

# Mississauga: A Leading Canadian ICT Cluster

Mississauga Ontario Canada



**MISSISSAUGA**  
*Leading today for tomorrow*

# Contents

<b>EXECUTIVE SUMMARY</b>	1
<b>1. STUDY CONTEXT</b>	5
A. Background	5
B. ICT Defined	6
<b>2. ICT SECTOR OVERVIEW</b>	7
A. Canada: A Significant ICT Player	7
B. Ontario: Home to Canada's Largest Cluster of ICT Companies	10
C. GTA: The ICT Capital of Canada	11
<b>3. MISSISSAUGA: A HOTBED OF ICT ACTIVITY</b>	15
A. Mississauga's Ranking in Canada	15
B. Mississauga ICT Sector's GDP: Overall Contribution Increases	16
<b>4. MISSISSAUGA'S ICT SECTOR EMPLOYMENT</b>	17
A. Cluster Distribution by Number of Employees	17
B. Growth in ICT Employment Over the Last Decade	17
C. Sector Composition	18
<b>5. MISSISSAUGA: A LEADING CANADIAN ICT CLUSTER</b>	19
A. Competitive Advantages	19
I. Accelerating Technology	19
II. Diverse and Dynamic Business Community	20
III. Huge Accessible Market: Canada and the U.S. Provide Vast Market	21
IV. Intellectual Capital	21
V. Cost-Effectiveness: Competitive Costs in Mississauga	22
VI. Access to Capital	23
VII. Government Programs and Incentives	23
VIII. Telecommunications and Infrastructure	24
IX. A Great Place to Live: Mississauga Has it All!	24
<b>6. MISSISSAUGA: POSITIONED FOR GROWTH</b>	25
<b>APPENDICES</b>	27
A. Bibliography	27
B. Mississauga ICT Company Profiles	29
C. Top Ranked Tech Companies in Mississauga	42
D. Business Investments in Mississauga – All Sectors	43
E. Data Analysis	45
F. North American Industrial Classification System (NAICS) and the Standard Industrial Classification (SIC)	48
G. Quick Facts – City of Mississauga	50

## Executive Summary

Mississauga, with strength in a broad range of business sectors, is home to one of Canada's largest and most concentrated Information and Communications Technologies (ICT) clusters. Companies in the ICT sector are attracted to Mississauga due to our diverse and dynamic business community and innovative environment; access to a huge pool of knowledgeable professionals; state-of-the-art telecommunications infrastructure; competitive business costs; and direct access to the vast North American market. These healthy economic factors have contributed to the unprecedented growth in Mississauga's ICT sector. Most notably:

- The City of Mississauga's ICT sector is the fourth largest in Canada
- Mississauga's ICT sector comprises more than 3,900 businesses and employs more than 37,000 people
- Direct GDP contribution from the ICT sector to the Mississauga region was estimated at \$4.87 billion (2004)
- Mississauga's ICT industries are 267% more concentrated than in Canada as a whole
- The Greater Toronto Area's (GTA) ICT sector is the largest in Canada, and among the largest in North America
- Located within the financial capital of Canada, with easy access to various venture capital firms and other financial institutions that invest in the ICT sector

### Key reasons Mississauga attracts this important sector:

Mississauga's costs, such as property taxes, services and utilities, are noticeably competitive and rank among the lowest of the major cities in Canada and the GTA. Mississauga, as part of the Greater Toronto Area, has overall business costs approximately 7% lower as compared to the United States (2004 KPMG Competitive Alternatives Study).

Mississauga's proximity to a large pool of labour that is highly-skilled for the ICT sector, generous access to R&D incentives, and an already large concentration of ICT companies, offer further reasons why the City's ICT community continues to flourish.

### Accelerating Technology

- The City of Mississauga is committed to furthering the ICT sector's growth and continuously champions efforts to intensify innovative activity
- Mississauga is an integral part of the Western Greater Toronto Area Convergence Centre, a network of business, education, institutions and government partners working together to accelerate new business opportunities and innovation
- Mississauga Technology Business Accelerator is a unique centre of innovation that enables entrepreneurs to accelerate their businesses in a collaborative environment, greatly improving their chances for long-term success
- Thriving partnerships between business and educational research institutions create new products and technologies
- ICT firms in Mississauga benefit from some of the most generous R&D incentives in the world

### Diverse and Dynamic Business Community

- Diversified business community of more than 49,000 offering potential for convergence of ideas and business-to-business opportunities
- Fourth largest head office centre in Canada
- Leading clusters in the following sectors:
  - Information and Communications Technologies
  - Automotive and Aerospace Industries
  - Biomedical and Pharmaceutical
  - Financial, Insurance and Business Services

### Huge Accessible Market: Canada and the U.S. Provide Vast Market

- Mississauga is the sixth largest city in Canada, with a population of 695,000
- Strategically located in the hub of the Greater Toronto Area (GTA), with a population of 2.9 million
- Mississauga is within a one-day drive of 164 million people
- Offers direct access to North America's vast, and quickly growing, affluent (\$12.3 trillion GDP) 420-million consumer base

### Intellectual Capital

- Over 82% of Mississauga's resident labour force has post secondary education
- Access to over 410,000 employees from the City of Mississauga and approximately 2.9 million employees located in the Greater Toronto Area
- 10 major universities and 11 community colleges located within commuting distance of Mississauga

### Telecommunications Network

- Well-spread and highly-developed telecommunications network and infrastructure
- Sophisticated infrastructure, offering 100% digital switching
- Existing fibre optic networks are rapidly evolving to leading-edge technologies to provide survivability
- Network services all business parks and offers bandwidth scalability on a simplified service portfolio
- Mississauga is well-covered by several wireless service providers, offering 100% integrated voice and data network services

### Transportation Infrastructure

- Home to Pearson International Airport
- Only city in the GTA serviced by seven major highways
- Two principle railways servicing the city
- A well-developed local transit system

### Past Growth

- Mississauga's ICT sector has experienced rapid and continuous growth
  - Between 1996 and 2004, the number of ICT businesses increased approximately 118%
  - Since 1996, the ICT sector added more than 2,500 jobs annually, an increase of approximately 128% over 8 years

### Projected Growth

- Employment in the ICT sector is estimated to reach 41,000 employees by the end of 2008
- Mississauga's ICT sector's real GDP is forecasted to grow from \$4.87 billion (2004), to \$6.07 billion by year end 2008, an average growth rate of more than 6% annually





# Study Context

## A. Background

### The ICT Sector

The Information and Communications Technologies (ICT) cluster is a growing, vital and enabling sector within the Mississauga business community.

Technology has changed the way companies think, interact, and promote their products and services. Many tried and true methods of yesteryear have been eclipsed, as new and exciting technological advances have created opportunities that would never have been considered, or even attempted, three or four decades ago.

Mississauga, with a solid commitment to the health and vitality of its vibrant ICT sector, is located in the heart of Canada's fastest-growing and largest ICT cluster. When analyzed from a location quotient perspective, ICT industries are more concentrated in Mississauga than in the rest of Canada as a whole.

This is a sector expected to boom over the next 10 years as new ICT technology spurs businesses to operate in newer markets and function with lower cost. As a result, this accelerated business activity is expected to bring new competition and deliver customized products on demand, all of which leads to requests for even higher technology and more products within the ICT sector.

New buzz words echo throughout the sector: VOIP (Voice Over Internet Protocol), wireless broadband, 3G (3<sup>rd</sup> Generation) networks, RFID (Radio Frequency Identification) technology, photonics, nanotechnology, among others... each of these innovative technologies within the ICT sector is driving changes in the business world.

These changes play an enormous role in the impact the ICT sector has on prosperity achieved by other industries located in Mississauga. Clearly, the ICT sector – by providing leading-edge products and services – enables other industries to perform better by creating the tools to enhance the manufacturing, delivery, sales and customer service processes.

To improve its products, the ICT sector needs access to highly-skilled employment. Skilled employees gravitate to cities, such as Mississauga, that can offer these highly-sought individuals the amenities, schools, colleges and moreover, a healthy and safe environment in which to live.

*This circle of dependencies is the driving force for a more competitive, more creative and cost-effective ICT sector. Mississauga has proven over time that it provides a business climate that is a catalyst for growth in the ICT sector.*

## B. ICT Defined

### ICT Sector Definition

The ICT sector may be defined in a number of ways. For purposes of this Study, the Mississauga ICT sector utilizes Industry Canada's definition of the ICT sector as a guideline.

Industry Canada divides the ICT sector into the manufacturing, intangible services and goods related services. This ICT Study further divides the sector by these major specializations:

#### 1) Telecommunication

Telecommunication and equipment manufacturers, wholesalers, distributors, and service providers. *Since call centres are part of the business service category, they have not been included in this Study.*

#### 2) Development

Software development, technical support, system integrators, networking, data processing, consulting services, computer engineering, web design, e-commerce, internet service provider.

#### 3) Manufacturing

Businesses involved in research and development, and manufacture of computers, computer peripherals, printers, semiconductors, hydrogen fuel cells, electronic components, testing and measuring equipment, pre-packaged software, pre-recorded CD, disk or DVD.

#### 4) Services

Businesses that are involved in providing other IT services such as repair, service and retail sales of computers, computer peripherals, printers. Businesses that provide graphic design services. Institutions and universities that provide training in computer technologies.

#### 5) Wholesale

Businesses involved in wholesaling and distributing computer hardware, software and computer-related electronics.

Based on the above definition, the ICT sector can be defined using the North American Industrial Classification System (NAICS) and the Standard Industrial Classification (SIC) codes – please refer to Appendix G for a detailed breakdown.

- For four years running Canada has led the world in e-government according to global consulting firm Accenture.
- Canadians rank third in the world when it comes to high-speed Internet access, according to a recent report by the Geneva-based International Telecommunication Union. The ranking is important because high-speed connections are seen as a key to future sales and profit growth.

Source: Ontario's ICT industry, *Programmed for Success*





## ICT Sector Overview

### A. Canada: A Significant ICT Player

When considered globally, Canada ranks as a significant player in the ICT industry; the ICT sector contributed \$57.0 billion to the country's overall Gross Domestic Product (GDP) in 2004.

To put this contribution into context, consider that the ICT sector's GDP increased at a rate of 4.1 per cent from 2003, compared to a 3.1 per cent increase for the overall Canadian GDP. Growth has been spectacular. Since 1997, the Canadian ICT sector's GDP grew by a very impressive 74.4 per cent.

Between 1997 and 2004, the ICT sector's GDP grew at a Compound Annual Growth Rate (CAGR) of 8.3 per cent compared to 3.6 per cent for the Canadian economy. As a result, the share of the ICT sector in the Canadian GDP increased from 4.0 per cent to 5.4 per cent over the same period, while 10.5 per cent of the Canadian economic growth was generated by the ICT sector.<sup>1</sup>

Canada has embraced technology. We lead the world in Internet adoption by individuals. Our universities and colleges produce more than 29,000 graduates a year in mathematics, engineering and sciences.<sup>2</sup>

More than 579,000 skilled Canadian workers generate over \$125 billion in revenues for the ICT industry.<sup>3</sup>

### Canada Hosts the World's Premiere Advanced Research Network

One key factor boosting ICT sector growth in Canada is that geographically, Canada's 32,000 ICT companies are gathered in regional clusters<sup>3</sup>. In Mississauga, our entire cluster of ICT companies, with annual revenues greater than \$30,000, comprises 3,912 businesses.<sup>4</sup>

By providing the necessary critical mass that comes with strength in numbers, and promoting innovative exchange of ideas, Canada's ICT companies take advantage of the country's educational and research infrastructure. Canadian researchers are connected to Canada's National Research and Innovation Network (CA\*net 4) the world's premiere advanced research network. This allows the exchange of ideas between domestic and international communities of interest, which facilitates innovation and new commercial opportunities.<sup>2</sup>

<sup>1</sup> Source: Industry Canada, Information and Communications Technologies Statistical Overview, April 2005

<sup>2</sup> Source: Ontario's ICT Industry, Programmed for Success

<sup>3</sup> Source: Industry Canada, [http://strategis.ic.gc.ca/epic/internet/inict\\_c-g\\_tic.nsf/en/home](http://strategis.ic.gc.ca/epic/internet/inict_c-g_tic.nsf/en/home)

<sup>4</sup> Source: Statistics Canada (1996, 2001, 2004). Canadian Business Patterns, Information and Communications Technologies Sector Data

### Highlights of the KPMG Study

- Business costs are 9 per cent lower in Canada compared to the United States.
- Canadian cities are overall international cost leaders in 15 of the 17 industry sectors studied.
- Canada is cost-competitive in biomedical R&D, clinical trials, back office/ call centres, aerospace, specialty chemicals, electronics assembly, medical devices, pharmaceuticals, and wireless communications.
- Canada has the lowest overall labour costs of any G7 country.
- Canada has a 20 per cent cost advantage over the United States for technical/ professional labour and a 23 per cent cost advantage for senior management.
- Canadian corporate income tax rates are among the lowest for manufacturing.
- Canada has the lowest corporate income tax rates for R&D.

