



ECONOMIC BASE PROFILE CITY OF KINGSTON

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INSIDE THIS ISSUE:

Top Ten Employers	2
Business Costs in North America	3
Size of Local Companies	4
Employment by Sector	4
Profile of Knowledge-Based Enterprises	5
Research and Development	5
Elements of a Knowledge-Based Economy	6
Service sector	7
Manufacturing Sector	8
Tourism	9
KEDCO's Products and Services	10

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Economic Base Profile

ECONOMIC BASE PROFILE

Kingston's economic base has historically been dominated by service sector employment, primarily in government, education, and health. While these institutions still play an essential role in employment, it is their contribution to the development of knowledge-based enterprises that is of greatest significance to the community. Innovation is the path to tomorrow, and the development and growth of knowledge-based enterprises will lead Kingston's creation of world-class products and services. For example, research and development at Queen's University and Kingston General Hospital results in the creation of many spin-off companies through local technology transfer mechanisms such as PARTEQ Innovations and the Kingston Technology Exchange Centre.

Top 10 Employers in Kingston, 1998	
Companies	No. Employees
Canadian Forces Base Kingston	4,787
Queen's University	3,800
Limestone District School Board	2,710
Correctional Services of Canada	2,670
Kingston General Hospital	2,324
Hotel Dieu Hospital	1,594
DuPont Canada Inc.	1,510
Providence Continuing Care Centre	1,000
Ontario Ministry of Transportation	998
City of Kingston	990

CFB Kingston remains the largest employer followed by Queen's University, the Limestone District School Board, Correctional Services of Canada, and the Kingston General Hospital.

Top 10 Public Sector Employers	
Company	No. Employees
Canadian Forces Base Kingston	4,787
Queen's University	3,800
Limestone District School Board	2,710
Correctional Services of Canada	2,670
Kingston General Hospital	2,324
Hotel Dieu Hospital	1,594
Providence Continuing Care Centre	1,000
Ontario Ministry of Transportation	998
City of Kingston	990
Royal Military College of Canada	900

Top 10 Private Sector Employers	
Company	No. Employees
DuPont Canada Inc.	1,510
Empire Financial Group	500
NORCOM / CDT	465
Bombardier Transportation	300
Alcan (<i>Rolled Products and R&D Centre</i>)	373
Celanese Canada Inc.	272
Bell Canada	250
DuPont Canada Inc. R & D Centre	173
T-Line Service Ltd.	143
Hummingbird Communications Ltd.	135

Top private sector employers include DuPont Canada Inc. (1,510 employees), Empire Financial Group (500 employees), NORCOM/CDT (465 employees), and Alcan (373 employees).

KINGSTON COMPETES!!

BUSINESS COSTS IN NORTH AMERICA

A Summary of Findings as They Relate to Kingston

In March 1999, KPMG released *The Competitive Alternatives*, a study to assist organizations in understanding the relative business costs of locating in different jurisdictions. The industries examined were electronics, food processing, medical devices, metal fabrication, pharmaceuticals, plastic products, telecommunications equipment, packaged software and advanced software. Costs included land, buildings, wages, salaries, benefits, transportation, electricity, telecommunications, debt service, income taxes, and all other major taxes.

CANADA'S COMPETITIVENESS:

- ◆ Canada is the lowest-cost G7 country overall.
- ◆ Canada has a 7.8% cost advantage over the U.S. – an advantage that holds so long as the value of the Canadian dollar remains below US \$0.79.
- ◆ The cost of living is lowest in Canada while the quality of life is highest.

KINGSTON'S COMPETITIVENESS:

- ◆ Kingston is the 9th most cost-competitive of 29 cities in eastern North America with costs at 92.5% of the U.S. average (or 7.5% less costly than the U.S. average).
- ◆ Kingston is the most cost-competitive location in Ontario.
- ◆ Kingston is most cost-competitive in advanced software services, packaged software services, plastic products manufacturing, and metal fabrication.
- ◆ **Packaged Software and Advanced Software Services:**
 - ◆ 13.2 % and 13.6 % more cost-competitive than the U.S. average, respectively.
 - ◆ Lowest costs in Ontario and lower than Raleigh-Durham, NC, Atlanta, GA, and Boston MA.
- ◆ **Life Sciences** (medical devices, pharmaceuticals, biotechnology):
 - ◆ 6.5% less costly than the U.S. average.
 - ◆ Lowest cost city in Ontario for life sciences. Lower than Boston, MA, Columbus, OH, and Raleigh-Durham, NC.
- ◆ **Advanced Manufacturing** (electronics and telecommunications equipment manufacturing):
 - ◆ 5.8% cost advantage over the U.S. average.
 - ◆ Lowest costs in Ontario. Lower than Scranton, PA, Atlanta, GA, and Burlington, VT.
- ◆ **Traditional Manufacturing** (metal fabrication and plastic products manufacturing):
 - ◆ 8.3% more cost-competitive than the U.S. average.
 - ◆ Lowest cost city in Ontario and lower than Atlanta, GA, Columbus, OH, and Saginaw, MI.

