



GREATER TORONTO AREA
INFORMATION AND COMMUNICATIONS TECHNOLOGIES STUDY
2004

G T A I C T O v e r v i e w

STUDY PARTNERS



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We extend our gratitude to the following individuals for offering their time in serving on the Steering Committee. The study has benefited considerably from their experience, knowledge, and expertise over the course of the study project.

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- Greater Toronto Marketing Alliance
- City of Toronto Economic Development
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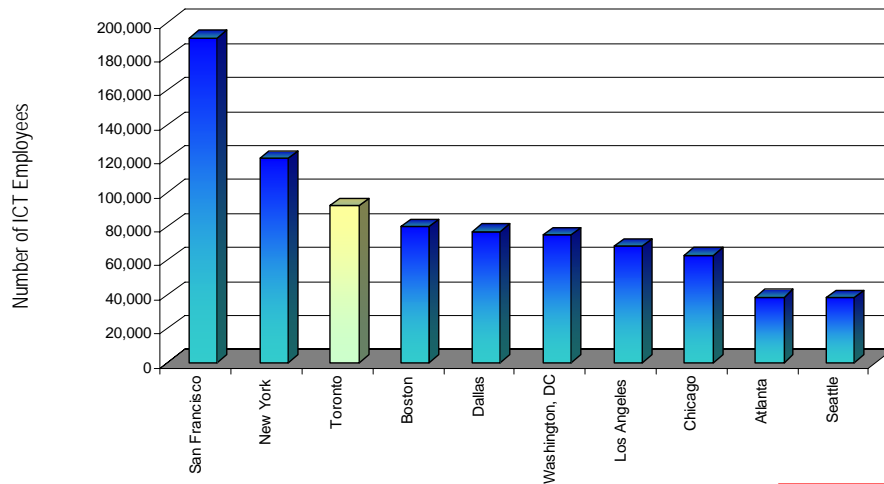
THE TORONTO REGION OFFERS THE WORLD'S LEADING HIGH-TECHNOLOGY COMPANIES OPPORTUNITIES TO INVEST, CREATE JOBS AND GROW

TORONTO'S ICT CLUSTER IS NOW AMONG THE TOP THREE IN NORTH AMERICA

The Toronto region has the largest concentration of medium and large private ICT companies in Canada, and ranks third among major North American metropolitan areas. The Toronto region follows historical leaders San Francisco and New York, but ahead of such technology centres as Boston and Washington, D.C.

The diversity of the cluster and a desire to decentralize has resulted in the entry of new companies into the region as well as the growth of existing firms. The Toronto region is also a hotbed for innovation particularly in the graphics, new media and communications devices areas.

RANKINGS OF TOP NORTH AMERICAN METROPOLITAN AREAS BY SIZE OF ICT INDUSTRY - 2003



Source: E&B Data

THE GREATER TORONTO AREA'S STRONG POSITION GIVES ICT FIRMS ACCESS TO:

- A labor force of over 185,000 ICT workers and a future powered by five universities and six colleges graduating more than 7,000 ICT-related graduates annually
- ICT leaders to stimulate thinking and innovation as well as to support business development and growth
- A diverse economy and within a one-hour flight from 90 million North Americans – 20 million more than New York City
- One of the largest and fastest growing markets in North America