Source: [www.locationcanada.com](http://www.locationcanada.com); retrieved May 17, 2005

### Canada is the Country of Choice for Business

The KPMG 2004 Competitive Alternatives Study recognized Canada, *for the fifth year in a row*, as the lowest-cost G7 country in which to do business.<sup>5</sup>

KPMG is not alone in viewing Canada as the country of choice for business. The Economist Intelligence Unit (EIU) predicts that Canada will be the *best country in the world* to do business between 2005-2008, due to our openness to foreign trade and capital, high-quality infrastructure and great market opportunities within the North American marketplace.<sup>6</sup>

### Near Shore and Off Shore Opportunities for ICT companies

Canada is increasingly being identified as a key “Near Shore” opportunity for ICT companies with markets throughout North America.

In the article, *Offshoring to Canada*, Canada is viewed as an excellent opportunity for companies looking to “offshore” closer to home. The article notes that many corporate clients realize the value of Canada’s unique and advantageous mix of cost savings, work force quality and stable government offering an excellent opportunity for U.S. companies looking to “offshore” closer to home.<sup>7</sup>

In fact, the article cites key factors, in addition to Canada’s cost-effective business

environment, that are likely to entice international companies to set up within Canada’s ICT regional cluster bases. These factors include: Canada’s location; time zones; language; culture; and travel. Together, these factors position Canada as a key place for international offshore firms to set up operations to service their U.S. clients.

### Detailed Information: ICT Sectors’ Growth in Canada

Canada’s economy has benefited from the rapid pace of growth of the ICT sector over recent years. Clearly, the ICT sector has been a driving force of the Canadian economy; outpacing economy-wide growth over the 1997-2004 period, with most ICT sector industries showing substantial increases.

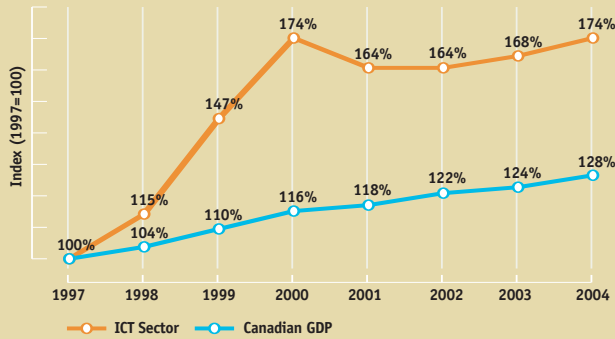
This healthy sector growth translates into increased employment, higher GDP numbers, more intensive and innovative research and development, along with heightened trade activity.

The ICT sector’s contribution to the Canadian GDP continued to increase in 2004, reaching \$57 billion. This represents a significant rise of 4.1 per cent from 2003 compared to 3.1 per cent for the overall Canadian GDP. This is the first time since 2000 that the growth of the ICT sector exceeded the growth of the overall economy.<sup>8</sup>

Figure 1

INDEXED GROWTH IN GDP AT BASIC PRICES FOR THE ICT SECTOR AND THE CANADIAN ECONOMY, 1997-2004

Source: Information and Communications Technologies Statistical Overview, Industry Canada, Statistics Canada data



- The largest contribution to the growth of the ICT output in 2004 came from the manufacturing industries (44 per cent of total growth as compared to 39 per cent for services). The ICT manufacturing industries' output posted a growth rate of 11.3 per cent in 2004. The largest increases were observed in the wireless communications equipment (+38 per cent) and electronic component (+30 per cent) industries.
- The ICT services industries kept growing in 2004, but at a slower rate of 2.0 per cent. The largest growth was observed in the cable/other program distribution (+2.5 per cent) and telecommunications services (+2.3 per cent) industries, followed by the computer systems design industry (+1.9 per cent).
- Economic activity picked up in the ICT wholesaling industries as output advanced by 11.4 per cent in 2004, up from 5.6 per cent in 2003.
- Between 1997 and 2004, the ICT sector's GDP grew at a Compound Annual Growth Rate (CAGR) of 8.3 per cent compared to

3.6 per cent for the Canadian economy. As a result, the share of the ICT sector in the Canadian GDP increased from 4.0 per cent to 5.4 per cent over the same period, while 10.5 per cent of the Canadian economic growth was generated by the ICT sector.

- With a contribution to the Canadian GDP of \$24.8 billion, telecommunications services were still the largest ICT industries, representing 44 per cent of total ICT sector's GDP in 2004. All together, the ICT services industries accounted for 76 per cent of the entire sector's output.<sup>8</sup>

**Impressive GDP and Employment Growth**

According to the most recent study by The Conference Board of Canada, *Canada's Information, Technology and Communications Industry Outlook Winter 2005*, real GDP in 2003 for the ICT industry was \$45 billion, representing 4.1 per cent of total GDP in Canada. Despite the downturn in 2001, the sector enjoyed impressive strides since 1997. Telecommunication services are the largest sector in

<sup>5</sup> Source: www.locationcanada.com; retrieved May 17, 2005

<sup>6</sup> Source: Ontario's ICT industry, Programmed for Success

<sup>7</sup> Source: Adkison, Jeff. (Senior Associate, Global Consulting Group, Jones Lang LaSalle) Offshoring to Canada. Area Development Magazine, Retrieved May 17, 2005, from www.locationcanada.com

<sup>8</sup> Source: Information and Communications Technologies Statistical Overview, Updated April 2005

this industry, with real GDP of \$24 billion in 2003, followed by computer systems design, worth \$11.3 billion. Real GDP in the computer manufacturing sector was \$9.8 billion in 2003.

The tremendous growth in the ICT industry since the mid-1990s is evident, when considered in light of employment trends. In 1997, 415,400 people worked in the ICT industry. By 2003, employment increased to 494,200, a gain of close to 20 per cent.

### **Forecast: Expect Further Growth in Revenues**

The Canadian ICT industry returned to a profitable situation in 2003, following the worldwide IT collapse of 2001. Profits which had soared above \$5 billion from 1997 to 2000, turned negative in 2001 as the industry lost close to \$3 billion. In light of the ICT sector's 2003 return to profitability, it's expected that profits will continue to improve over the short-term, as demand and production recover from the collapse in the early part of this decade.

Still, profits will not approach the levels attained in the late 1990s, and profit margins will continue to be squeezed by declining prices, which hurt revenue growth. Falling prices are a result of the technological change resulting from new networks, such as Voice over Internet protocol (VoIP), that will lead to even more intense competition between cable operators, large telecoms and wireless service providers.

As well, over the medium-term, declining prices and low margins will characterize the industry. By 2008, profits are expected to be \$3.8 billion, significantly lower than the more

than \$5.5 billion in profit that the industry recorded in the late 1990s.

### **B. Ontario: Home to Canada's Largest Cluster of ICT Companies**

Ontario, Canada's largest province, is home to a dynamic cluster of innovative ICT companies. These include well-known, home-grown global giants such as Nortel Networks, Mitel Networks, Cognos, Research in Motion and Open Text. Many foreign multinationals, including IBM, Alcatel, Cisco Systems, Dell, Ericsson, Microsoft, Siemens, Motorola and McAfee, also choose to be located in the country's most prosperous province.<sup>9</sup>

Ontario's IT community includes leaders in every sector, including telecom equipment, software development and services, digital media and web, and micro electronics, as well as cutting-edge technologies like VoIP, wireless broadband and photonics.

Located in the heartland of the country, Ontario's ICT sector is a generator of jobs. More than 230,000 people work directly in our ICT industry. These workers are well-educated, enterprising and respected for their expertise in high-demand areas. Ontario's labour force is wage-competitive – the average salary for a systems analyst in Ontario is \$54,300 compared to \$72,850 in U.S. centres; a telecommunications specialist in Ontario makes an average \$46,500 compared to \$57,000 in the U.S. Only one in five ICT workers in Ontario is covered by a collective bargaining agreement.<sup>9</sup>

Looking to the future, it's important for the ICT industry, that Ontario produces a steady supply of industry-ready workers,

**Ontario's ICT industry is wide ranging, innovative and undertakes leading-edge research and development. With sales of more than \$40 billion in products and services<sup>13</sup> annually the ICT sector benefits from Ontario's position as the economic engine of the country. Ontario's broad manufacturing base and strong local and regional markets have created a dynamic powerhouse of a province: Ontario's GDP is the largest in Canada, accounting for over 40 per cent of Canada's GDP.<sup>14</sup>**

## Fast Facts

### R&D credits:

- Ontario provincial and federal tax credits can cut the after-tax cost of a \$100 R&D expenditure to \$40.24
- The Ontario government has earmarked an additional \$230 million for R&D over the next four years and it will be matched by \$345 million in federal government and private sector funding
- Companies conducting R&D in Ontario earn a tax credit on every dollar they spend on eligible R&D, including capital equipment and overhead, neither of which is eligible for U.S. federal tax credits
- R&D deductions can be carried forward indefinitely
- An Ontario corporation can claim R&D tax incentives even if its R&D costs are covered, in whole or in part, by a foreign corporation or government

Source: Ontario's ICT Industry, Programmed for Success

through a well-established education infrastructure that includes:

- 44 universities and colleges with thousands of students enrolled in degree and certificate programs in computer sciences and engineering.
- An extensive and focused system of co-op and internship programs.
- Industry participation in shaping programs.
- Thousands of researchers at 20 universities and 24 colleges conducting research in every area of ICT, including leading-edge technologies such as photonics, nanotechnology, VoIP and wireless broadband.

### C. GTA: The ICT Capital of Canada

The Greater Toronto Area (GTA) – which includes Mississauga – is the ICT capital of Canada, and ranks third in North America, behind San Francisco and New York. In fact, the GTA is home to the largest concentration of 3,362 medium and large private ICT companies in Canada. In 2002, the GTA ICT industry generated \$32.5 billion in revenues, with 19 per cent being exported.<sup>11</sup>

The GTA's ICT cluster has attracted sector business leaders. Internationally recognized companies such as Microsoft, Xerox Canada, ATI Technologies, Bell Canada, CGI Group, EDS Canada, Oracle Canada, IBM Canada, Celestica, Nortel Networks, Microsoft Canada, IMAX, Alias, Rogers, Hewlett-Packard Canada, Hummingbird Communications, Siemens Canada, are all located within the GTA.

By utilizing innovative thinking and strategies, the GTA's ICT firms are making technological advances in e-health, e-training, and e-banking. Multimedia is of one of the largest and fastest-growing ICT markets in North America. More than 800 interactive digital media companies in the GTA contributed nearly \$2 billion in sales to the region's GDP in 2002.

### Lower costs attract ICT companies

According to a study conducted by E&B Data, there are a number of major features of the GTA that attract the ICT sector: a population of 5.9 million people, a large skilled labour force, and massive road and telecommunications network infrastructure.

<sup>9</sup> Source: Ontario's ICT industry, Programmed for Success

<sup>10</sup> Source: Canadian Economic Observer, May 2005

<sup>11</sup> Greater Toronto Information and Communications Technologies (ICT) Industry Profile 2004

In addition, the 2004 KPMG study established that the GTA has some of the lowest costs in the G7 for software development, and outperformed a number of well-established U.S. locations. Labour costs are 12 to 13 per cent lower in the GTA compared to U.S. locations.<sup>12</sup>

The following figure demonstrates the GTA's cost effectiveness in the various ICT sub-sectors. One example of a major cost advantage can be found in Research & Development product testing, where the GTA has a cost advantage of 18.7 per cent relative to the U.S.

Employment data and the GTA's education infrastructure show the interrelationship between high-quality educational institutions and skilled workers.

