12 million travelers a year, coming and going on more than 30 different airlines, and connecting to Asia, the Middle East, Europe and every corner of North America. YYC is one of the city's major economic engines, generating more than \$5 billion in economic activity annually, and directly employing more than 15,000 people.

In 2008, the Calgary Airport Authority introduced the YYC Global Logistics Parks, connecting Calgary's business community with the world and providing 24/7 access to cargo services and to an impressive network of intermodal transportation systems, services and companies, all on airport land. The Calgary International Airport is Alberta's premier 'air cargo bridge' and one of only two airports in Canada to offer main-deck cargo services to Asia and Europe.

Operated and maintained by the Calgary Airport Authority, the Springbank Airport is a Canada Customs-designated airport of entry located 10 kilometres west of Calgary just off the TransCanada Highway in the Municipal District of Rocky View No. 44. It occupies about 420 hectares (1,040 acres) and is the gateway to the Canadian Rockies and conveniently close to the town of Cochrane and the hamlet of Bragg Creek.

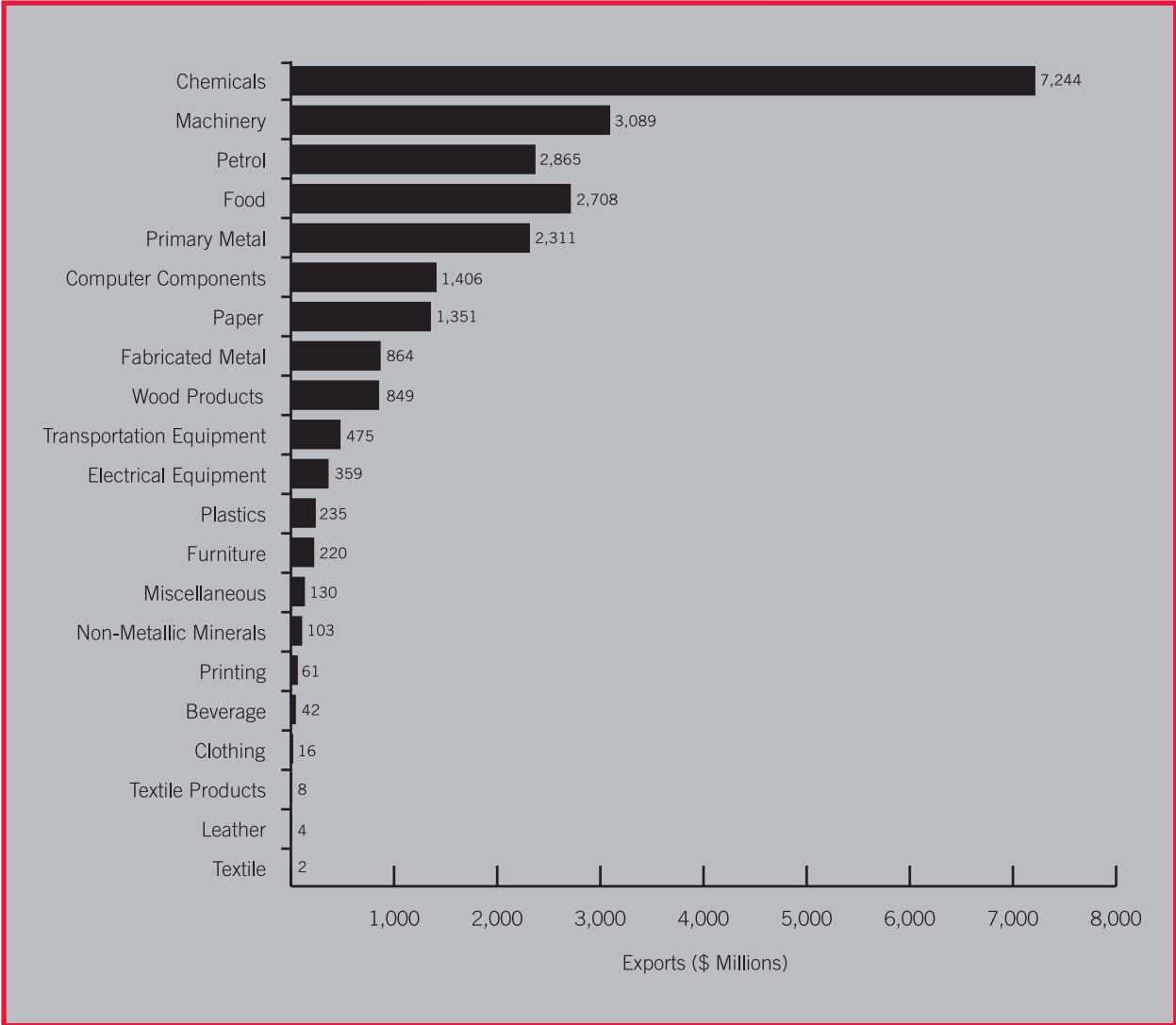
TABLE 27 – DRIVING AND FLIGHT TIMES FROM CALGARY