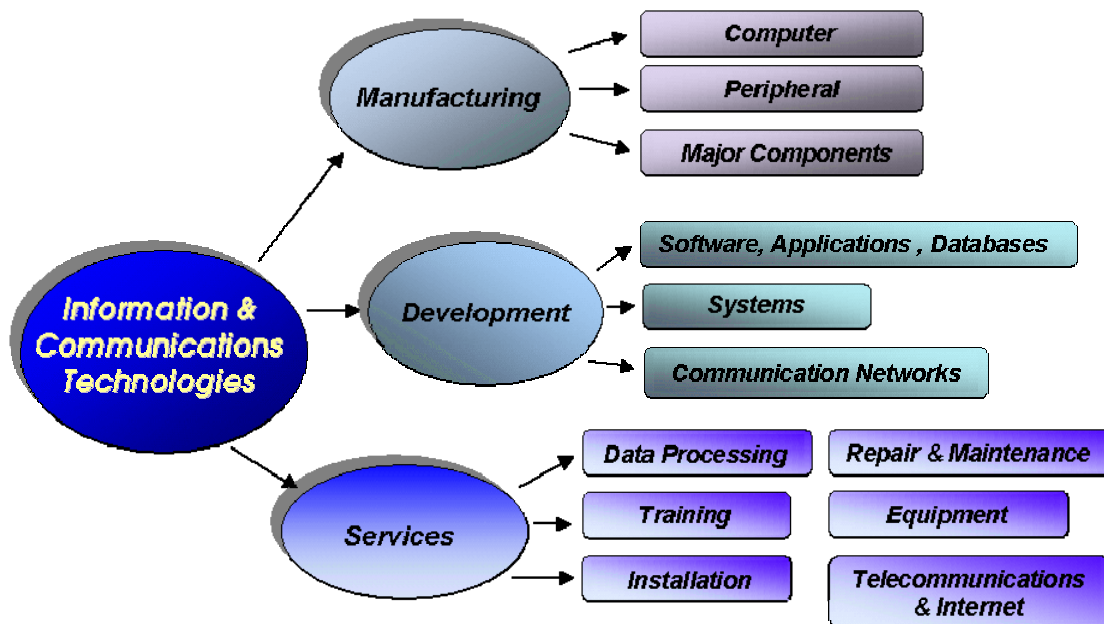
The GTA ICT study compares the Toronto area with other top metropolitan regions in North America.

The study was commissioned by the Greater Toronto Marketing Alliance and the City of Toronto with the support of the Ontario Ministry of Economic Development & Trade, the Government of Canada's Program for Export Market Development – Investment and with input from an industry advisory committee.

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THE GREATER TORONTO AREA ICT IS WELL INTEGRATED INTO THE REGION'S LEADING INDUSTRIES FROM BIOTECHNOLOGY TO MANUFACTURING TO FINANCIAL SERVICES

Regionally, the ICT sector is comprised of the following three sectors and their main subgroups, representing sales of \$32.5 billion annually and exports exceeding \$6.2 billion.



Source: Greater Toronto Information & Communications Technologies Industry Profile; E&B Data, 2004.

TOP 10 EMPLOYERS IN EACH OF THE ICT CATEGORIES: MANUFACTURING, DEVELOPMENT AND SERVICES

Top sector employers and industry leaders such as Celestica, Xerox, Sony, IBM, CGI, Oracle, Rogers Communications, Bell Canada, Allstream, MDS and Hewlett-Packard Canada have positioned the GTA in the forefront of innovation, investment opportunities and growth.

MANUFACTURING		DEVELOPMENT SYSTEMS & SOFTWARE		SERVICES	
Top Employers	Empl.	Top Employers	Empl.	Top Employers	Empl.
Celestica	4,450	IBM Canada	11,000	Rogers Communications	10,480
Xerox Canada	3,000	CGI Group	3,900	Bell Canada	10,000
ATI Technologies	1,300	Oracle Canada	1,000	AllStream	2,350
Solectron Invotronics	960	Microsoft Canada	900	Hewlett-Packard Canada	2,000
Sony Music Entertainment	860	NexInnovations	700	Telus National Systems	1,600
Nortel Networks Corporation	850	Accenture	670	Sprint Canada	1,500
Leitch Technology Corporation	800	Electronic Data Systems Corporation	650	GE Canada (IT-related)	1,380
Cinram	700	Percepta	600	MDS	900
Mark IV Industries (F-P Electronics)	600	ClientLogic	600	Yellow Pages Group (IT-rel.)	800
Gennum Corporation	500	International Financial Data Services	510	Thomson Corporation (IT-rel.)	800

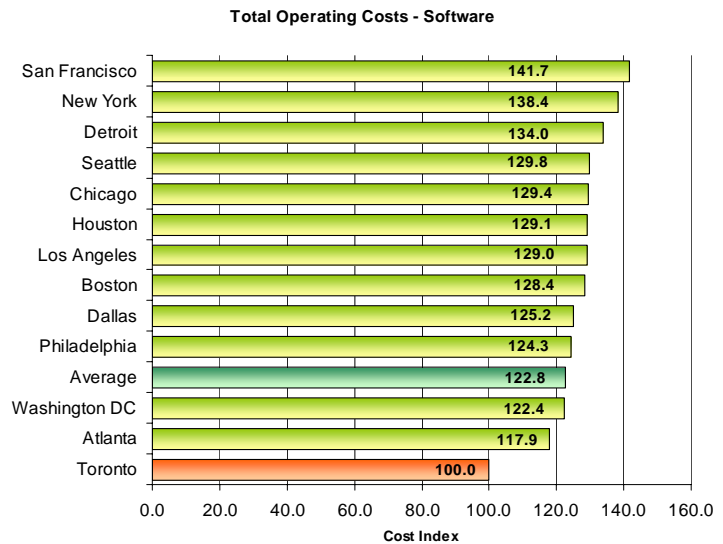
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EXCELLENCE FOR LESS: TORONTO REGION'S COMPETITIVE COST STRUCTURE DELIVERS VALUE TO ICT COMPANIES