- The GTA – with an ICT labour force that numbers 185,000 – has the third-highest ICT employment in North America, behind only San Francisco and New York
- The university and college system produces an additional 7,000 ICT-related graduates every year
- Overall, 148,000 jobs are held within 3,362 ICT facilities, including more than 300 foreign-owned establishments
- Educational institutions include: University of Toronto, York University, Ryerson Polytechnic University, University of Ontario Institute of Technology, Sheridan College, Seneca College, Centennial College, Humber Institute of Technology & Advanced Learning, George Brown College<sup>13</sup>

Figure 2

**THE GTA'S COST-EFFECTIVENESS, COMPARED TO THE U.S. (100%)**

Source: 2004 KPMG's Competitive Alternatives Study, [www.competitivealternatives.com](http://www.competitivealternatives.com)

INDUSTRY	OPERATION	INDEX RATING (U.S. = 100.0)	% COST ADVANTAGE RELATIVE TO U.S.
<b>Manufacturing</b>			
Electronics	Electronics Assembly	94.9	5.1%
Medical Devices	Medical Device Manufacturing	96.3	3.7%
Precision Manufacturing	Precision Components	93.0	7.0%
Telecommunications	Telecom Equipment	96.9	3.1%
<b>Research &amp; Development</b>			
Product Testing	Electronic Systems Development & Testing	81.3	18.7%
<b>Software</b>			
Software Design	Advanced Software	90.2	9.8%
Web & Multimedia	Content Development	91.4	8.6%
<b>Corporate Services</b>			
Back Office/Call Centres	Shared Services Centre	95.1	4.9%

<sup>12</sup> Source: Crawford, Mark. (October, 2004) Greater Toronto. Area Development Magazine, 58-62

<sup>13</sup> Source: Greater Toronto Information and Communications Technologies (ICT) Industry Profile 2004

Figure 3

**GTA ICT INDUSTRY OVERVIEW**

Source: E&B DATA. Greater Toronto Information and Communications Technologies (ICT) Industry Profile 2004.

SECTOR	EMPLOYMENT		FACILITIES		REVENUES (M\$)		EXPORTS (M\$)	
					MIN	MAX		
Manufacturing	28,000	19%	268	8%	6,250	7,250	3,600	47%
Development	48,000	33%	1,303	39%	5,250	6,000	1,200	15%
Services	64,000	43%	953	28%	19,000	22,000	1,050	10%
Not Classified	8,000	5%	838	25%	2,000	2,250	350	19%
<b>Total</b>	<b>148,000</b>	<b>100%</b>	<b>3,362</b>	<b>100%</b>	<b>32,500</b>	<b>37,500</b>	<b>6,200</b>	<b>100%</b>

Figure #4 below indicates the numbers and breakdown of ICT specialists in the GTA.

Figure 4

**NUMBER OF ICT SPECIALISTS IN THE GTA, 2000**

Source: E&B DATA, Greater Toronto Information and Communications Technologies (ICT) Industry Profile 2004

OCCUPATION	NUMBER OF SPECIALISTS
Analysts	28,630
Programmers	22,400
ICT Technicians	18,920
ICT Engineers	15,965
ICT Managers	11,925
ICT Designers	8,245

**Education Infrastructure**

Educational institutions play a key role in the success of this key sector since, in addition to training the workforce, they are also frequently involved in research and development. Figure #5 provides an outline of the ICT educational programs provided by universities and colleges in the GTA.

Figure 5

**NUMBER OF ICT-RELATED PROGRAMS IN GTA**

Source: E&B DATA, Greater Toronto Information and Communications Technologies (ICT) Industry Profile 2004

**Universities**

University of Toronto	23
York University	12
Ryerson University	8
University of Ontario	1

**Total University-Level programs 44**

**Colleges**

Centennial College	7
Durham College	6
George Brown College	6
Sheridan College	6
Humber College	6
Seneca College	5
Ontario College of Art & Design	3

**Total College-Level programs 39**

ICT companies in the GTA can also take advantage of the availability of graduates from a number of additional educational institutions throughout Southern Ontario, including the University of Waterloo; University of Western Ontario in London; and McMaster University, located in Hamilton.

### **GTA Growth Highlights**

The following highlights present various observations about each ICT sub-sector's growth, as cited by the *Greater Toronto Information and Communications Technologies (ICT) Industry Profile 2004*:

- Although the Manufacturing sub-sector has suffered important losses since 2001, with 46 per cent of facilities having seen declines in their employment, the situation has now changed. Of the facilities surveyed, 63 per cent of the facilities expect to grow as fast as the economy in the current economic cycle (2004-2007) and 25 per cent expect to grow even faster. In addition, 41 per cent are anticipating new investments within the next twelve months.
- The Development sub-sector has made up for its losses during the recent downturn and is now set for a period of high growth with 46 per cent of facilities expecting faster-than-average growth, and 70 per cent anticipating investments in the current year.
- The Services sub-sector has not wholly recuperated from the downturn, but does have positive forecasts with 95 per cent of firms expecting to grow at least as fast as the GTA economy in the next five years.



## Mississauga: A Hotbed of ICT Activity

A location quotient analysis helps determine the relative concentration of the ICT sector in Mississauga's economy in relation to other geographic areas.

Mississauga's overall location quotient for the ICT economy, compared to Canada, increased from 1.83 in 2001 to 2.67 in 2004. Therefore, ICT industries were 267 per cent more concentrated in Mississauga than in Canada as a whole.

Compared to Ontario, ICT industries were 219 per cent more concentrated in Mississauga than in Ontario as a whole. Mississauga's overall location quotient for the ICT economy, in relation to Ontario, increased from 1.47 in 2001 to 2.19 in 2004.

An increasing location quotient, shows that Mississauga is increasing at a faster pace when compared to either Canada or Ontario for the ICT industry.

### A. Mississauga's Ranking in Canada

Mississauga's ICT sector represents the fourth largest cluster in Canada, and forms an integral part of the largest cluster in Canada, the Greater Toronto Area's ICT sector.

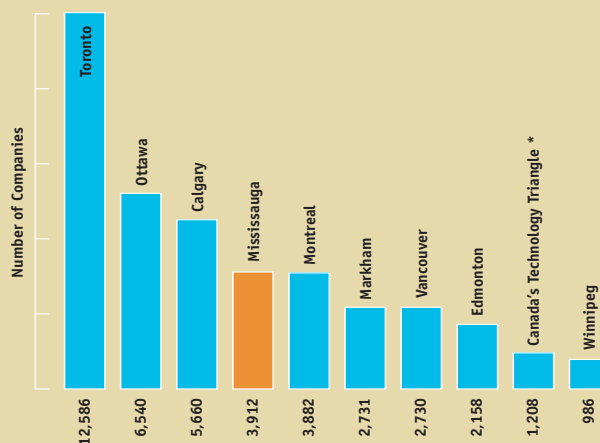
With an impressive 3,912 businesses and 37,016 employees, the strength of the Mississauga sector can be seen in its growth over the last ten years. The ICT employment represents more than 9 per cent of Mississauga's

Figure 6

#### TOP 10 ICT CLUSTERS IN CANADA

Source: Canadian Business Patterns, December 2004, Statistics Canada

\*Canada's Technology Triangle includes the cities of Kitchener, Waterloo, and Cambridge



When Xerox established its Research Centre of Canada (XRCC) in 1974, it charged the GTA-based facility with the global mission for materials development. It was a big responsibility, but XRCC stepped up to the plate and delivered. With more than 960 patents to its credit – and counting – XRCC has been a research powerhouse for Xerox. The centre’s 125 researchers represent just 2.5% of Xerox’s worldwide research staff, but they hold about 10% of the company’s patents. “Our success all comes down to people,” says XRCC Director Hadi Mahabadi, noting that Xerox is the only company among its competitors to have a true research centre in Canada. “We’ve been able to attract the best scientists and engineers from Canada and around the world and keep them here,” he says. “That diversity is a huge competitive advantage when you’re making products for the worldwide market.” Adds Dr. Mahabadi, “XRCC is located close to a number of top-notch universities and we’ve also benefited from collaborating with them.”

Xerox Research Centre of Canada

total employment. The GDP (1997 \$) contribution to the Mississauga region in 2004 by the ICT sector was estimated at \$4.87 billion or almost 16 per cent of Mississauga’s GDP (1997 \$), estimated at \$30.55 billion.

**B. Mississauga ICT Sector’s GDP: Overall Contribution Increases**

Since 2001, the overall contribution of the ICT sector to the City of Mississauga’s GDP has

increased by 50 per cent. In 2001, the sector contributed 10.73 per cent toward Mississauga’s total GDP. In 2004, this sector’s contribution was markedly higher, accounting for 15.94 per cent of Mississauga’s total GDP.

Between 2001 to 2004, the ICT sector grew at a faster rate than the general Mississauga economy. The ICT sector grew by 62 per cent; in comparison, the overall Mississauga GDP grew by 9 per cent.

Figure 7

**ICT SECTOR’S GDP GROWTH (\$BILLIONS)**

Source: City of Mississauga, Economic Development Office



## Mississauga's ICT Sector Employment

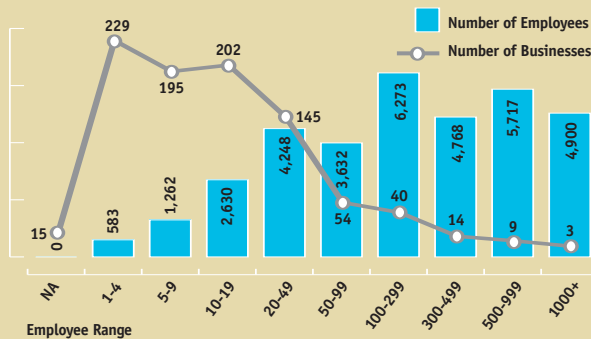
### A. Cluster Distribution by Number of Employees

Figure 8

#### MISSISSAUGA ICT SECTOR DISTRIBUTION BY NUMBER OF EMPLOYEES

Source: Employment Database, Economic Development, City of Mississauga

Note: This includes ICT businesses within industrial and commercial land uses only.



The Distribution of the sector by the range of employees reveals that the ICT industry is no different in its mix, than any other sectors studied previously. (Refer to Figure #8)

- 71 per cent of all businesses in the ICT sector consist of fewer than 20 employees; and employ 13 per cent of employees of the total employment in the sector
- 29 per cent of all ICT businesses have 20 or more employees
- 7 per cent of all ICT businesses with 100+ employees account for 64 per cent of the ICT sector's employment in Mississauga

### B. Growth in ICT Employment Over the Last Decade

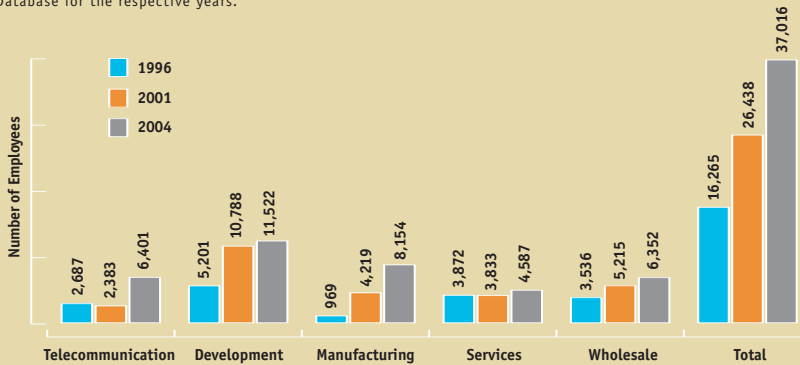
Since 1996, the Mississauga ICT sector has added an average of 2,594 jobs per annum to the city's economy. ICT employment grew from 16,265 in 1996 to over 37,000 in 2004, an increase of approximately 128 per cent over 8 years.

Between 1996 and 2004, the Manufacturing sub-sector grew by an impressive 741 per cent. During the same period, the Telecommunication, Development and Wholesale sub-sectors, also achieved a strong growth rate of 138 per cent, 122 per cent and 80 per cent respectively.

Figure 9

**MISSISSAUGA ICT EMPLOYMENT GROWTH BY SUB-SECTOR**

Source: Extrapolated data based on Statistics Canada, Canadian Business Patterns and City of Mississauga's Employment Database for the respective years.



Mississauga's ICT sector posted a growth in its employment over the last three year period (2001 through to 2004), in spite of the fact that this was a period in which the ICT industry experienced a major global recession. Employment in the Mississauga ICT sector grew from 26,438 in 2001 to 37,016 in 2004, an increase of 40 per cent.

In the last three years, employment in the Telecommunications sub-sector led the way by posting an increase of 169 per cent over 2001. The Manufacturing sub-sector followed next, posting the second largest increase at 93 per cent, with the Wholesale sub-sector recording a 22 per cent increase. The Development and Services sub-sectors, posted a growth of 7 per cent and 20 per cent, respectively.