Canada	Drive	Flight
Edmonton	3 h	45 m
Montreal	38 h	4 h
Ottawa	36 h	3 h 50 m
Regina	8 h	1 h 11m
Thunder Bay	21 h	2 h 50 m
Toronto	35 h	4 h 10 m
Vancouver	11 h	1 h 15 m
Winnipeg	14 h	2 h 10 m
United States		
Chicago	26 h	3 h 30 m
Dallas	32h	3 h 40 m
Denver	14.5h	2 h 23 m
Los Angeles	27 h	3 h
New York City	40 h	5 h 53 m
Salt Lake City	15 h	1 h 46 m
San Francisco	22 h	2 h 44 m
Seattle	12 h	1 h 10 m

Source: Statistics Canada, U.S. Census Bureau, The Calgary Advantage, Proximity One, GGA Management Consultants

Export Trade

FIGURE 13 – ALBERTA MANUFACTURING EXPORTS, 2007



Source: Industry Canada, Trade Data Online

Calgary manufacturing companies are exporters of goods and services beyond Alberta. Opportunities exist to strengthen these industries and broaden their export markets to other areas of Canada and internationally. Exports growth over the last decade has been particularly strong in printing, petroleum and coal products, primary metal manufacturing, fabricated metal manufacturing, machinery and electrical equipment as local firms have increased their incursion into global markets.

TABLE 28 – EXPORTS BY MANUFACTURING SUB-SECTOR EXPORTS (IN CURRENT \$ MILLIONS)

Subsector	1998	2007	Growth
311 - Food Manufacturing	\$1,813	\$2,708	49.3%
312 - Beverage and Tobacco Products	\$ 54	\$42	-22.9%
313 - Textile Mills	\$2	\$2	-0.8%
314 - Textile Product Mills	\$9	\$8	-8.5%
315 - Clothing Manufacturing	\$25	\$16	-36.5%
316 - Leather and Allied Product Manufacturing	\$10	\$4	-57.0%
321 - Wood Product Manufacturing	\$1,160	\$849	-26.9%
322 - Paper Manufacturing	\$1,401	\$1,351	-3.5%
323 - Printing and Related Support Activities	\$18	\$61	243.6%
324 - Petroleum and Coal Products Manufacturing	\$963	\$2,865	197.4%
325 - Chemical Manufacturing	\$2,430	\$7,244	198.0%
326 - Plastics and Rubber Products Manufacturing	\$182	\$235	29.3%
327 - Non-Metallic Mineral Product Manufacturing	\$99	\$103	3.9%
331 - Primary Metal Manufacturing	\$478	\$2,311	383.6%
332 - Fabricated Metal Product Manufacturing	\$291	\$864	196.6%
333 - Machinery Manufacturing	\$998	\$3,089	209.4%
334 - Computer and Electronic Products	\$1,594	\$1,406	-11.8%
335 - Electrical Equipment/ Appliance/ Components	\$121	\$359	196.3%
336 - Transportation Equipment Manufacturing	\$285	\$475	66.9%
337 - Furniture and Related Product Manufacturing	\$352	\$220	-37.6%
339 - Miscellaneous Manufacturing	\$103	\$130	26.3%
Total	\$12,389	\$24,341	96.5%

Source: Industry Canada, Trade Data Online

Alberta's exports of chemicals has grown by nearly 200 per cent over the past decade from 2.4 billion in 1998 to more than 7.2 billion in 2007. Chemical manufacturing exports represent 30 per cent of all Alberta manufacturing exports, which is the largest portion of Alberta exports among manufactured goods.