Visit www.kpmg.ca for the complete study

Economic Base Profile

SIZE OF LOCAL COMPANIES

Business Sizes by No. of Employees	No. Firms	No. Employed	%Total Firms	%Total Employees
1-10	430	1,796	68%	5%
11-20	92	1,370	14%	4%
21-50	66	2,068	10%	6%
51-100	14	1,039	2%	3%
Over 100	35	29,443	5%	82%
Total	637	35,716	100%	100%

The table to the left outlines the size characteristics of local companies. As over 90% of local businesses have 50 employees or less, there is clearly an active entrepreneurial environment in Kingston. Despite the number of small businesses, companies with a workforce of 100 or more employ over 80% of the Kingston labour force.

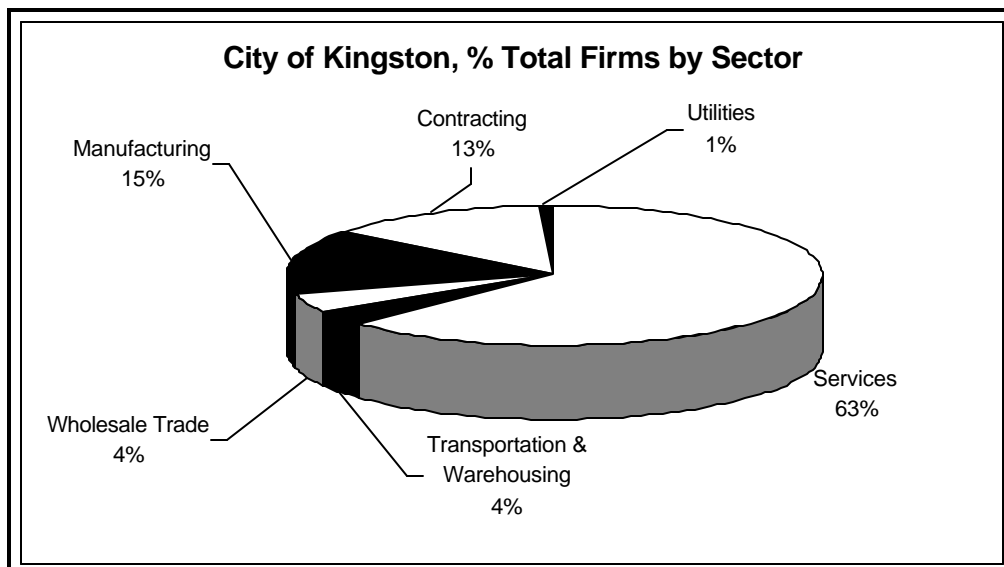
Source: KEDCO Business Guide, 1999

EMPLOYMENT BY SECTOR

According to KEDCO's survey of businesses, 81% of Kingston's labour force is employed in the service sector while 12% is employed in manufacturing and 3% is employed in contracting. These results are consistent with past findings. The service sector has always been and continues to be a significant employer.

Sector	No. Firms	% Total Firms	Employees	% Total Employees
Services	416	63%	29780	81%
Transportation & Warehousing	24	4%	700	2%
Wholesale Trade	27	4%	456	1%
Manufacturing	98	15%	4374	12%
Contracting	88	13%	1139	3%
Utilities	6	1%	299	1%
Total	659	100%	36748	100%

*Figures based on KEDCO's 1998 survey (60% response rate)



PROFILE OF KNOWLEDGE-BASED ENTERPRISES

A 1998 study conducted by Coopers and Lybrand revealed knowledge-based industrial clusters in Kingston employ 10,870 people and produce almost \$2 billion worth of output. Kingston's knowledge-based industrial clusters include the following:

Knowledge-Based Employment and Value of Output		
Knowledge Based Industrial Clusters	Total Employment	Value of Output (\$million)
Advanced Materials	3,200	1,140
Health Sciences	5,500	492
Information Technology & Telecommunications	2,000	266
Environmental Products & Services	170	19
Total	10,870	1,917

Source: PriceWaterhouseCoopers, 1998

RESEARCH AND DEVELOPMENT IN KINGSTON

Kingston's research and development centres include both private and public sector commitment and cooperation. Alcan, DuPont, Bombardier, Queen's University, Kingston General Hospital (KGH), Canadian Forces Base Kingston, Royal Military College, and the Advanced Technology Education Consortium (ATEC) are just some of the organizations actively involved in research and development in Kingston.