**C. Sector Composition**

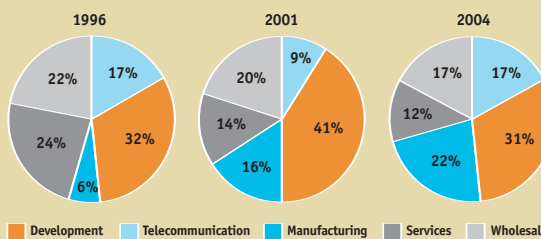
A look at how the various sub-sectors of the ICT sector account for the total employment within the sector, provides some interesting results of how the Mississauga ICT sector has developed over the years.

- The Development sub-sector has consistently been the largest employment contributor to the sector in Mississauga, through the period 1996 to 2004
- The Manufacturing sub-sector has changed significantly by increasing its employee share from 6 per cent in 1996 to 22 per cent in 2004
- The Services sub-sector accounted for 24 per cent of the labour force in the sector in 1996 and has since then declined to 12 per cent in 2004

Figure 10

**MISSISSAUGA ICT SECTOR COMPOSITION (EMPLOYMENT PERCENTAGES)**

Source: Employment Database, Economic Development, City of Mississauga





## Mississauga: A Leading Canadian ICT Cluster

Mississauga, with our solid commitment to the health and vitality of our vibrant ICT sector, is located in the heart of Canada's fastest-growing and largest ICT cluster.

We recognize that the ICT sector is an enabling industry; the innovative products and services developed by our ICT sector benefit the Mississauga business community at large. Clearly, the ICT sector – by providing leading-edge products and services – enables other industries to perform better by creating the tools to enhance the manufacturing, delivery, sales and customer service processes.

Enhanced systems generate lower costs and increases profits, which prompts other competitors to enter the market. The increase in competition, in turn, generates a demand for better and for more effective processes and ICT sector products.

### A. Competitive Advantages

#### I. Accelerating Technology

In a knowledge-based economy, the links between economic success and education are integral. Mississauga recognizes that the ability to draw on a pool of employees with the necessary skills to help ICT companies compete globally is a prime concern.

For this reason, Mississauga continuously champions efforts to intensify innovative activity. We are an integral part of the Western

Greater Toronto Area Convergence Centre (WGTACC) – a network of business, education, institutions and government partners, working together to accelerate new business opportunities and innovation.

To support businesses in the IT, advanced manufacturing and biotechnology industries, the City of Mississauga and its partners established the Mississauga Technology Business Accelerator (MTBA). This centre of innovation enables entrepreneurs to accelerate their businesses in a collaborative environment, with ready access to business, professional and academic resources. This unique organization assists companies with infrastructure and services, such as business growth mentoring programs, propelling these businesses to development and greatly improves their chances for long-term success.

Mississauga fosters business education partnerships that contribute to a superior education climate and an internationally successful business community. The City recently made an investment in support of the Communication, Culture and Information Technology (CCIT) program expansion plans of the University of Toronto at Mississauga (UTM) campus. The CCIT facility houses an interdisciplinary program for the study of the art and science of human communication, how communication builds knowledge and creates culture and how it impacts the way humans

communicate. This state-of-the-art facility is wired and equipped for the most advanced teaching technology and instructional support.

The Mississauga Economic Development Advisory Council (EDAC) fosters ongoing, creative business and education partnerships. Mississauga's goal is to facilitate an ever increasing number of partnerships between ICT companies and universities. Approximately 100 R&D centres have been identified within GTA universities, community colleges and other public institutions such as Bell University Laboratories.

The ICT industry thrives on partnerships and networks. The Ontario Research and Innovation Optical Network (ORION), which facilitates research among universities, colleges and research centres in Ontario, and through connections to Canada's National Research and Innovation Network (CA\*net 4), enables collaboration with researchers around the world. In addition, Communications and Information Technology Ontario (CITO) and Photonics Research Ontario (PRO) – divisions of Ontario Centres of Excellence Inc. – work with industry and, university and college research centres to move new products and technologies from the lab to the marketplace.

These partnerships have the potential to create new and thriving research facilities that attract highly-skilled employees.

## II. Diverse and Dynamic Business Community

- Mississauga's 49,000-strong business community is diverse and includes leading clusters in the ICT, automotive, aerospace, biomedical, and financial services.
- Mississauga, composed of more than 3,912 ICT companies, is part of the largest ICT cluster in Canada, the Greater Toronto Area (GTA) ICT cluster – offering potential for ongoing convergence of ideas and resources and represents significant business to business opportunities.
- Mississauga's Biomedical cluster is the third largest cluster in Canada and, is an integral part of the GTA biomedical community. The Mississauga ICT sector continues to be a major catalyst for growth, powering advances in the Bio sector and synergies for further innovation.
- Mississauga is also home to Canada's third largest Financial, Insurance and Real Estate (FIRE) cluster. Our location, adjacent to the financial capital of Canada, allows for easy access to various venture capital and other financing options that invest in ICT sector

**In today's high-tech world, governments and corporations are increasingly concerned about ensuring that their information is secure – and more and more of them are turning to Certicom for help. That's because the Mississauga-based company sets the standard for cryptography. Its products and services are used by more than 300 industry leaders, including Motorola, Oracle, Research in Motion, Terayon, Texas Instruments and Unisys. Certicom's technology is also used by the United States National Security Agency (NSA), to protect the U.S. government's most sensitive information. A spin-off of the University of Waterloo, Certicom moved its headquarters to Silicon Valley in 2000 to grow the business, but by 2002 the company had moved back to Ontario to improve its operational efficiencies and take advantage of the province's lower operating costs. "Our patented technology has made us a leader in strong, efficient cryptography," says President and CEO Ian McKinnon. "Being headquartered in Mississauga has strengthened our ties to the University of Waterloo and customers like Research in Motion, while giving us access to some of the world's best mathematicians and cryptographers – and that's key to our growth strategy."**

Certicom

**Mississauga shares a common language, similar business culture and ICT laws with the U.S. We offer direct access to North America's vast, and quickly growing, affluent (\$12.3 trillion GDP), 420 million consumer base.**

firms and spin-off businesses. The GTA is home to the Toronto Stock Exchange, the sixth largest stock exchange in the world, with a trading volume of \$1 trillion.

- The City is the location of choice for many world-renowned corporations who operate their head office and facilities here. More than 50 of the Fortune 500 U.S. companies chose Mississauga as the site of their Canadian head office. Canadian companies realize the advantages of locating in Mississauga: over 40 of the country's Top 500 corporations are headquartered here. Mississauga ranks as the fourth largest head office centre in the country.<sup>14</sup>

### **III. Huge Accessible Market: Canada and the U.S. Provide Vast Market**

The ICT sector benefits from Mississauga's location in the heart of Canada's major consumer and industrial market. As Canada's sixth largest city, with a population of 695,000, we are strategically located in the hub of Ontario's thriving Greater Toronto Area (GTA).

The consumer market base within the immediate area surrounding Mississauga is large: the Toronto Census Metropolitan Area (CMA), including Mississauga, has a population of approximately 4.7 million people.

Mississauga's proximity to the booming markets in the United States is a key attraction for ICT companies choosing to locate here. Mississauga is only 90 minutes from the U.S. border, which puts local companies in touch with a vast market of 164 million consumers within a day's drive. Our proximity to the U.S. provides a shared time zone, and reduced cost of time and travel for outsourcing and delivery, as compared to overseas ventures.

In addition, Mississauga ICT companies benefit from the city's membership in the North American Free Trade region, where products move freely across borders. We offer direct access to North America's vast, and quickly growing, affluent (\$12.3 trillion GDP), 420 million consumer base.

We are located at the centre of one of the most important – and accessible – transportation hubs in North America. Mississauga is home to Pearson International Airport – our business community enjoys ready access to the largest and busiest airport in Canada. We are only a two-hour flight from major U.S. centres such as New York City and Boston and a 5<sup>1/2</sup> half hour flight from San Francisco.

We are the only Canadian city to be serviced by seven major highways. We operate on Eastern Time-which means, at most, a three-hour time difference with the continental U.S.

### **IV. Intellectual Capital**

Mississauga is surrounded by some of Ontario's finest post-secondary institutions, offering a wide variety of educational opportunities.

These include well-recognized facilities such as the University of Toronto at Mississauga (UTM), a known research-based university; and a campus of the Richard Ivey School of Business located right here in Mississauga. In addition, there are 10 major universities and 11 community colleges within commuting distance.

- The City of Mississauga is part of the largest labour force market in Canada, the Greater Toronto Area (GTA). Within the GTA, employees can be recruited from a large employment base of 2.9 million people.
- In Mississauga alone, there are more than 410,000 employees – with over 82 per cent

<sup>14</sup> Source: National Post, Financial Post, Top 500 Canada's Largest Corporations, June 2005

## University of Toronto at Mississauga (UTM), Communication, Culture and Information Technology (CCIT)

- In the knowledge economy, the links between economic success and education are clear. Mississauga has recognized that the availability of employees with the right skills is the primary competitive economic development factor in today's global environment.
- Mississauga fosters business education partnerships that contribute to a superior education climate and an internationally successful business community; the City recently made an investment in support of the CCIT program at UTM
- The CCIT facility houses an interdisciplinary program for the study of the art and science of human communication, how communication builds knowledge and creates culture and how it impacts the way humans communicate. This state-of-the-art facility is wired and equipped for the most advanced teaching technology and instructional support.

of our resident labour force having post secondary education.

- The Toronto CMA, which includes Mississauga, attracts the highest percentage of immigrants into Canada.<sup>15</sup>

### External Recruitment Success

The Software Human Resource Council's (SHRC) study, *The Information Technology (IT) Labour Market in Canada*, reported on external recruitment activities.

As Figure 11 shows, IT businesses in the GTA (Toronto CMA) have the highest success of employee recruitment from within the region, compared to any other region in Canada. Therefore, an IT business that locates in Mississauga will be able to find the talent they need right here in the GTA.

### V. Cost-Effectiveness:

#### Competitive Costs in Mississauga

Mississauga works hard to build and foster a vibrant business community: we maintain low costs for property taxes, services and utilities. These costs are noticeably competitive, ranking among the lowest of the major cities in Canada.

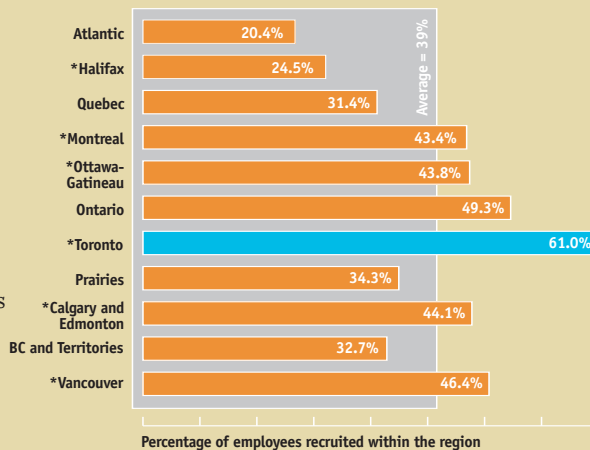
- Our property taxes compare favourably with other major Ontario cities (Figure 12).
- Mississauga's tax levy per capita is low

Figure 11

#### IT RECRUITMENT WITHIN EACH REGION EXCLUSIVELY

Source: The Information Technology (IT) Labour Market in Canada: Results From the National Survey of IT Occupations, Software Human Resource Council (SHRC), April 2005

\* CMA regions



compared to most other cities; the net levy per capita in 2004 was \$827, compared to the average of \$955 and a high of \$1,398.

- Mississauga tax rates are competitive compared to GTA municipalities with populations over 100,000.
- In every property class, Mississauga's taxes are at the middle to low end of the scale.<sup>16</sup>

<sup>15</sup> Source: Statistics Canada, 2001 Census



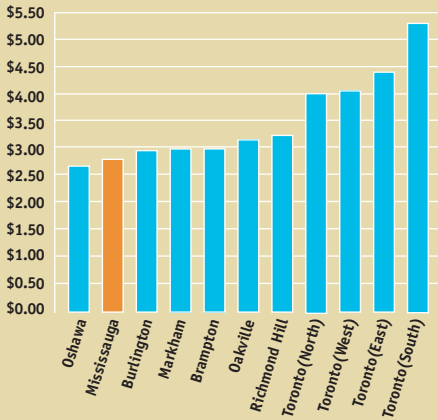
Figure 12

**PROPERTY TAXES IN THE GTA FOR PRIME OFFICE BUILDINGS**

**PROPERTY TAXES IN THE GTA OVER 100,000 POPULATION**

Tax cost listed in \$ per sq ft

Source: BMA Municipal Study 2004, BMA Consulting Inc.