An Exceptional Business Climate

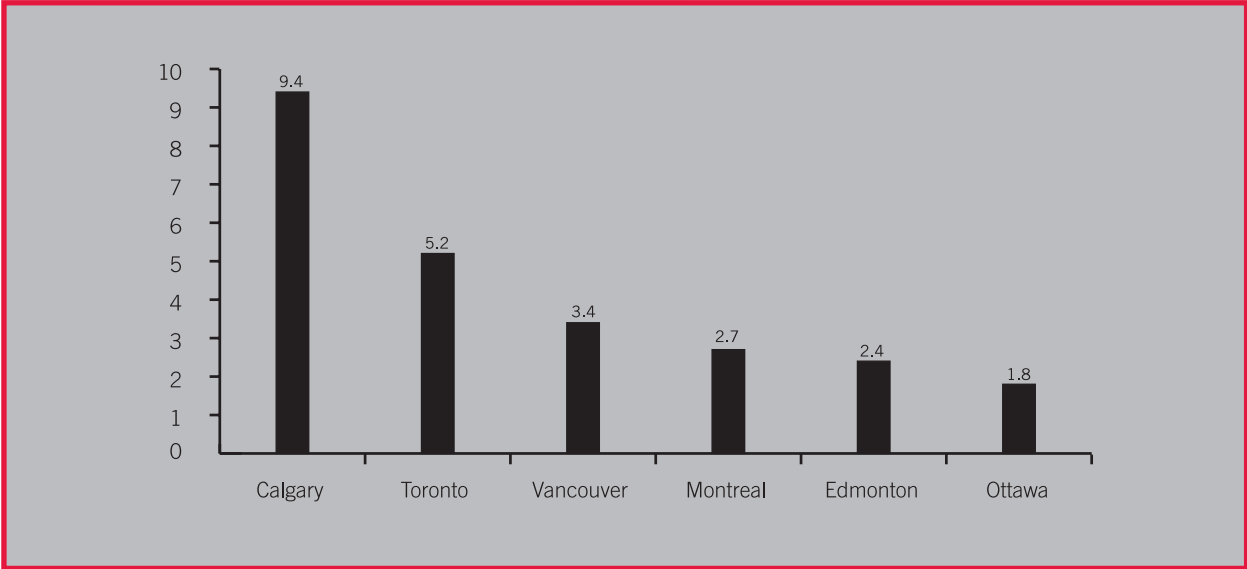
Calgary manufacturers have a strong economic base to support their operations. The established and growing oil and gas sector has similar infrastructure and capital requirements, paving the way for companies in the manufacturing sector.

The entrepreneurial business climate in Calgary creates an environment where small, innovative and independent companies can flourish. Investors recognize this and entrepreneurs in the city have easier access to a strong capital base compared to other regions in Canada.

The city is young and dynamic, and entrepreneurs succeed based on the quality of their ideas and business acumen; and companies collaborate and co-operate with each other to resolve issues and find business solutions.

Calgary has the highest concentration of head offices per capita in Canada. Key decisions, especially purchasing decisions, are often made locally and leaders of the companies are generally accessible.

FIGURE 14 – HEAD OFFICES PER CAPITA, 2007



Calgary and Alberta offer a business-friendly environment that minimizes regulatory barriers. The government in Alberta views its role as creating an environment where industry can create jobs. As well, because Calgary is a young city, the market is still being developed, and there is limited competition and ample opportunity in the manufacturing sector.

An Educated, Skilled and Motivated Labour Force

Value-added manufacturing companies benefit from the high calibre of human resources available in Calgary: engineers, commerce graduates, product development staff, technologists, heavy equipment operators, millwrights, ironworkers and other skilled trades.

Manufacturers have access to graduates from numerous first-rate post secondary educational institutions including the University of Calgary and SAIT Polytechnic.