Of particular significance is Queen's University, which consistently ranks among the top 3 Canadian research-intensive universities. The estimated annual sponsored research at Queen's is \$65 million. Also of great significance is KGH's contribution to local R&D. The hospital's affiliation with Queen's University, which began in 1854, enables KGH to obtain advanced medical equipment and to attract leading healthcare professionals and researchers. KGH provides advanced technology and patient care services and one of the highest standards of health care available anywhere in the country.

Kingston's Research and Development Centres include:

- ◆ Advanced Technology Education Consortium
- ◆ Alcan
- ◆ Bombardier
- ◆ Canadian Microelectronics Corporation
- ◆ Centre for Advanced Gas Combustion Technology
- ◆ Centre for Automotive Materials and Manufacturing
- ◆ DuPont
- ◆ Kingston General Hospital
- ◆ Kingston Regional Cancer Centre
- ◆ PARTEQ Innovations
- ◆ Queen's University
- ◆ Queen's University Biosciences Complex
- ◆ Royal Military College
- ◆ St. Lawrence College
- ◆ Syl and Molly Apps Medical Research Centre

“Queen’s MBA in Science and Technology gives students the biggest financial payback of any MBA program in Canada”
(Canadian Business, October 1998)

Queen’s University consistently ranks among the top 3 Canadian research-intensive universities.

For more information on Kingston's knowledge-based economy including knowledge-based enterprises, please ask for KEDCO's Jobs and Prosperity Guide.

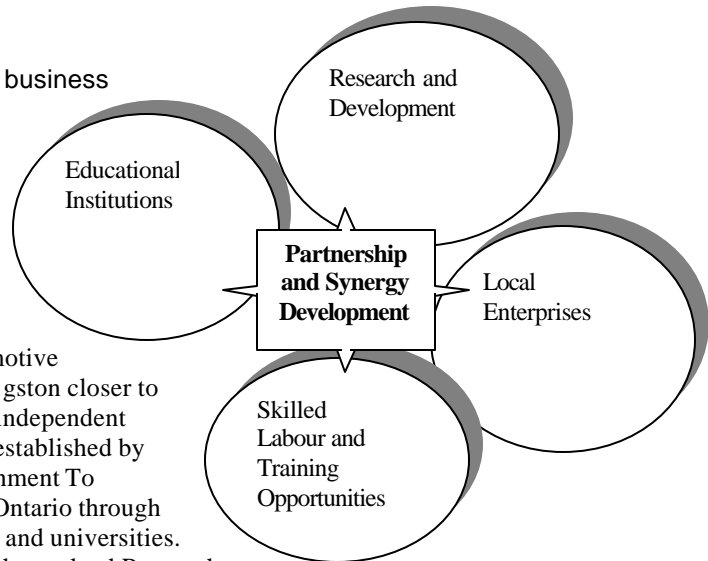
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ELEMENTS OF A KNOWLEDGE-BASED ECONOMY

What causes a KBI cluster to develop and thrive?

- ◆ Strong university and college linkages with the business community,
- ◆ Technology transfer mechanisms, and
- ◆ An advanced telecommunications infrastructure.

Strong university and college linkages with the business community through initiatives like the Centre for Automotive Materials and Manufacturing (CAMM) are bringing Kingston closer to developing a knowledge-based economy. CAMM is an independent automotive research and education facility in Kingston established by Queen's University, Industry, and the Provincial Government To enhance the competitiveness of the automotive sector in Ontario through cooperative research and development among industries and universities. CAMM's research program is being developed by an industry lead Research Advisory Committee (RAC) with from: 3M Canada, Alcan International, CLiMRI, Dofasco, DuPont



PARTEQ Innovations

Queen's PARTEQ Innovations is Kingston's technology transfer mechanism, and was ranked 4th among the top 50 research institutions in North America for performance in technology transfer (Technology Access Report, 1998). PARTEQ enhances the development and marketing of intellectual property at Queen's by offering its intellectual property management expertise to Queen's researchers. Further, PARTEQ's entrepreneurial approach - creating spin-off companies and helping those companies develop their discoveries and their business - has resulted in the successful establishment of nearly a dozen new companies developing everything from new drug therapies to new materials for catalytic converters.