Compared to the U.S., Mississauga, as part of the Greater Toronto Area (GTA), was found by KPMG’s *Competitive Alternatives Study (2004)* as being approximately 7 per cent lower in overall business costs; and 5 to 7 per cent lower on manufacturing costs. In research and development and software development, Mississauga’s cost advantage increased to nearly 20 per cent and 10 per cent respectively.

Mississauga shares a time zone with the U.S. Hence, the cost of travel and time taken to travel is negligible when compared to businesses that outsource to Asia and service clients in the U.S.

Our advanced telecommunications infrastructure provides seamless voice, video and data links with major U.S. carriers at a substantially lower cost than in the U.S.<sup>16</sup>

Mississauga’s cost advantages, to that of the U.S., can be attributed to lower cost of labour, lower cost of land and building, lower facility lease rates, lower utility costs and lower operating costs in general.

<sup>16</sup> Source: 2004 Municipal Study, BMA Management Consulting Inc.

<sup>17</sup> Source: Enersource Corporation,

<http://www.enersource.com/news/reports.htm>, 2004 Annual Report

**VI. Access to Capital**

Mississauga is home to the third largest Financial, Insurance and Real Estate (FIRE) cluster in Canada. Together with the City of Toronto’s FIRE cluster, we are the largest in Canada and one of the largest in the world. Our location, within the financial capital of Canada, allows easy access to various venture capital firms that invest in the ICT sector.

The CVCA – Canada’s Venture Capital & Private Equity Association – represents the majority of private equity companies in Canada, with over 1,000 members. CVCA members have over \$50 billion in capital under management. For more information, visit [www.cvca.ca](http://www.cvca.ca).

The Business Development Bank of Canada (BDC) provides small and medium-sized businesses with flexible financing, affordable consulting services and venture capital. BDC supports the needs of entrepreneurs at every stage of growth. For more information, visit [www.bdc.ca](http://www.bdc.ca).

**VII. Government Programs and Incentives**

ICT companies in Ontario benefit from some of the most generous R&D incentives in the world. Through federal and provincial tax incentives and credits, R&D performers earn a tax credit on every dollar spent on eligible R&D, including capital equipment and overhead. Together, these incentives can stretch research dollars by 20 per cent to 50 per cent.

**R&D incentive highlights**

- Provincial and federal tax credits can cut the after-tax cost of a \$100 R&D expenditure to \$40.24
- A 100 per cent deduction of all eligible R&D costs, including capital equipment
- A 20 per cent investment tax credit on scientific research and experimental development expenditures
- For small-sized, Canadian controlled private corporations, the investment tax credit increases from 20 per cent to 35 per cent – on as much as the first \$2 million of R&D

- The investment tax credit can offset 100 per cent of the federal tax payable in the year, or can be carried back 3 years or forward 10 years
- The Ontario government has earmarked an additional \$230 million for R&D for 2005-2009, to be matched by a further \$345 million in federal government and private sector funding
- An Ontario corporation can claim tax incentives even if its R&D costs are covered, in whole or in part, by a foreign corporation or government
- R&D deductions can be carried forward indefinitely

*It's clear: Federal and provincial incentives are spurring performance – R&D expenditures in the City of Mississauga approached \$1 billion in 2003. As part of the GTA, we are in the midst of a critical mass of research activity; we attract the best and brightest minds from all over the world.*

### **VIII. Telecommunications and Infrastructure**

Mississauga's highly-developed telecommunications network and infrastructure provide additional reasons for ICT companies to choose Mississauga for their business endeavours.

#### **Telecommunications Network**

The ICT sector benefits from Mississauga's well-spread and highly-developed telecommunications network and infrastructure. Existing fibre optic networks are rapidly evolving to leading-edge technologies to provide survivability. The network services all business parks, and offers bandwidth scalability on a simplified service portfolio. Mississauga is well covered by several wireless service providers, offering 100 per cent integrated voice and data network services.

#### **Energy Distribution:**

Enersource Hydro Mississauga, the regulated electricity distribution affiliate of Enersource Corporation, has delivered electricity reliably throughout Mississauga since 1917. The company, owned 90 per cent by the City of Mississauga, is Ontario's only public-private

partnership in the local electricity distribution sector. Enersource is the fourth largest local distribution company in Ontario.

Enersource's reliability record is stellar. In 2004, the company averaged 22.2 minutes annual outage time per customer. This reliability is far ahead of most Canadian and U.S. large urban utilities. Reliability such as this saves the Mississauga community some \$60 million each year. Due to the relatively low cost of power and high reliability of service, Enersource Hydro Mississauga is helping to attract investment and jobs to the area.

### **Transportation Infrastructure**

Mississauga is located at the centre of one of the most important – and accessible – transportation hubs in North America. Mississauga is home to Pearson International Airport – our business community enjoys ready access to the largest and busiest airport in Canada; and is serviced by an extensive road and rail network.

### **IX. A Great Place to Live:**

#### **Mississauga has it All!**

For the fifth year in a row, Mississauga has been cited as the "Safest City in Canada" as documented in a 2004 independent national study<sup>18</sup> based on crime statistics from major cities across the country.

Highly-skilled employees gravitate to cities – such as Mississauga – that can offer individuals the amenities, schools, colleges and moreover, a healthy and safe environment in which to live.

Mississauga is proud of our lifestyle which features:

- Strong communities
- First-class schools, quality housing, excellent health and medical services
- Family-oriented sports, leisure and arts facilities
- More than 400 parks with beautiful natural areas
- Magnificent waterfront on the shores of Lake Ontario

<sup>18</sup> Source: CNW Group, [www.newswire.ca/en/releases/archive/December2004/22/c8159.html](http://www.newswire.ca/en/releases/archive/December2004/22/c8159.html)

## Mississauga: Positioned for Growth

### Mississauga Growth Analysis, Highlights and Forecast

The dynamics of our extraordinary environment and business community has spurred exceptional growth in the ICT sector in Mississauga.

We are an integral part of the Greater Toronto Area (GTA) ICT community, which – including Mississauga – consists of the largest ICT cluster in Canada. We rank among the largest such clusters in North America.

Our ICT sector is experiencing rapid growth: The number of businesses has increased from 1,795 in 1996 to 3,912 in 2004, an increase of approximately 118 per cent.

Since 1996, the Mississauga ICT sector has added an average of 2,594 jobs per annum, growing from 16,265 in 1996 to over 37,000 in 2004, an increase of approximately 128 per cent over 8 years.

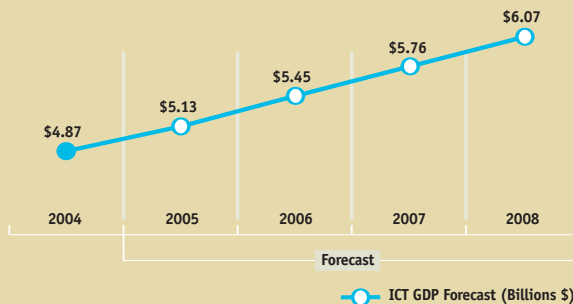
Between 1996 to 2004, the strongest employment growth occurred in the Manufacturing sub-sector with an impressive rate of 741 per cent with 8,154 employees. The Development sub-sector accounted for the largest portion (31 per cent) of employment in the ICT sector with 11,522 employees in 2004.

The sector's positive contribution to the Mississauga region is highlighted by its 2004 real GDP contribution of an estimated \$4.87 billion.

Figure 13

#### MISSISSAUGA ICT GDP GROWTH FORECAST (\$ BILLIONS)

Source: City of Mississauga, Economic Development Office. (Based on The Conference Board of Canada's Growth forecast of Canada's ICT sector, completed on October 6, 2004) Note: GDP \$ 1997



### Mississauga's ICT Sector GDP and Employment is Forecasted to Grow

Based on the Conference Board of Canada's growth forecast of Canada's GDP and employment, Mississauga's ICT sector's real GDP is forecasted to grow from \$4.87 billion at the end of 2004, to \$6.07 billion at the end of 2008, achieving an average growth rate of more than 6 per cent annually (Figure 13).

In the same period, employment within the sector is forecasted to grow from 37,016 (2004) to 40,917 (2008), achieving an average growth rate of 2.63 per cent annually.

This growth analysis is fairly conservative,

especially when the location quotient analysis is factored into the equation. The location quotient shows that the concentration of the ICT sector in Mississauga, compared to Canada, grew from 1.83 in 2001 to 2.67 in 2004. This means that Mississauga's ICT industries were 267 per cent more concentrated in Mississauga than in Canada as a whole.

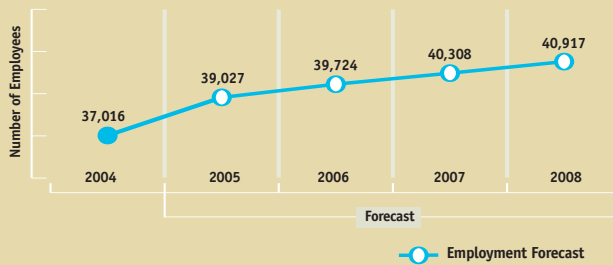
*It is clear that the strong and expanding Mississauga ICT sector allows for sharing of resources and ongoing opportunities for convergence. This cluster will continue to be a major catalyst for growth, powering advances in all sectors and synergies for further innovation.*

Figure 14

#### MISSISSAUGA ICT EMPLOYMENT FORECAST

Source: City of Mississauga, Economic Development Office.

(Based on The Conference Board of Canada's Growth forecast of Canada's ICT sector, completed on October 6, 2004)





## Bibliography

- Adkison, Jeff. (Senior Associate, Global Consulting Group, Jones Lang LaSalle) Offshoring to Canada, *Area Development Magazine*, Retrieved May 17, 2005, from [www.locationcanada.com](http://www.locationcanada.com)
- Branham Group, “Canada’s Top 300”, *Backbone Magazine*, March 2005, [www.backbonemag.com](http://www.backbonemag.com)
- Business Expansion Journal, “Sounding Board: Top Siting Factors”, October 2004, [www.bxjonline.com](http://www.bxjonline.com)
- Canada’s Venture Capital & Private Equity Association, “Venture Capital Investment Activity by Investee Location”, 2004, [www.cvca.ca](http://www.cvca.ca)
- City of Mississauga, Economic Development Office, Mississauga Employment Database, 2005
- Deloitte, “Technology, Media & Telecommunications (TMT) Trends: Predictions, 2005”, [www.deloitte.com](http://www.deloitte.com)
- Ernst & Young, “Fast Forward, Technology Propels Media and Entertainment CEPs into the Future”, 2004, [www.ey.com/tce](http://www.ey.com/tce)
- Greater Toronto Marketing Alliance (GTMA), “Greater Toronto Information and Communications Technologies (ICT) Industry Profile 2004”, [www.greatertoronto.org](http://www.greatertoronto.org)
- Halcyon Business Publications Inc., “Canada: The Best Place in the World to Do Business”, *Area Development Magazine*, Retrieved May 17, 2005, from [www.locationcanada.com](http://www.locationcanada.com)
- Industry Canada, “Information and Communications Technologies Statistical Overview”, Retrieved June 12, 2005, from [http://strategis.ic.gc.ca/epic/internet/inict-tic.nsf/en/h\\_ito6155e.html](http://strategis.ic.gc.ca/epic/internet/inict-tic.nsf/en/h_ito6155e.html)
- KPMG, “Competitive Alternatives G-7 2004 Edition”, [www.competitivealternatives.com](http://www.competitivealternatives.com)
- Province of Ontario, “Ontario’s ICT Industry, Programmed for Success”, 2005, [www.2ontario.com](http://www.2ontario.com)
- Province of Ontario, “New Investments in Ontario: Location of Investments”, Retrieved May 15, 2005, from [www.2ontario.com/edp/home.asp#locationinvest](http://www.2ontario.com/edp/home.asp#locationinvest)
- Software Human Resource Council (SHRC), “The Information Technology (IT) Labour Market In Canada: Results From the National Survey of IT Occupations”, April 2005, [www.shrc.ca](http://www.shrc.ca)
- Statistics Canada, “Employment, Earnings and Hours, 2002”, Catalogue number 72-002-X1B
- Statistics Canada, “Employment, Earnings and Hours, 2005”, Catalogue number 72-002-X1B
- Statistics Canada, “Gross Domestic Product by Industry”, Catalogue number 15-001-X1E, December 2004
- Statistics Canada, *The Daily: The Information and communications technology sector through the boom and bust years*, March 2, 2005

Statistics Canada, "Canadian Business Patterns, Information and Communications Technologies Sector Data", 1996, 2001, 2004

Statistics Canada, "Canadian Economic Observer", Catalogue number 11-010, May 2005

Strategis, "Information and Communications Technologies Statistical Overview", April 2005,  
<http://strategis.ic.gc.ca/ictso>

The Conference Board of Canada, 656-04, "Canada's Information Technology and Communications Industry Industrial Outlook", [www.conferenceboard.ca](http://www.conferenceboard.ca)

Toronto Economic Development, "Information Technology (IT) & New Media", [www.toronto.ca](http://www.toronto.ca)

# Mississauga ICT Company Profiles

## 1. Mississauga's Top 25 ICT Companies by Employment

Accenture Inc.  
ADP Canada  
Bell Canada  
CGI Information Systems & Management Consultants  
Canon Canada Inc.  
Cedara Software Corp.  
Chubb Security Systems  
Creation Technologies Inc.  
Delphax Ltd.  
Financial Models Company (FMC) Inc.  
GE Information Technology Solutions  
Hewlett-Packard (Canada) Ltd..  
IMAX Corp.  
Ingram Micro Inc.  
Mark IV  
Microsoft Canada Co.  
NexInnovations Inc.  
Oracle Corporation Canada Inc.  
Pision Teklogix Inc.  
Rand, A Technology Corp.  
Redknee Inc  
Siemens Business Services Canada Inc.  
Symcor Inc.  
Tech Data Canada Inc.  
Xerox Research Centre of Canada

## 2. Mississauga ICT Company Profiles

The following pages feature company profiles from some of the many successful ICT companies in Mississauga.