THE TORONTO AREA IS LOW IN OPERATING COSTS--HIGH IN LOCATION VALUE

In 2003, the Toronto region presented ICT companies with the lowest operating costs when compared to large U.S. metropolitan areas for both manufacturing and service activities. Moreover, based on a survey conducted by E&B Data in early 2004, Toronto also excels on two key location factors:

- **Access to markets** – Toronto area businesses have one of the best access entry points to consumers of all major North American metropolitan areas. The region is within an hour's flight of more than 90 million consumers, 20 million more than New York City.
- **Labor force** – The Toronto area is competitive in all key ICT workforce dimensions including expertise, availability and costs. On average, labor costs are 12 – 13% less in Toronto than comparable U.S. cities. More than 56% of Toronto region residents have post-secondary certificates, diplomas or degrees. Colleges and universities are graduating more than 7,000 students annually in mathematics, engineering and computer sciences.



Source: KPMG Competitive Alternatives Study-2004* and E&B DATA
* KPMG data was normalized, with Toronto as the baseline index of 100.0

FULLY INTEGRATED WITHIN THE REGIONAL ECONOMY, THE TORONTO REGION'S ICT SECTOR IS DRIVING INCREASED BUSINESS PRODUCTIVITY AND EXPORT DEVELOPMENT

THE TORONTO AREA ECONOMY PROVIDES BOTH LOCAL AND EXPORT OPPORTUNITIES

The ICT industry is fully integrated into the Toronto region's economy, a market area that provides ICT firms with strong local business opportunities. The Toronto area feeds the ICT sector's growth with one of North America's most diverse economies.

In turn, the ICT sector supports the rest of the economy by enhancing productivity through the application of technology. Analysis of the area's ICT sector shows that of all firms:

"With DVD growing at such a fast pace, Cinram knows its customers require manufacturing and distribution services that bring their product to market in the fastest, most efficient way."
Isidore Philosophie, Cinram CEO

- 24% target other ICT companies as customers, helping to drive industry growth, innovation and exports;
- 24% target consumer markets in response to market demands and opportunities;
- 52% target financial services, business services and industrial markets. These firms are driving increased productivity and the creation of new business applications such as e-health, e-training and e-banking.

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ICT SECTOR DEPTH AND DIVERSITY IS THE TORONTO REGION'S COMPETITIVE ADVANTAGE

THE TORONTO AREA'S ICT COMPANIES OPERATE IN NEARLY ALL KEY INDUSTRY SUB-SECTORS

The Toronto region is strong in a wide range of ICT industry categories including manufacturing, software and systems development, and ICT services. Leading industries include electronic components manufacturing, computer and communications equipment manufacturing, software development, systems development and integration, and telecom, internet and distribution services.

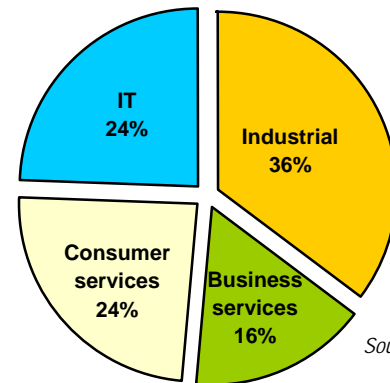
Toronto Region ICT Profile-2004

- Total employment of 148,000 in **3,362** ICT facilities
 - 28,000 jobs in 268 manufacturing facilities
 - 48,000 jobs in 1,303 software and systems development facilities
 - 64,000 jobs in 953 services-related facilities
 - An additional 8,000 jobs in 838 unclassified facilities
- 40,000 additional ICT workers in non-ICT sectors
- 376 major ICT foreign companies have subsidiary operations in the Toronto Region

"Toronto is a first-class city with a telecom infrastructure that is second to none. Small, medium and large businesses, as well as institutions, government and residential users have access to a dynamic technology landscape that is highly competitive and secure. Businesses locating here benefit from an unrivalled technology platform providing millions of connections throughout North America and the world."