Educational institutions in Calgary work with industry leaders to produce graduates that have the skills and knowledge required by industry. For example, SAIT Polytechnic's Industry Advisory Committee includes key business leaders who help determine content for courses. In addition, SAIT Polytechnic's apprenticeship program encourages strong trades development and produces skilled trades people. The city also has a large pool of sub-contractors and workers in the support services.

Calgary offers a large labour force of registered apprentices available to the manufacturing sector. From 2001 to 2006, there was a strong upsurge in registered apprentices in Alberta, culminating in 59,666 registered apprentices in Alberta in 2006. Over the six year period, registered apprentices increased by 56.6 per cent and new apprentices increased by 71.2 per cent. Growth in total registered apprentices over the period grew 3.5 times faster than the Calgary labour force, which underwent 13.3 per cent growth during the period. Trades employment in Calgary has grown by 25.4 per cent during the 2001-2006 period, outpacing the 19.7 per cent growth throughout the province. Completion rates of apprenticeship training was 78 per cent for 2006-2007.

TABLE 29 – ALBERTA APPRENTICESHIP AND PROVINCIAL LABOUR FORCE STATISTICS, 2001-2006

	2001	2002	2003	2004	2005	2006	2001-2006 Change
Alberta Total Apprentices Registered (all trades)	38,089	40,501	39,294	40,483	46,472	59,666	56.6%
Alberta New Apprentices Registered (all trades)	13,994	13,038	11,758	12,746	17,896	23,954	71.2%
Alberta Total Trades Employment	155,800	158,700	166,300	167,100	161,700	186,500	19.7%
Calgary Total Trades Employment	43,700	45,400	49,000	48,300	44,700	54,800	25.4%

Source: Alberta Apprenticeship and Industry Training Board 2006-2007 Annual Report, Statistics Canada Labour Force Survey

HUMAN CAPITAL

The University of Calgary

Ranked one of Canada's top seven research universities, the University of Calgary is home to scholars in 18 faculties, over 100 academic programs, and more than 30 research institutes and centres. In 2006-2007, the university enrolled more than 27,000 full and part-time students and employed 1731 academic staff, 976 academic sessionals, and 54 senior administrators. The university generates an estimated economic impact of \$1 billion to the Calgary area.

The university offers manufacturing-related education and training through the Department of Mechanical and Manufacturing Engineering at the Schulich School of Engineering. The department offers a B.Sc., M.Sc., M.Eng., and Ph.D. to its 500 undergraduates and 200 graduates. Faculty and students in manufacturing engineering have research interests in topics such as: modelling manufacturing systems, intelligent manufacturing systems, production planning and control, supply chain management, machinery and process diagnosis, process control systems analysis and design, and manufacturing system design.

In 2005, the department attracted over \$7.6 million in research funding. In addition, the department has earned numerous achievement awards including the SME University LEAD Award in 2003, the Alan Blizzard Award in 2004, and the ASME Curriculum Innovation Award in 2005.

For further information please contact:

University of Calgary

2500 University Drive NW

Calgary, Alberta, T2N 1N4

Phone: 403-220-5110

<http://www.ucalgary.ca>

Southern Alberta Institute of Technology/SAIT Polytechnic

SAIT Polytechnic is known worldwide for its quality technical education and hands-on training. SAIT Polytechnic also has over 2,300 continuing education courses and more than 70 applied degree, diploma and certificate programs. SAIT Polytechnic provides education and first class training for more than 65,000 learners beginning and enhancing their careers each year. SAIT Polytechnic provides five career streams within the Manufacturing and Automation area:

- Automated Systems Engineering Technology
- Computer Integrated Design
- Machinist Technician
- Mechanical Engineering
- Welding Engineering

SAIT Polytechnic graduated 169 students in 2007 from its Manufacturing and Automation programs. In 2007, 72 per cent of the graduates found employment in Calgary in their field of study; and another 17 per cent were working elsewhere in Alberta.