## ADP Canada

Since business began, management at companies big and small have longed for a way to spend less time running their business, and more time building their business. By focusing on core products and services, business executives and owners free up valuable employee time often spent handling day-to-day administrative processes, such as human resources and payroll administration.

That's why today more than 50,000 companies coast-to-coast rely on ADP Canada for outsourced employer services such as human resource management, third party remittances, payroll, benefits administration, time and labour management and occupational health and safety services.

ADP continues to strengthen its position in the employer services marketplace by developing state-of-the-art hosted solutions for both payroll and human resources management, global payroll options for mid-to-large sized Canadian and global companies, and expanding its suite of outsourcing services through ADP's Comprehensive Outsourcing Services (COS).

COS combine ADP's traditional expertise in handling the data and financial transactions associated with HR, benefits, payroll and time and labour management with full service offerings such as an employee contact centre that allows employees to speak live with an ADP specialist for questions about their payroll or benefits. Since its debut in spring 2005, more than 1,100 businesses of all sizes have embraced ADP's Comprehensive Outsourcing Services.

Mississauga, Ontario acts as the host city for ADP's 75,000 square foot state-of-the-art data processing facility, the largest private sector payroll centre in Canada. ADP's facility is home to a leading edge communications system that is connected to ADP Canada's regional offices through both fiber optic and microwave cables. The Mississauga facility produces 30 million employee cheques, deposits and T4 slips per year, and approximately 500,000 deliveries are made to clients across Canada and the U.S. per year from Mississauga.

### ADP Canada Fast Facts

- Established in 1979, ADP Canada employs more than 1,800 associates across the country including 500 people in Mississauga
- ADP Canada pays more than 2.5 million wage earners (1 in 4 Canadians in the private sector)
- More than three million T4 documents are issued annually by ADP
- Over 14,000 kilometres of paper – predominantly in the form of employee paystubs – are printed per year at ADP's Mississauga data processing facility

Mississauga is also home to ADP Investor Communications, Canada's leading provider of investor communication services. Operating from two facilities totaling just under 100,000 square feet, ADP Investor Communications services Canada's mutual fund industry, 14,000 North American public corporations, and more than 100 financial institutions.





Making it simple.

### **Bell Canada**

Bell Canada, Canada's national leader in communications, provides connectivity to residential and business customers through wired and wireless voice and data communications, local and long distance phone services, high speed and wireless Internet access, IP-broadband services, e-business solutions and digital television services. Bell Canada is wholly owned by BCE Inc. For more information, please visit [www.bell.ca](http://www.bell.ca)

On April 29, 2005 Bell Canada celebrated its 125<sup>th</sup> Anniversary. Bell Canada has a significant presence in the City of Mississauga, our state of the art facility on Creekbank Drive employs approximately 4,000 employees. Bell Canada employees are active volunteers in Mississauga and we support many community events including the Bread and Honey Festival, Canada Day, Santa Claus parade and the Bell Walk for Kids Help Phone.

#### **Advantages of being in the City of Mississauga**

- Excellent access to talented labour pool
- Ease of doing business with the City – particularly during building phase for construction of new office towers
- Proximity to airport, and major highways
- Close location to key customers



## Hewlett-Packard (Canada) Co.

### About HP

HP is a technology solutions provider to consumers, businesses and institutions globally. The company's offerings span IT infrastructure, global services, business and home computing, and imaging and printing. For the four fiscal quarters ended April 30, 2005, HP revenue totaled US\$83.3 billion. Hewlett-Packard (Canada) Co. has locations across Canada, and is headquartered in Mississauga, Ontario. More information about HP Canada is available at [www.hp.ca](http://www.hp.ca).

### Benefits of being located in the City of Mississauga

- Beautiful location surrounded by woodlands that are adjacent to an environmentally protected ravine
- Close proximity to major highways and airport
- Availability of nearby public transportation
- Large, well-educated and culturally diverse talent pool in Mississauga and surrounding areas
- Home to other world-class organizations including leading IT companies
- Excellent quality of life afforded employees through convenient access to amenities including a major shopping mall, a variety of restaurants, professional theatre and other entertainment options, park and wilderness area, and a recreation centre

### Community Outreach

For many years, HP Canada has been a strong supporter of charities and schools in the communities where our employees live and work. Nowhere is there a better example of that commitment than in Peel Region where HP Canada is headquartered.

In 2004, HP Canada ran the #1 United Way fundraising campaign in the Tech and Tel Division in Peel Region and contributed \$539,700 overall to United Way agencies across Canada. This donation included employee donations and the company's dollar-for-dollar match.



### Microsoft Canada Co.

Microsoft Corporation (Nasdaq "MSFT") is the worldwide leader in software, services and Internet technologies for personal and business computing.

Microsoft Canada Co. was founded in 1985. As the Canadian subsidiary of Microsoft Corporation in Redmond, Washington, the company provides sales, marketing, consulting and local support services in French and English. From five people 19 years ago, Microsoft Canada has grown to more than 650 employees. It also has strong relationships with more than 1,000 Microsoft Certified Partners, over 50 Gold Certified Partners, 2000 Value Added Resellers and 2,600 System Builders.

Headquartered in Mississauga, Microsoft Canada has regional offices in Toronto, Vancouver, Calgary, Edmonton, Winnipeg, Ottawa, Montreal, Quebec and Halifax.

Microsoft Canada has more than \$1 billion in annual sales, with 20 per cent growth in 2003. In a 2003 KPMG/Ipsos-Reid study, Canadian CEOs voted Microsoft one of the 25 most respected Canadian corporations.

Microsoft Canada received the subsidiary of the year award in 2003 for the second time in three years. This award recognizes Microsoft Canada's commercial business in the company's Americas Region.

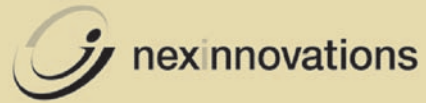
1950 Meadowvale Boulevard  
Mississauga, ON L5N 8L9 CANADA  
905.568.0434 Fax: 905.568.1527  
[www.microsoft.ca](http://www.microsoft.ca)

### NetSuite, Inc.

NetSuite, Inc. was founded in the Silicon Valley in 1998 by Oracle CEO and chairman, Larry Ellison, and his leading technology guru and NetSuite CTO, Evan Goldberg, to bring the power of integrated application suites to SMEs (small and mid-size enterprises). From the introduction of its first online accounting application in 1999, to the 2002 launch of NetSuite, to becoming the first mid-market integrated CRM/ERP/e-commerce application, the company has led the market in creating a new standard in business applications. Delivered as Web-based on-demand applications, NetSuite can reduce the cost of business applications by as much as 90 percent as there is no hardware to procure; no large, up-front license fees; and no resources required to install, maintain, or upgrade the system. And finally, the products' easy-to-use, patent-pending "dashboard" user interface provides an intelligent, role-specific portal view of the application. Headquartered in San Mateo, California, NetSuite has opened offices in Canada, the UK, Singapore and Australia. With more than 7,500 customers worldwide, NetSuite is the largest provider of online business applications in the world.

NetSuite launched its Canadian operations in Mississauga in June 2004. Much of the operations conducted out of the Mississauga office revolves around the infrastructure to support the sales operations, customer support and professional services. Today, with nearly 200 employees in Mississauga, NetSuite is one of the fastest growing companies in Canada – and is continuing its expansion.

Mississauga provides opportunities for businesses to grow and flourish. Specifically, NetSuite's decision to grow its North American operations in Mississauga was based on a number of reasons, including: 1) the Mississauga office is responsible for all of eastern North America from a sales perspective due to its close proximity to these regions – it's a 3 hour flight to just about anywhere in the eastern time zone, 2) the skills set of the workers – large university population in the area, and 3) the growing market space.



## NexInnovations

Since 1978, NexInnovations has been providing technology consulting, deployment and support expertise to organizations across Canada. More than 3,000 business and government organizations, both local and national, rely on NexInnovations to help them plan, supply, integrate and support their IT systems from small custom orders to large complex projects.

Partnered with the top IT market leaders, NexInnovations offers cost-effective, multi-vendor solutions for Desktop, Server, Storage, Software, Print and Internetworking environments including:

- Professional Consulting Services
- Technology Integration & Deployment Services
- Support Services

For over 25 years, NexInnovations has provided customers with high quality products and services. In 1996, the Company implemented an ISO 9000 Quality Management System to help deliver consistent levels of superior quality and continual improvement of business processes.

Today, NexInnovations holds ISO 9001:2000 Standard registration for all its key customer-interfacing areas: National Account Support Centre, Distribution Centre, Configuration Centre, Customer Help Desk, and Technical Services Support Operations and Logistics. The company consistently delivers customer satisfaction through quality, reliability and accuracy as acknowledged by their partners and by Canadian industry measurements.

Ranked as the number one Solutions Provider by IDC Canada and Evans Research, NexInnovations also maintains premier partnerships with technology leaders, including Cisco (Gold), HP (Platinum), IBM (Premier), Microsoft (Gold), Symantec (Enterprise Security).

With its head office in Mississauga, NexInnovations is conveniently located near its business partners, technology manufacturers, as well as logistics, transportation and airport services.

Close to all the main highways (401, 427, 407), NexInnovations is easy for visitors to access and provides several commuting options for its highly skilled and varied workforce.

**For general inquiries, please contact NexInnovations at:**

5700 Explorer Drive  
Mississauga, ON  
Canada L4W 5J3  
Toll-free: 1.866.682.5700  
Info@nexinnovations.com  
www.nexinnovations.com

## Oracle Corporation Canada Inc.

Oracle's business is information – how to manage it, use it, share it, protect it. For nearly three decades, Oracle, the world's largest enterprise software company, has provided the software and services that let organizations get the most up-to-date and accurate information from their business systems.

With the industry's widest range of enterprise software – from database, application server, and collaboration infrastructure software to enterprise wide applications and industry-specific solutions – Oracle helps organizations of all sizes better manage their information while keeping down costs.

The 2005 combination of Oracle and PeopleSoft marks a major turning point in the evolution of the software industry. The combined companies are now positioned to deliver a more competitive offering in the enterprise applications market and increase innovation with a larger applications R&D budget.

Oracle Corporation Canada Inc. was founded in 1984 and has 11 offices across the country: Victoria, Vancouver, Calgary, Edmonton, Winnipeg, Mississauga (Canadian headquarters), Ottawa, Montreal, Quebec City, Fredericton and Halifax.

An exciting and vibrant work environment, Oracle Canada has employees working across a number of areas including sales, consulting; marketing; finance; human resources; product support; and, training. The company has product development centres in Vancouver, Toronto, Ottawa and Montreal.