PARTEQ was ranked 4th among the top 50 research institutions in North America for performance in technology transfer (Technology Access Report, 1998).

KINGSTON AREA NETWORK (KANnet)

Kingston is enhancing its telecommunications infrastructure through the Kingston Area Network (KANnet) consortium. KANnet presently comprises representation from KGH, the Algonquin and Lakeshore Catholic School Board, the Limestone District School Board, Queen's, the City of Kingston, and KEDCO. The purpose of KANnet is to act as a catalyst for the development of advanced network applications by leveraging the resources and skills of its members. The coordination of the network applications and their respective funding mechanisms will help to aggregate demand for telecommunications infrastructure in the Kingston area with a view to creating a community with rural and urban access to high speed, affordable, and interconnected telecommunications networks.

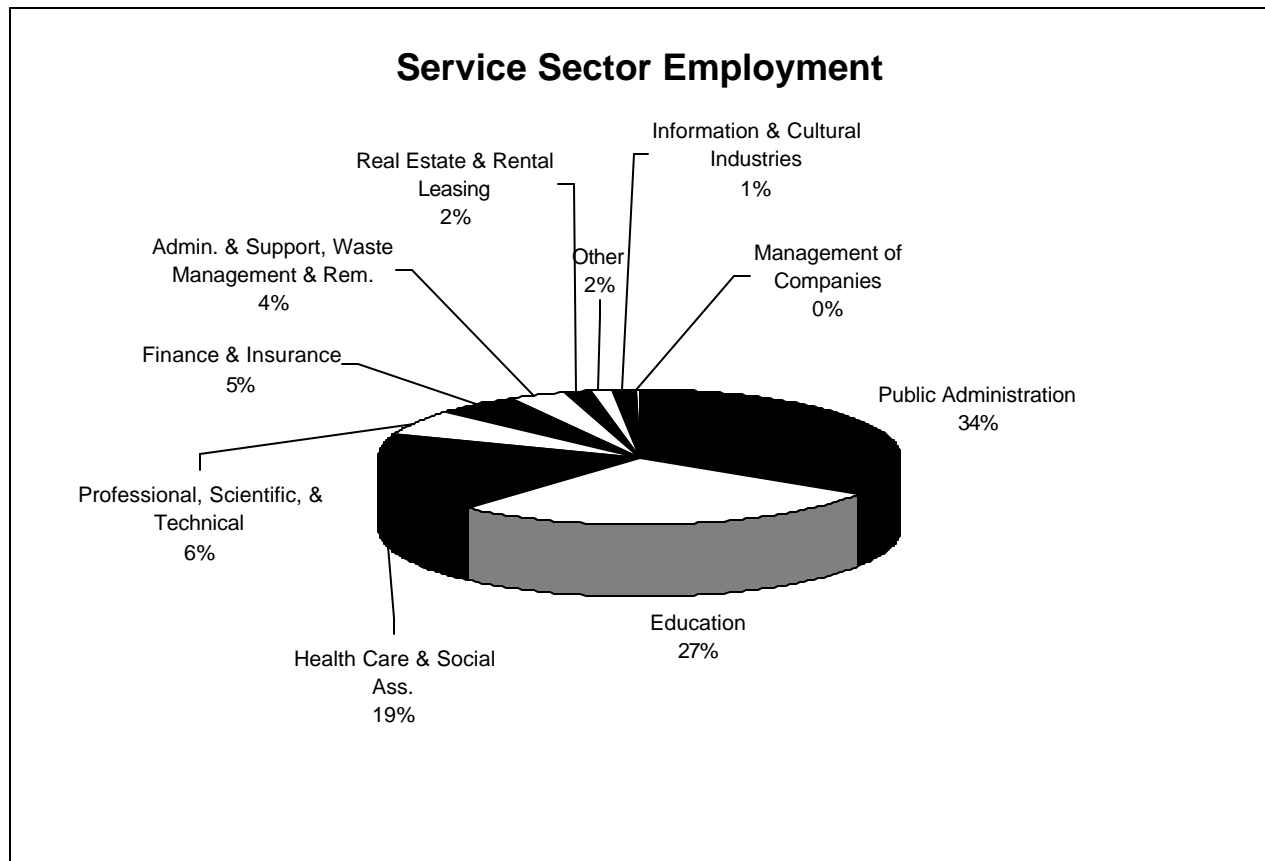
KANnet will act as a catalyst to develop advanced network applications and thereby enhance regional telecommunications infrastructure and opportunities.