For further information please contact:

SAIT Polytechnic

1301 16th Avenue NW

Calgary, Alberta, T2M 0L4

Phone: 403-284-SAIT (7248)

Toll free: 1-877-284-SAIT (7248)

<http://www.sait.ab.ca>

DeVry Institute of Technology

DeVry Institute of Technology (DeVry) offers bachelor's degree and diploma programs that combine today's business skills with current technical applications. DeVry is part of the DeVry University system, which also offers undergraduate and graduate programs online.

For further information please contact:

DeVry Calgary

2700 3rd Avenue SE

Calgary, Alberta, T2A 7W4

Phone: 403-235-3450

Toll free: 1-800-363-5558

<http://www.devry.ca>

Bow Valley College

Bow Valley College serves more than 11,000 learners (about 4,100 full-load equivalents) each year in Calgary, at campuses throughout Southern Alberta and, through contract arrangements, across Canada and in a number of other countries.

The college offers year-round programs leading to career certificates and diplomas, adult upgrading and English as a Second Language (ESL) courses. In addition, career planning and assessment services are provided to 20,000 Albertans per year, along with other specialized services for businesses and organizations.

For further information please contact:

Bow Valley College

332 – 6 Avenue SE

Calgary, Alberta T2G 4S6

Phone: 403-410-1400

<http://www.bowvalleycollege.ca>

RESEARCH AND DEVELOPMENT ASSISTANCE

A number of federal and provincial R&D-focused grants and awards provide Calgary-based companies funding for applied or basic research. The following programs are available to eligible Calgary companies or research personnel to offset costs that otherwise would be incurred in conducting research and development activities.

Canadian Scientific Research and Experimental Development (SR&ED) Tax Incentive Program

Offered by the Government of Canada and administered by the Canada Revenue Agency, the SR&ED program is the largest single source of federal government support for industrial research and development. The tax incentive program is designed to encourage Canadian businesses to conduct research and development in Canada that will lead to new, improved, or technologically advanced products or processes.

Generally, Canadian-controlled private corporations can earn an investment tax credit (ITC) of 35 per cent up to the first \$2 million of qualified expenditures for SR&ED conducted in Canada; and 20 per cent on any excess amount. Other Canadian corporations, proprietorships, partnerships and trusts can earn an ITC of 20 per cent of qualified expenditures for SR&ED conducted in Canada.

To qualify for the SR&ED program, the R&D must advance the understanding of scientific relations or technologies, address scientific or technological uncertainty and incorporate a systematic investigation by qualified personnel. Examples of work that qualifies for SR&ED tax credits include: experimental development to achieve technological advancement to create new materials, devices, products, or improve existing ones; applied research to advance scientific knowledge with a specific practical application in view; basic research to advance scientific knowledge without a specific practical application in view; and support work in engineering, design, operations research, mathematical analysis, computer programming, data collection, test or psychological research, but only if the work is commensurate with, and directly supports, the eligible experimental development or applied or basic research.

For complete application information, including full eligibility criteria and additional information, please contact: <http://www.cra-arc.gc.ca/sred>

Alberta Scientific Research and Experimental Development (SR&ED) Tax Credit Program

The SR&ED tax credit program provides a refundable tax credit to corporations for SR&ED expenditures incurred in Alberta by corporations. The program came into effect January 1, 2009 for SR&ED expenditures incurred in Alberta after December 31, 2008. A corporation with a permanent establishment in Alberta at any time during the taxation year and that carries on SR&ED activities in Alberta in the taxation year is eligible to claim the Alberta SR&ED tax credit. The SR&ED tax credit offers a maximum of \$400,000 in tax credit in a taxation year. The credit is based on 10 per cent of the eligible Alberta SR&ED expenditures to a maximum expenditure limit of \$4 million.

To learn more visit: http://www.finance.alberta.ca/publications/tax_rebates/faqs_corporate.html#what

National Research Council Industrial Research Assistance Program (NRC-IRAP)

IRAP is delivered by NRC and provides a range of technical and business advisory services, including potential financial support, to growth-oriented Canadian small and medium sized enterprises (under 500 employees).

NRC-IRAP provides non-repayable contributions to Canadian small and medium sized enterprises interested in growing by using technology to commercialize services, products and processes in Canadian and international markets. NRC-IRAP also provides mentoring support and invests, on a cost-shared basis, in research and pre-competitive development technical projects, upon assessment of a project and firm by a team of Industrial Technology Advisors. Depending on the specifics of the proposed project, NRC-IRAP is able to invest up to 50 per cent of eligible project costs to a maximum amount.