In addition to being the location of Oracle's Canadian headquarters, Mississauga is the home of a North American hub for Oracle Direct, Oracle's Internet sales division.



What Business Demands.

### Satyam Computer Services Ltd.

Satyam Computer Services Ltd. (NYSE: "SAY") is a leading global consulting and IT Services company with a turnover of CD \$ 1 billion having 20,000 employees and operating in 47 countries. Accredited with SEI-CMM level 5 and pioneers in other quality certifications like eSCM, we serve over 390 global customers, including over 144 Fortune 500 corporations. Satyam combines excellent domain knowledge, technology expertise and its unique Rightsourcing™ model to offer a range of solutions and products that enhances customer's performance and competitiveness.

In Canada, Satyam started its operations in 2003 and in less than 2 years has established itself as a preferred IT partner for many Bellweather Companies in Banking, Pharmaceuticals, Retail and Manufacturing verticals. Today, Satyam has a national presence with regional offices located in Toronto, Montreal, Calgary and Vancouver. Satyam has more than 200 professionals in Canada and another 350 associates servicing this market from other global delivery centers. Satyam's Canadian presence is also augmented by a state of art technology development center located at Matheson Boulevard, Mississauga which was inaugurated by our Mayor Hazel McCallion.

"Our development center has helped us to move up the value chain and partner with our clients for mission critical solutions and also to provide cost-effective 'near-shore' services to major clients in the U.S.," says Sanjay Tugnait, Head RBU Americas (Canada, Caribbean and Latin America). Sanjay who is also a board of director with GTMA participated and facilitated the GTMA's 18 member exploratory Investment Attraction Mission to India which was led by Mayor McCallion to enhance trade ties between India and Canada.

Satyam proactively partners with MoED, Ontario and the GTMA to promote Ontario as a business destination for US and Indian companies. Sanjay was a key speaker for the MoED delegation to New York. The advantage of being located in Mississauga includes:

- Access to a strong pool of high tech talent
- Scalable infrastructure & Networking capabilities
- Excellent transportation facilities including the Airport
- There are good engineering schools and a tremendous amount of migration of talent to the area from around the world

**For more information about Satyam Computer Services Ltd., visit our web site at [www.satyam.com](http://www.satyam.com)**

## Siemens Business Services Canada, Inc.

Siemens Business Services Canada, Inc. is a unit of Siemens Business Services GmbH, a top 10 global solutions and IT solution provider employing more than 34,300 professionals in over 44 countries. The parent company, Siemens AG is a global electronics and engineering powerhouse with more than 417,000 employees. Siemens AG has been in existence for 156 years, having over \$120 billion in annual sales.

We pride ourselves on being a strong IT services partner with the financial stability and flexibility to provide value to your organization, achieving a customer renewal rate of 93%. Our customer focus and vendor-neutral approach allow Siemens to be a flexible partner for meeting the changing needs of your infrastructure.

Our client base includes many of the most prestigious and successful companies in the world, spanning numerous industries ranging from mid-size manufacturing companies to large information intensive enterprises. No other company in Canada has provided a wider range of solutions, products and services in health care, information & communications, energy & power, industry & automation, transportation and lighting, than Siemens.

### Our Goal:

Increase our clients' shareholder value by optimizing IT infrastructure and enterprise solutions through the integration of world-class people, processes, and technology.

### Siemens Business Services best-in-class services include:

#### • Customer Interaction Center/Enterprise Help Desk

Our integrated solution uses a single point of contact model, leveraging our outsourcing best practice methodology, industry leading tools, and a dedicated, certified staff of professionals to provide a high resolution call ownership model that delivers intelligent support to your end-users.

#### • Application Management & Hosting Services

We provide innovative and flexible SAP management and hosting solutions. As a certified SAP Hosting™ Partner and SunToneSM certified organization, we can provide a full suite of SAP hosting services from our ISO 9001 certified data centers.

#### • Network Managed Services

Our Network Managed Services provide continuous network and system monitoring, proactive maintenance and administration for today's complex, multi-vendor technology environments.

#### • Product Support Services

As customers become more demanding your support requirements need to evolve to meet their expectations. We provide 24X7, supporting 13 languages, fast response time, combined with exceptional customer service.

### Siemens Business Services at a Glance:

- As one of the world's premier providers of IT services, we have extensive experience helping our clients use information technology to address challenges and boost profitability.
- A leading provider of SAP® services, with over 1,800 R/3 implementations and over 100 hosted systems worldwide.



- Manage more than 770,000 PC desktops and 30,000 servers, routers and switches.
- Siemens Business Services Canada, Inc has over 600 agents and takes more than 2 Million calls per year
- Migrated more than 1,000,000 servers and desktops to new operating platforms in North America alone.
- Siemens Business Services professionals hold product and technology certifications from companies such as SAP, IBM, 3COM, Siebel, i2, Microsoft, Lotus, Novell, Toshiba, Cisco, Hewlett Packard, and Sun Microsystems.



## TATA CONSULTANCY SERVICES

### Tata Consultancy Services

Tata Consultancy Services (TCS) is the world-leading technology consulting, services, and outsourcing organization that pioneered the adoption of flexible global business practices that today enable companies to operate more efficiently and produce more value.

TCS achieved this by creating and perfecting a unique method of global deployment and delivery of high quality, high value services and products in IT consulting and business process outsourcing. Known as the “Global Delivery Model,” this strategic services delivery concept has reshaped the IT services industry.

With more than 43,000 of the world’s best trained IT consultants operating in 32 countries, TCS is uniquely positioned to seamlessly deliver its flexible, world-class services to any location.

#### Commitment to Innovation

TCS places special emphasis on continual innovation in two ways: via the Tata Research, Design and Development Centre (TRDDC) established in 1981 and via TCS’ many alliances with leading technical and regional academic institutions.

TCS has alliances in North America with several leading universities, including University of Waterloo, Carnegie Mellon University, Georgia Tech University, University of California, Riverside, Massachusetts Institute of Technology, Simon Fraser University, University at Buffalo, University of Illinois at Urbana Champaign, and University of Wisconsin, Milwaukee.

#### Presence within North America

TCS began working with North American clients in 1971 and now has:

- 10 Global Development Centers
- 4 Centers of Excellence/Labs
- More than 50 offices

#### Presence in Canada

- 4 Marketing Offices (Montreal, Ottawa, Toronto, Vancouver)
- Development Center, Mississauga

#### Advantages of being located in Mississauga

- Canada’s sixth largest city
- In the Greater Toronto Area and very close to the US
- Excellent infrastructure facilities
- Business Friendly Environment
- Home to head offices of 57 Fortune 500 Corporations
- Cost Competitive

- First Indian software company to cross the \$2 billion mark
- Consolidated revenues of \$2.24 Billion in the 2004-2005 fiscal year
- TCS America accounts for 60% of TCS revenues
- Over 1000 clients; 7 out of the US Fortune Top 10 for 2004 are TCS clients
- Global spread of over 153 branches in 32 countries
- First company to be assessed at Enterprise wide CMMI® and PCMM® Level 5
- 17 development centers assessed at SEI CMM Level 5
- Expanding capabilities through research and academic relationships with various leading academic institutions across the world
- Over 9,000 of TCS’ employees work in North America

## Xerox Research Centre of Canada

Xerox Research Centre of Canada (XRCC), located in the Sheridan Science and Technology Park in Mississauga, is one of five award-winning research and development centers that Xerox Corporation operates globally to support its ongoing leadership in document technologies, products, and services. XRCC's global mandate is to conduct fundamental and applied research in imaging materials and consumables, such as inks and toners, to support Xerox's needs worldwide.

XRCC has been very successful in its technological contribution to Xerox since it was opened in 1974. In the last 31 years, XRCC scientists and engineers have developed capabilities needed to generate ideas and have effectively delivered them to the market. XRCC has grown to 150 personnel that so far have generated close to 1000 US patents and more recently have delivered, with its partners, an average of three ideas to market every year.

An example of XRCC's breakthrough research is Xerox's chemical toner, named Emulsion Aggregation (EA) Technology, which was first introduced in 2002 in the Xerox DocuColor 1632 and 2240 multi-functional devices. EA Technology brought with it a new, environmentally-friendly method of growing toner organically, and ensured that better-quality day-to-day printing could be achieved at lower print temperatures and using 50 per cent less toner than traditional methods. The EA technology is protected by 200 patents and its first manufacturing facility was built in Mississauga to supply to Xerox customers worldwide.

The scientific breakthroughs in photoreceptor pigment and toner resin for the Xerox iGen3 Digital Production Press also came from XRCC. Over one billion US dollars in R&D was spent on the iGen3, and this single product generated more than 400 patents. Since then, the iGen3 has become Xerox's most significant production technology platform in a decade.

XRCC's innovativeness and effective commercialization approach has not gone unnoticed. XRCC received its latest award as recently as June 2004, for best emerging technology, from the renowned CATAAlliance. Its pioneering ability to manage the process of innovation has led to interest from the Provincial and Federal governments with visits this year by Premier Dalton McGuinty and Dr. Arthur Carty, the national science advisor to the prime minister.

In just over thirty years, XRCC has gone from ten Canadian scientists working in a temporary building to a 150+ team of people from 39 different countries of origin. The Mississauga site includes a state-of-the-art 120,000 sq ft laboratory, a 27,000 sq ft chemical engineering pilot plant and a 50,000 sq ft supplies development centre. Meanwhile its talented team, of which more than half live in the Mississauga area, holds over 38 PhDs, and includes four scientists who each have been awarded more than 100 US patents.

XRCC collaborates closely with a number of local universities and has established a network of contacts within the leading chemistry/chemical engineering departments at Canadian universities and colleges. The XRCC student program provides an industrial work experience to approximately thirty students per year and stimulates their interest in pursuing graduate studies and careers in science and technology.

XRCC continues to support Xerox in its vision to help people find better ways to work by developing breakthrough material technologies which enable high quality, cost effective and reliable products both in office and production as well as digital document media and printed organic electronics.



## Top Ranked Tech Companies in Mississauga

### 1. Mississauga Businesses Ranked in the Top 250 Tech Companies in Canada

RANK 2004	RANK 2003	COMPANY NAME
57	74	Cedara Software Corporation
15	8	NexInnovations Inc.
38	24	Rand A Technology Corporation
45	45	Financial Models Company Inc.
58	–	MediSolution Ltd.
65	117	Certicom Corp.
75	93	Redknee Inc.
76	73	Avotus Corporation
107	130	Bioscrypt Inc.
157	164	M.R.S. Company Ltd.
167	174	PROPHIX Software Inc.
235	–	BSM Technologies Inc.

### 2. Mississauga Businesses Ranked in the Top 25 Multinational Tech Companies in Canada

RANK 2004	RANK 2003	COMPANY NAME
2	2	Hewlett-Packard (Canada) Ltd.
5	3	Microsoft Canada Co.
7	–	Accenture Inc.
11	9	Oracle Corporation Canada Inc.
16	16	Software Spectrum Canada Ltd.
18	17	Computer Associates International Inc.
20	20	Computer Horizons Canada Corp.
23	21	SIGI Canada (Silicon Graphics, Inc.)