SERVICE SECTOR

The following chart provides a more detailed look at the service sector employers in Kingston. KEDCO's survey results reinforce findings from the 1996 Census indicating the largest service sector employers are public administration (34%), education (27%), and health care (19%).

Service Sector Employment by Sub-Sector, City of Kingston 1998		
Sub-Sector	Employees	%Total Employees
Public Administration	10,168	34.1%
Education	8,134	27.3%
Health Care & Social Ass.	5,568	18.7%
Professional, Scientific, & Technical	1,912	6.4%
Finance & Insurance	1,477	5.0%
Admin. & Support, Waste Management & Rem.	1,111	3.7%
Real Estate & Rental Leasing	485	1.6%
Other	450	1.5%
Information & Cultural Industries	426	1.4%
Management of Companies	49	0.2%
Total	29,780	100.0%

Source: KEDCO Business Survey, 1998-1999



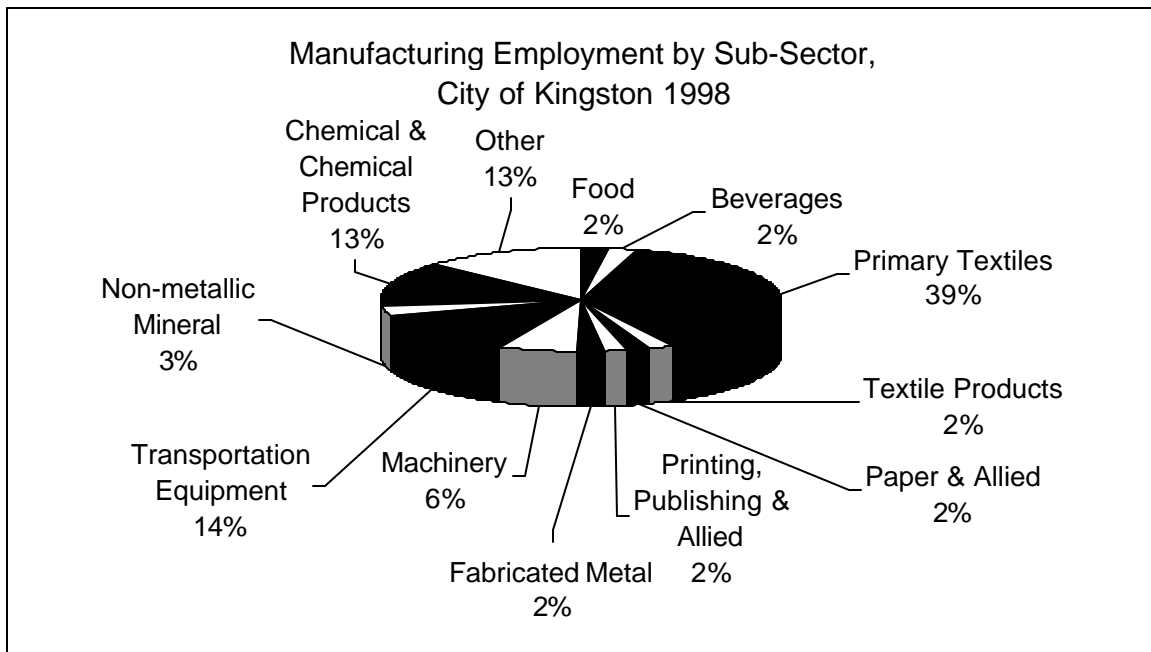
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MANUFACTURING SECTOR

Kingston's manufacturing sector is comprised of both traditional and advanced manufacturers. KPMG's "The Competitive Alternatives" highlights the cost advantages of these sectors in Kingston with 8.3% and 5.8% lower costs than the U.S. average, respectively. Primary textiles, including products such as advanced materials for automotive air bags, invented by DuPont, Kingston (37%), transportation equipment (13%), and chemical and chemical products (13%) dominate Kingston's manufacturing sector, and combined represent 63% of the total manufacturing employment.

