Economic Strategy for the City of Ottawa

Foreword

The health of a twenty-first century city is measured by the talent of its workers, the creativity of its citizens, its appreciation of diversity, the strength of its high-tech sector—and its willingness to collaborate for success. Ottawa is positioned to compete. It ranks first in Canada for talent, third in size of technology workforce and sixth in the number of creative and artistic citizens. And it is growing a collaborative culture that embraces every sector of the economy.

Like all cities internationally, Ottawa is adapting to a new economy that is less tied to place and more dependent on technology. Cities are the stage on which economies win or lose. The world’s population is progressively moving to cities—60% of humanity by 2030. Five cities today have populations of more than 10 million people. By 2015, 21 cities will be that size.

Many Ottawa businesses now compete globally. Strong and innovative technology, tourism and professional services industries support its economic prosperity and our telecommunications companies lead internationally. Other sectors such as creative industries, wireless technology and environmental technology are seedbeds for future global competitors.

In city economies transformed by fast information and increasing choice, businesses are taking new shapes. Competition with its win-loss outcomes is not the single answer. Cooperation with win-win outcomes is proving the stronger strategy.

Taking Action

The City of Ottawa will launch implementation of this Economic Strategy by addressing the most pressing needs. Priorities for immediate action include:

1. Improve two-way communication with business community
2. Implement a targeted business visitation program
3. Address workforce shortages, underemployment and training issues
4. Extend broadband service to every Ottawa address
5. Increase commercialization of research and technology
6. Leverage Ottawa's business incubators—not just for technology but for all sectors
7. Help Ottawa businesses market their products and services better
8. Create an infrastructure to manage and support industry cluster collaboration
9. Promote increased commerce between the industry clusters and local businesses, and between urban and rural businesses
10. Promote and strengthen Ottawa's main street business areas.
11. Market and promote Ottawa domestically and internationally as an ideal location for people, tourism, companies and investment
12. Move forward the expansion of the Ottawa Congress Centre
It will be seen that creating a prosperous city is equally a matter of collaboration and competitiveness, of innovation and adaptation. Creating wealth within the context of a sustainable environment and an equitable society is critical to attracting both businesses and workers. These factors are becoming ever more important because cities and businesses must meet and manage change—changing technology, changing trade regulations, even changing climate.

This report sets out the City of Ottawa’s strategy to position our city for innovation, competitiveness and prosperity in the next two decades. It is one of five interrelated growth-management plans prepared to guide planning and decision-making in this newly amalgamated city.

The goal of the Economic Strategy is to help build a diverse community that is both prosperous and liveable, a city in which a growing economy generates high-quality jobs, investment and improved quality of life. This strategy recognizes the role of every sector of the Ottawa economy, their interdependence and the importance placed on preservation of Ottawa’s countryside and natural spaces.

The Economic Strategy values and seeks to promote Ottawa’s collaborative culture, and to increase mutually profitable linkages between export and local industries, between companies with shared interests, between businesses and research, and between the city and all economic stakeholders. Only through collaboration will we maintain and grow Ottawa’s innovation and prosperity.

The strategic directions established through consultation with our stakeholders to achieve these goals are:

- Invest in people and place
- Share knowledge and ideas
- Link innovation to the marketplace
- Strengthen industry clusters and entrepreneurship
- Promote Ottawa to the world

Ottawa has the opportunity now to determine how it will grow and what it will grow to become. The Economic Strategy is the first step in drawing a map to ensure continued economic growth while maintaining the qualities we value in our city.
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1.0 Introduction

1.1 The role of the Economic Strategy

The Economic Strategy will guide Ottawa to continued competitive excellence in the 21st century. It is a reference point both for the City of Ottawa and for industry networks concerned with achieving competitive success within the global marketplace. This Economic Strategy sets out:

- the role of cities in the new economy
- Ottawa’s status relative to competing cities
- a vision for Ottawa’s economic future
- strategic directions and policies to achieve that vision
- the role of the City of Ottawa relative to its economic partners

The City’s tactical plans for economic growth will flow directly from this Strategy.

This Economic Strategy acknowledges that individual companies drive a city’s prosperity. The more successful the export-oriented businesses, the more wealth flows back into the local economy, which in turn fuels further rounds of local purchases and employment. The result of export success is not just jobs and wealth, but an increased capacity to invest in and support other priorities within our city—from parks to hospitals to schools to theatre and music.

As Canada’s capital city, Ottawa offers its businesses a unique synergy of research capacity, talent and quality of life. The city encompasses a diversity of business interests and sectors—ranging from a $10.5 billion advanced technology sector to a $400 million agricultural sector. It is an attractive destination for living—a green metropolis with an electric and creative business culture.