NRC-IRAP also delivers two youth initiatives on behalf of the Government of Canada's Youth Employment Strategy that provides financial support to hire post-secondary graduates.

To learn more visit: <http://www.nrc-cnrc.gc.ca>

The Alberta Research Council (ARC)

The Alberta Research Council develops and commercializes technologies to give customers a competitive advantage. The corporation performs applied research and development on a contract or fee basis and co-ventures with others to develop new technologies, deriving a return on investment from the commercialization of new products and processes.

ARC focuses on:

- Life sciences technologies
- Energy technologies
- Forest processes and technologies
- Industrial processes and services

To learn more visit: <http://www.arc.ab.ca>

The Food Processing Development Centre

The Centre serves to encourage the growth and expansion of the food processing industry in highly competitive domestic and global markets.

As an integral part of Alberta Agriculture, Food and Rural Development's Processing Industry Division, the Centre is a modern, fully equipped pilot plant and product development laboratory facility. It is staffed with experienced food scientists, engineers and technologists. Centre services are designed to strengthen and expand the capability of Alberta's food processors to meet the challenges of the marketplace through application of new technology and the development of new or improved products and processes.

To learn more visit: <http://www.agric.gov.ab.ca/app21/ministrypage?cat1Id=1&cat2Id=2&cat3Id=22>

SUPPORTING ORGANIZATIONS

Canadian Manufacturers & Exporters (CME)

Canadian Manufacturers & Exporters represents the interests of Canadian business, keeping members on the competitive edge of world-class manufacturing and trade. CME is Canada's largest national trade and industry association, with strong divisions in every province.

CME's mandate is to promote the competitiveness of Canadian manufacturers and enable the success of Canadian goods and services exporters in markets around the world.

CME members include Canada's leading businesses engaged in manufacturing and the export of goods and services. Members represent 75 per cent of the country's manufacturing output and 90 per cent of exports. While membership includes Canada's largest players, 80 per cent of members are considered small and mid-sized companies.

To learn more visit: <http://www.cme-mec.ca>



Alberta Apprenticeship & Industry Training Board

The Apprenticeship and Industry Training Board's main function is to advise the Alberta Ministry of Advanced Education and Technology on labour market issues that relate to training and certification of people in designated trades and occupations. It is an industry-driven partnership with government that ensures a highly skilled, internationally competitive workforce in over 50 designated trades and occupations.

To learn more visit: <http://www.tradesecrets.gov.ab.ca>

Alberta Economic Development (AED)

Alberta Economic Development works in partnership with business, industry associations, other provincial ministries and other governments to:

- Provide quality information and competitive intelligence
- Diversify industry products and services
- Attract investment
- Promote tourism
- Expand export and trade

To learn more visit: <http://www.albertacanada.com>

Calgary Technologies Inc. (CTI)

CTI is a not-for-profit agency in the business of economic development focused on Calgary's advanced technology sector. CTI manages the University Research Park, located on 125 acres adjacent to the University of Calgary.

Discovery Place One is a multi-tenant research building, which provides cost effective facilities for organizations wishing to take advantage of proximity to the research excellence and facilities of the University of Calgary and the major concentration of research organizations already located in the Park.

Discovery Place One currently houses laboratory facilities and many technology intensive incubator enterprises. Taken together, these companies constitute a broad range of research and technology capability in oil and gas servicing, electronics, software and biotechnology.

To learn more visit: <http://www.calgarytechnologies.com/bins/index.asp>

Calgary Regional Partnership

The Calgary Regional Partnership is an association of 19 municipalities and communities in the Calgary region from Banff in the west, to Crossfield in the north, to Wheatland County in the east, to Nanton in the south, with Calgary at its centre. Members of the Calgary Regional Partnership work cooperatively on issues related to delivering municipal services to residents and businesses, enhancing prosperity and protecting the natural environments upon which their citizens depend.

To learn more visit: <http://www.calgaryregionalpartnership.ca>

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