Source: The Branham Group, [www.branhamgroup.com](http://www.branhamgroup.com)

## Business Investments in Mississauga – All Sectors

### APPENDIX D

COMPANY	INDUSTRY SECTOR	INVESTMENT VALUE \$ CANADIAN	TYPE OF INVESTMENT	JOBS CREATED	YEAR
Bell Mobility	ICT	\$60 million	New Head office	2000	2002
Bell Canada	ICT	N/A	Consolidation	1,100	2004
Enterasys Networks	ICT	N/A	New Research and Development Facility	70	2001
Wells Fargo Financial Corp. Canada	Financial Services		New Canadian Headquarters – Phase I	400	2004
Microsoft Canada	ICT	\$73 million	New Canadian Head Office Global Technical Support Centre	115	2003
NetSuite	ICT		New Canadian Head Office	200	2004
Oracle Corporation Canada	ICT	\$135 million	New Canadian Head Office	100	2001
Satyam Computer Services	ICT		New Research and Development Labs	100	2004
Tata Consultancy Services (TCS)	ICT		New Research and Development Labs		2004
AstraZeneca	Bio-Medical	\$21 million	Expansion		2003
Biovail Corporation International	Bio-Medical	\$20 million	New Head Office & Expansion	70	2003
Blackhawk Automotive Plastics	Automotive	\$25 million	New Manufacturing Facility	75	2003
Federal Express Canada	Logistics	\$33 million	Relocated Head Office Call and Service Centre	480	
LISI Automotive	Automotive	\$40 million	New Manufacturing Facility	30	2002
Patheon	Bio-Medical	\$5.1 million	Expansion		

Source: New Investments in Ontario (City of Mississauga region), [www.ontario.com/edp/home.asp#locationinvest](http://www.ontario.com/edp/home.asp#locationinvest) and, Economic Development Office, City of Mississauga

## Additional ICT Investments in Mississauga

COMPANY NAME	EMPLOYEE RANGE	YEAR
Avotus Corp.	100-299	2004
Global Mentoring	20-49	2004
Prophix Software	50-99	2004
Avanade Canada Inc.	50-99	2002
Engineering.com	20-49	2002
FlashLine Inc.	20-49	2002
Fusepoint Management Services	20-49	2002
I Q-Ludorum Software	20-49	2002
Metafore	50-99	2002
Survallent Technology Corp.	20-49	2002
Accenture Inc.	500-999	2001
Electrovaya Corp.	100-299	2001
MDX Group	50-99	2001
Net Bus Model Inc.	20-49	2001
Radian Communication Services Corp.	20-49	2001
Stuart Energy Systems	100-299	2001
Vanguard Managed Solutions L.L.C.	50-99	2001
CBIZ Network Solutions Inc.	20-49	2000
ConceptWave Software Inc.	20-49	2000
Hydrogenics Corp.	100-299	2000
Nexxlink	20-49	2000
Stahlschmidt Cable Systems (SCS) Ltd.	20-49	2000
Symcor	500-999	2000
Tierone OSS Technologies Inc.	20-49	2000

Source: Mississauga Employment Database, Economic Development Office, City of Mississauga



## Data Analysis

The data analysis conducted within this ICT study was performed on data derived from two different sources:

1. The Mississauga Employment Databases for the years 1996, 2001 and 2004.
2. Statistics Canada, Canadian Business Patterns data for 1996 (based on 1980 SIC), data for 2001 (based on 1997 NAICS) and data for 2004 (based on 2002 NAICS).

### Mississauga Employment (ME) Database

The ME database is owned and maintained by the Economic Development Office and the Planning and Building Department of the City of Mississauga. The ME database accounts for all industrial, commercial, office and retail establishments within the City of Mississauga. Home based businesses are not accounted for within this database.

### Canadian Business Patterns (CBP) Data

The CBP database, a product of Statistics Canada, includes only those businesses that have reported a minimum of \$30,000 in annual sales revenue or are incorporated under a federal or provincial act and have filed a federal corporate income tax form within the past three years.

The data in the CBP reflects counts of business establishments by:

- 9 employment size ranges, including “indeterminate” (as of December 1997)
- Geography groupings: province/territory, census division, census subdivision, census metropolitan area and census agglomeration
- Standard Industrial Classification which classifies each establishment in Canada into a specific industry (tables at the 1, 2, 3 and 4-digit level)
- The North American Industry Classification System (tables at the 2, 3, 4 and 6-digit level) has also been included since December 1998 reference period

For the purposes of the ICT study, the data from the above sources was analysed at a 4 digit level based on the definition of the ICT industry as provided in Appendix F.

### Estimation of Labour Force

The need to extrapolate the data:

As mentioned previously, the Mississauga Employment (ME) database does not take into account employment within home-based businesses. Both Canadian Business Patterns (CBP) data and Labour force survey, products of Statistics Canada, include home-based businesses in their estimations. To perform any analysis, employment within home based businesses in Mississauga had to be accounted for.

Given below is the method used to extrapolate employment and adjust extrapolated employment by sub-sector for the purposes of this study:

### Step 1: Accounting for Home Based employment

YEAR	1996	2001	2004
Total ICT businesses in Mississauga as per CBP data (TCBP)	1795	2781	3912
Total Number of businesses from ME database (TME)	598	753	906
Total Home based businesses in the City of Mississauga (THM)= (TCBP) – (TME)	1197	2028	3006
Total Employment of ICT businesses from ME database (TEME)	15068	24410	34010
Total extrapolated employment in the ICT Sector in Mississauga (TEEM)= (THM) + (TEME)			
<b>Assumption: 1 home based business = 1 employee</b>	<b>16,265</b>	<b>26,438</b>	<b>37,016</b>

### Step 2: Adjustment of Extrapolated employment between the ICT sub-sectors

2.1: Employment from the ME database broken down by ICT sub sector:

SECTOR CODE	1996 EMPLOYMENT	2001 EMPLOYMENT	2004 EMPLOYMENT
Telecommunication	2489	2200	5882
Development	4818	9961	10587
Manufacturing	898	3896	7492
Services	3587	3539	4215
Wholesale	3276	4815	5836
<b>Total*</b>	<b>15068</b>	<b>24410</b>	<b>34010</b>

\*Note: may not add up due to rounding

2.2: Percentage of employment distributed by sector component, based on data from 2.1:

SECTOR COMPONENTS	1996 EMPLOYMENT	2001 EMPLOYMENT	2004 EMPLOYMENT
Telecommunication	17%	9%	17%
Development	32%	41%	31%
Manufacturing	6%	16%	22%
Services	24%	14%	12%
Wholesale	22%	20%	17%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

2.3: Distribution of extrapolated total ICT employment, based on the percentage of employment distributed by sector component from the ME database.

YEAR	1996	2001	2004
Telecommunication	2687	2383	6401
Development	5201	10788	11522
Manufacturing	969	4219	8154
Services	3872	3833	4587
Wholesale	3536	5215	6352
<b>Total</b>	<b>16265</b>	<b>26438</b>	<b>37016</b>



### Location Quotient (LQ)

The LQ analysis helps to determine the relative concentration of a certain industry segment within certain geography in relation to other geographic areas.

**The formula for computing a location quotient is as follows:**

$$LQ = (e_i/e) / (E_i/E)$$

where:

$e_i$  = Local employment in industry

$e$  = Total local employment

$E_i$  = National employment in industry

$E$  = Total national employment

The LQ analysis reported on within this study was performed based on the geography of the City of Mississauga in relation to Canada and Province of Ontario.

### Gross Domestic Product (GDP)

This study reports on GDP data for the City of Mississauga and the ICT sector within the City of Mississauga.

The GDP analysis reported within this study is extrapolated and based on Statistics Canada reports GDP figures, which are reported at the country (Canada) and at the provincial (Ontario) levels.

**The formula used for computing a GDP is given below:**

$$GDPL = (GDPC/EC) * EL$$

where:

GDPL = Local GDP

EL = Local Employment

GDPC = Country/Provincial GDP as reported by Statistics Canada

EC= Country/Provincial Employment as reported by Statistics Canada



## North American Industrial Classification System (NAICS) and the Standard Industrial Classification (SIC)

CLASSIFICATION	2004 DATA IS BASED ON NAICS 2002	2001 DATA IS BASED ON NAICS 1997	1996 DATA IS BASED ON SIC 1980	
<b>Telecommunication</b>	3342 – Communications Equipment Manufacturing	3342 – Communications Equipment Manufacturing	3351 – Telecommunication Equipment Industry	
	3345 – Navigational, Medical & Control Instruments Manufacture.	3345 – Navigational, Medical & Control Instruments Manufacture.	3352 – Electronic Parts and Components Industry	
	5171 – Wired Telecommunications Carriers	5133 – Telecommunications	3359 – Other Electronic Equipment Industries	
	5172 – Wireless Telecommunications Carriers (except Satellite)		3912 – Other Instruments and Related Products	
	5173 – Telecommunications Resellers		4821 – Telecommunication Carriers Industry	
	5174 – Satellite Telecommunications		4839 – Other Telecommunication Industries	
	5175 – Cable and Other Program Distribution			
	5179 – Other telecommunications			
	<b>Development</b>	5112 – Software Publishers	5112 – Software Publishers	7721 – Computer Services
		5181 – Internet Service Providers, Web Search Portals	5142 – Data Processing Services	7799 – Other Business Services n.e.c.
5182 – Data Processing, Hosting, and Related Services		5415 – Computer Systems Design and Related Services		
5415 – Computer Systems Design & Related Serv.				

CLASSIFICATION	2004 DATA IS BASED ON NAICS 2002	2001 DATA IS BASED ON NAICS 1997	1996 DATA IS BASED ON SIC 1980
<b>Manufacturing (Mfg.)</b>	3341 – Computer & Peripheral Equip. Mfg.	3341 – Computer & Peripheral Equip. Mfg.	3361 – Electronic Computers & Peripheral Equipment
	3343 – Audio and Video Equipment Mfg.	3343 – Audio and Video Equipment Mfg.	3362 – Electronic Office , Store & Business Machine Industry
	3344 – Semiconductor & Other Electronic Component Mfg.	3344 – Semiconductor & Other Electronic Component Mfg.	
<b>Services</b>	8112 – Electronic and Precision Equipment Repair and Maintenance	8112 – Electronic and Precision Equipment Repair and Maintenance	6223 – Appliance, TV, Radio & Stereo Repair Shops 7722 – Computer Equipment Maintenance & Repair 9949 – Other Repair Services n.e.c.
<b>Wholesale</b>	4173 – Computer & Comm. Equip. & Supplies Wholesale-Distribution.	4173 – Computer and Communications Equipment and Supplies Wholesaler-Distributors	5743 – Electronic Machine, Equipment & supplies (except computers), Wholesale 5744 – Computer & Related Machinery, Equipment and Software, Wholesale 5791 – Office & Store Mach, Equip & Supp, Wholesale 5792 – Service Machinery, Equip & Supp., Wholesale 5793 – Professional Mach., Equip & Supp, Wholesale

## Quick Facts – City of Mississauga

### Population

- Population: 695,000
- Growing by 10,000 each year
- Canada's 6th largest city

### Labour

- Employees in Mississauga: 410,000+
- Access to 2.9 million employees in the Greater Toronto Area
- Over 82% of resident labour force has post-secondary education

### Businesses

- More than 49,000 registered businesses
- More than 1,500 multinational corporations
- More than 50 Fortune 500 corporations operate their Canadian head offices here

### Low Costs: Taxes, Services & Utilities

- Property taxes are among the lowest in the province
- Electric power rates are among the lowest in the Greater Toronto Area (GTA)
- Natural gas is readily available at low prices

### Land & Buildings

- Competitive lease rates and land prices
- Largest supply of modern high quality, industrial land and buildings in the GTA
- 3,000+ acres of land available for business development
- 50 high quality, private sector business parks

### Transportation

- Home to Pearson International Airport, the largest and busiest airport in Canada
- Served by 2 national railways: Canadian National (CN) and Canadian Pacific (CP) Rail
- Serviced by 7 major highways
- An accessible, easy and efficient public transportation system
- Mississauga has direct access to all lake ports and to the Atlantic Ocean via the St. Lawrence Seaway

**For More Information,  
Please Contact:**  
Economic Development Office  
City of Mississauga  
300 City Centre Drive  
Mississauga, Ontario, Canada  
L5B 3C1  
1.800.456.2181  
[www.mississauga.ca/business](http://www.mississauga.ca/business)



### **Technology**

- Mississauga's fibre optic and communications infrastructure is one of the best in North America
- A major centre for successful technology-based companies

### **Higher Education**

- The University of Toronto at Mississauga (UTM) – part of Canada's largest university
- The Richard Ivey School of Business – state-of-the-art executive development facility
- 10 major universities and 11 technical colleges within commuting distance

### **Police, Fire & Emergency Services**

- Mississauga is the safest city in Canada according to a 2004 independent national study
- Mississauga is protected by the Peel Regional Police which provides one police officer per 655 residents
- The City has professional Fire services with one firefighter per 1,272 residents, a statistic that is above the national average

### **Healthcare**

- The provincial health insurance program covers major medical and hospital bills for all Canadian residents
- Mississauga's two modern community hospitals, the Credit Valley Hospital and the Trillium Health Centre, house approximately 1,000 beds providing excellent health care by combining the latest in technology with the utmost in professional, compassionate care

### **Housing Options**

- Mississauga offers a diverse housing mix – from townhouses, high-rise condominium and rental facilities to semi-detached, fully-detached and executive housing to satisfy every income level
- Average housing prices in Mississauga are lower than the average for the GTA





Mississauga's  
Location in  
Eastern U.S.A./  
Canada



For More Information,  
Please Contact:

Economic Development Office  
City of Mississauga  
300 City Centre Drive  
Mississauga, Ontario, Canada L5B 3C1  
1.800.456.2181

[www.mississauga.ca/business](http://www.mississauga.ca/business)