Ottawa is rapidly developing a critical mass of knowledge and entrepreneurial expertise that—with the right support—will sustain the city and propel it farther into international competitiveness. However, the isolated efforts of individual companies are not sufficient to position Ottawa as a global competitor. The most successful cities are characterized by high levels of private- and public-sector collaboration. Ottawa’s success depends on forging economic partnerships that recognize the importance of all stakeholders, from universities, colleges and hospitals to research centres and business organizations. Within this context, it is
the City’s role to act as a catalyst for change, and to provide the conditions necessary to compete for investment, skilled workers and international trade.

Accelerating the ability of export industries to compete internationally while also promoting a diverse and innovative local economy is a challenge. The City of Ottawa and its economic partners share the responsibility of ensuring that economic activity benefits all the people of Ottawa to the maximum extent possible. The result will be a continued growth of creativity and innovation in Ottawa’s entrepreneurial community and the global recognition of Ottawa as a prosperous international city.

### 1.2 Supporting plans

The Economic Strategy is based on three background reports developed as a starting point for this work:

- **Innovation Ottawa: A Strategy for Sustaining Economic Generators**, which deals with the export-oriented industry clusters that lead Ottawa’s growth and wealth.
- **Serving Ottawa: Economic Strategies to Develop Ottawa’s Local Economy**, an examination of market sector businesses that sell goods and services to residents and other Ottawa businesses.

The Economic Strategy is also accompanied by two key supporting plans:

- **Broadband Plan**, Ottawa’s strategy to extend broadband connectivity to unserviced areas and to integrate telecommunications strategy into the city’s planning and development.
- **Talent Plan**, Ottawa’s strategy to link employers to a skilled workforce and to improve workforce infrastructure.

These reports and the Economic Strategy itself are the result of extensive consultation with the business community including the Ottawa Centre for Research and Innovation (OCRI), Ottawa Life Sciences Council (OLSC), Ottawa Tourism and Convention Authority (OTCA), Greater Ottawa Chamber of Commerce (GOCC), Ottawa Federation of Agriculture, National Capital Business Alliance (NCBA), Regroupement des gens d’affaires (RGA), Ottawa Business Improvement Areas Network, Ottawa Construction Association, Capital Health Alliance, Business Education Leadership Group, industry clusters and related City steering committees. City staff were also guided by The Ottawa Partnership (TOP), a group of private- and public-sector leaders committed to advancing Ottawa’s economy.
The antecedent for the Economic Strategy is an August 2000 publication, Choosing a Future: A New Economic Vision for Ottawa. Prepared for TOP, this report examined the city’s economic wealth generators. Choosing a Future fostered such initiatives as SmartCapital, Branding Ottawa and TalentWorks. It identified the City’s strongest economic drivers and underlined the importance of key economic foundations such as the availability of capital, skilled labour and adequate infrastructure.

In its prescription for “balanced economic growth, social equity and environmental sensitivity,” Choosing a Future also introduced the elements of smart growth.

1.3 Ottawa’s growth management plans

This Economic Strategy exists within the broader context of the Ottawa 20/20 Growth Management Strategy initiative, a two-year planning process for managing growth and change in the next 20 years. The goal of the Ottawa 20/20 initiative is sustainable development. The basic premise of sustainable development is that social, environmental and economic issues must be kept in balance.

The Economic Strategy is one of five growth management plans that together will provide long-term strategic direction for Ottawa’s future. Beginning in 2000, the City of Ottawa has consulted extensively with local stakeholders to create these complementary plans.

- **Human Services Plan**—Focuses on community services such as health, recreation, social services, arts and culture, libraries, housing and emergency protection. It is supported by the Library Plan, Facilities Needs Study, Affordable Housing Strategy and other human services plans. Includes health promotion and disease prevention activities mandated by the Government of Ontario.

- **Arts and Heritage Plan**—Champions culture and creativity. Identifies new initiatives and actions in areas such as access to cultural opportunities, public art, heritage preservation and cultural facilities development.

- **Official Plan**—Provides a vision of future growth and a policy framework to guide physical development, including public works, zoning, community design and land development. It is a legal document under the Ontario Planning Act.

- **Environmental Strategy**—Addresses the need to protect and strengthen local ecological features and processes, and to reduce the city's environmental impact at the global levels. The strategy helps formulate how urban development can proceed without undermining environmental processes and presents policies that will reduce sprawl.
1.4 The 20/20 Guiding Principles

One of Ottawa’s first acts as an amalgamated city was to convene the Ottawa 20/20 Smart Growth Summit, a public consultation on sustainability. The resulting document—Charting a Course—put forth principles to guide the City's future growth. Ottawa City Council endorsed the seven guiding principles in June 2002. These principles are reflected in the five growth management plans and will guide the municipality's day-to-day decision-making in the next 20 years.

The seven principles recognize the connections between development and quality of life. They acknowledge that development must serve the economy, the community and the environment. Their goal is to achieve growth in the context of sustainability. Thus, social, environmental and economic issues must be kept in balance to make a liveable, prosperous city. The principles are:

- **A Caring and Inclusive City**—is about universal access to adequate income, food, clothing, transportation, health services and recreation; safety and security; equal opportunity to fully participate in community life; respect for cultural and social diversity; access to services that are responsive to special and differing needs.