Manufacturing Employment by Sub-Sector, City of Kingston 1998		
Sub-Sector	Total Employees	% Total Empl.
Primary Textiles	1,623	37%
Transportation Equipment	574	13%
Chemical & Chemical Products	561	13%
Machinery	273	6%
Non-metallic Mineral	144	3%
Food	100	2%
Fabricated Metal	94	2%
Beverages	93	2%
Textile Products	86	2%
Printing, Publishing & Allied	76	2%
Paper & Allied	73	2%
Other	573	13%
Total	4,374	100%

Source: KEDCO Business Survey 1998-1999



TOURISM

An estimated 3.1 million people visited Kingston in 1998, an increase of more than 25% from 1997. Kingston's estimated total increase in tourism revenues from 1997 to 1998 was \$35.5 million, representing a 22% increase, to a total of more than \$250 million. Annual tourism expenditures represent over 6,750 person years of employment. In addition, when external tourism is included (such as people traveling from Kingston using local transportation suppliers) total tourism revenues increase to nearly \$300 million.

The city of Kingston is renowned as the freshwater sailing capital of North America and prides itself on being a major port for scenic entertainment cruises of the breathtaking Thousand Islands,

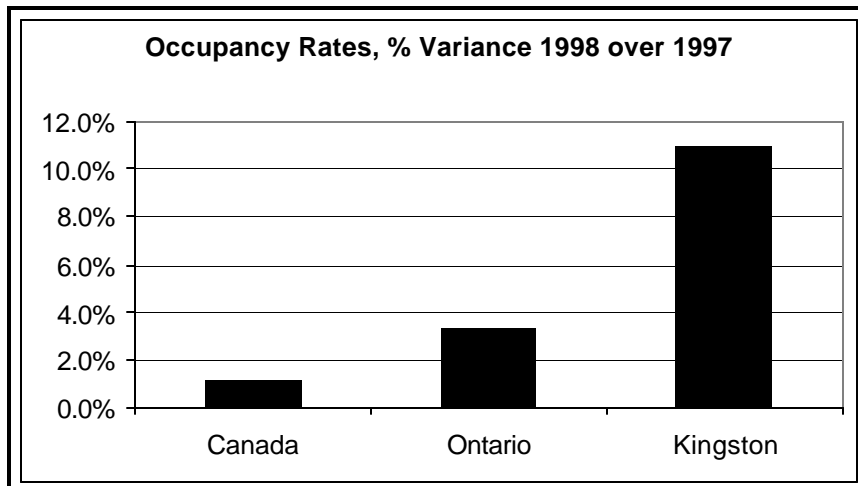
Further information on Attractions, Festivals, Events, Meetings/Conventions, Accommodations, Restaurants, Shopping, Recreation and Touring in Kingston is available through KEDCO via the Internet at:

www.kingstoncanada.com/tourism

Occupancy Reports, 1998 Versus 1997 National Perspective	
Area	% Variance 1998 over 1997
Canada	1.1%
Ontario	3.3%
Kingston	11.0%
Ottawa	2.90%
Newfoundland	5.20%
Prince Edward Island	3.20%
Nova Scotia	8.70%
Other Nova Scotia	13.30%
New Brunswick	1.00%
Quebec	5.40%
Manitoba	5.90%
Saskatchewan	0.40%
Alberta	0.90%
British Columbia	-5.30%

The increase in occupancy rates in Kingston was second highest in Canada with an 11% increase in occupancy over 1997 compared to 3.3% in Ontario and 1.1% in Canada. Based on the growth experienced in Kingston, employment in tourism increased in 1998 by an estimated 700 additional full years of employment.

Source: Pannell, Kerr, Forster Reports



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BUSINESS DEVELOPMENT

KEDCO's Business division provides the following resources for those making location decisions.

- ◆ **Jobs and Prosperity Guide** (On-line, searchable guide to knowledge-based enterprises, manufacturers and Jobs and Prosperity Partners, providing information on local businesses and their expertise.)
- ◆ **Available Properties** (On-line listing of available office and industrial space and land.)
- ◆ **Industrial Land** (On-line listing of Kingston's business and industrial parks, offering strategically located properties for your business or industry.)
- ◆ **Knowledge-Based Industry Cluster Study** (see our web site for a downloadable copy of the Advantage Kingston! Coopers and Lybrand Study.)
- ◆ **Call Centre Information**
- ◆ **Community Profile Statistical Supplements**
including: Economic Base Profile
Demographic Characteristics
Labour Force Characteristics
Environment and Lifestyle
Land Development and Building Activity



KEDCO ACTIVITIES AND SERVICES

KEDCO's activities include the promotion of the City of Kingston in the international marketplace; assisting local companies with expansion/modernization projects; maintaining a computer database of up-to-date economic indicators for the area; co-ordinating local economic development efforts; and advising local and senior governments on economic development matters.



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www.kingstoncanada.com