Terry Mosey, Executive Vice President, Bell Canada

ICT TECHNOLOGY MARKETS IN THE TORONTO REGION



Source: E&B DATA

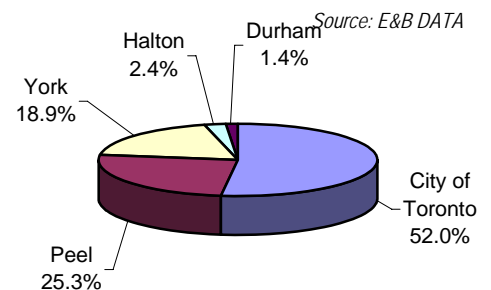
DISTRIBUTION OF ICT FACILITIES IN THE TORONTO REGION

While the ICT sector is well represented across the region, reflecting an environment that is conducive to innovation and economic growth, over 50% of the region's ICT sector call the City of Toronto home.

GREATER TORONTO AREA NUMBER OF ICT FACILITIES BY REGION

Region	Sector					Total
	Manu- facturing	Dev. Systems	Dev. Software	Services	n.c.	
City of Toronto	95	386	322	412	470	1,685
Peel	76	120	117	250	176	739
York	67	132	124	205	126	654
Halton	12	35	33	44	40	164
Durham	18	24	10	42	26	120
Total	268	697	606	953	838	3,362

GTA EMPLOYMENT BY REGION



Source: E&B DATA

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TORONTO'S ICT SECTOR IN EXCEPTIONAL GROWTH MODE

ICT FIRMS PLAN TO INVEST AND GROW IN THE TORONTO REGION

Based on a January/February 2004 survey conducted by E&B Data:

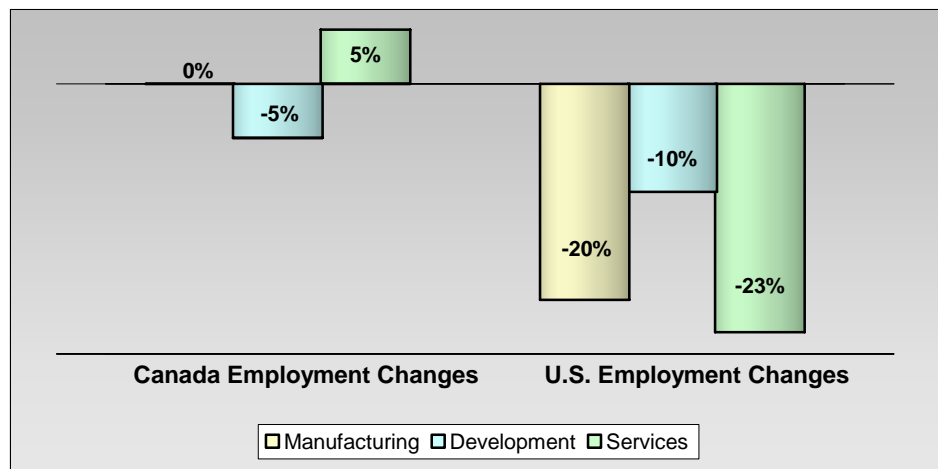
- 65% of ICT firms plan to invest in their Toronto region operations this year
- 89% of ICT firms expect to grow at least as fast as the economy in the next five years
 - 39% expect to grow faster
 - 50% will grow as fast as the economy

When compared to 2003 Canadian and U.S. ICT performance, these growth expectations are exceptional. In 2003, Canada's ICT performance was stable overall, with some growth in the services sub-sector. The U.S. ICT industry, however, registered declines across all sub-sectors.

FIRMS' INVESTMENT EXPECTATIONS			
Will invest in their GTA facility in the next 12 months			
Sector	Yes	No	Don't know
Manufacturing	41%	35%	24%
Development	72%	14%	14%
Services	60%	16%	24%
Not Classified	75%	6%	19%
Total	65%	16%	19%

MARKET FORECAST			
Relative to the economy the firm will grow			
Sector	Slower	As fast as	Faster
Manufacturing	13%	63%	25%
Development	10%	44%	46%
Services	5%	58%	37%
Not Classified	31%	38%	31%
Total	10%	50%	39%

2002-2003 ICT CLUSTER EMPLOYMENT CHANGES



Source: E&B DATA

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