- **A Creative City Rich in Heritage, Unique in Identity**—is about being proud of what we have and who we are as the nation's capital; a vibrant downtown, local arts and heritage; community vitality, creativity and innovation; culture that is present in all the city's communities; a distinct rural countryside.

- **Green and Environmentally Sensitive City**—is about preserving and enhancing natural habitats, urban woodlands and rural forests, and the network of green spaces; developments that respect the environment and use land wisely; a focus on walking, cycling and transit; improving the quality of the air, water and soil; and protecting natural resources and agricultural lands.

- **A City of Distinct, Liveable Communities**—is about communities with identity; communities that have a variety of housing choices, employment, parks, services and facilities accessible by walking, cycling or transit; communities that are accessible to the disabled.

- **An Innovative City Where Prosperity is Shared Among All**—is about creating a critical mass of knowledge and experience that attracts venture capital and talent and spins off new companies; a supportive environment for the creation of strong local businesses and a strong rural economy; connecting people to opportunities.

- **A Responsible and Responsive City**—is about accountability, conducting on-going strategic monitoring and making appropriate adjustments; fiscal responsibility meaning the City makes efficient use of its infrastructure and resources; an open and participatory process that is welcoming and easy for everyone to participate in; partnerships with other levels of government, the private sector and community-based organizations; public education to raise awareness and understanding of key issues and choices.
A Healthy and Active City—is about communities that are designed in ways that promote the health of all residents; a focus on prevention by getting people to participate in physical activities; the provision of parklands, recreational pathways, beaches, playgrounds, arenas, swimming pools, and gymnasiums; a clean and safe water supply; treatment of stormwater; and the safety of contaminated soils/sites.

1.5 The economic directives

In June 2002, Ottawa City Council set out an economic interpretation of the Ottawa 20/20 principles. The Economic Strategy is guided by these directives:

- **Strong Export-Based Economic Generators**—Ottawa develops and supports local innovators to create a critical mass of knowledge and experience that attracts venture capital, more talent, and spins off new companies.
- **Strong Local Business**—Ottawa's local businesses thrive in an environment that provides opportunities for entrepreneurship, tourism and commerce.
- **Strong Rural Economy**—All people recognize and support the special role of agriculture, rural businesses and tourism in our economy.
- **Connecting People to Opportunities**—Citizens have access to quality training, information, education and community services that provide support to overcome barriers; increase employment; reduce poverty; and create opportunities to participate in the community.
- **Connecting Businesses to a Skilled Workforce**—Ottawa's skilled workforce attracts businesses to our city that in turn provide quality jobs.

1.6 How this strategy addresses the 20/20 Guiding Principles

The Economic Strategy and its supporting plans support the Ottawa 20/20 Guiding Principles:

**A Caring and Inclusive City**

- *The Economic Strategy* promotes improved communication between the City and all businesses—urban and rural, large and small.
- Indications of economic success include citizen participation in the economy, community and governance.
A Creative City Rich in Heritage, Unique in Identity

- *The Economic Strategy* promotes collaboration between business and cultural interests, especially with respect to tourism and creative industries.
- Indications of economic success include increased collaborative activity and growth.

Green and Environmentally Sensitive City

- *The Economic Strategy* recognizes the need to preserve Ottawa’s unique green spaces and agricultural land base.
- Indications of economic success include environmental sustainability and reduction of our “ecological footprint.”

A City of Distinct, Liveable Communities

- *The Economic Strategy* recognizes Ottawa’s excellent quality of life as a pre-requisite and a planned outcome of its economic success.
- Policies support collaborative action on community design, particularly in the rural areas.

An Innovative City Where Prosperity Is Shared Among All

- *The Economic Strategy* seeks to accelerate the growth of export industries to increase the wealth of Ottawa’s local and rural economies.
- Indications of economic success include rate and quality of employment, reduction of opportunity and income gaps.

A Responsible and Responsive City

- *The Economic Strategy* seeks to achieve maximum impact through collaboration and leverage of municipal resources and assets.
- Policies include monitoring and improving municipal services to businesses.

A Healthy and Active City

*The Economic Strategy* recognizes that investment in Ottawa’s quality of life, recreational infrastructure, green spaces and cultural assets pay back in business attractiveness.
Figure 1 – Stakeholders in Ottawa’s Economy

CITY OF OTTAWA & THE OTTAWA PARTNERSHIP WITH FEDERAL & PROVINCIAL GOVERNMENTS

VISION, COLLABORATION, INNOVATION

OTTAWA BUSINESSES & WORKFORCE

ECONOMIC AGENCIES (CCRA, GDCRA, OTL, S&T, BUSINESSES)

PARK/RECREATION ACTIVITIES, EDUCATION, HEALTHCARE
2.0 An economic vision for Ottawa in 2020

In 2020, Ottawa will be a prosperous, entrepreneurial and globally competitive city fuelled by an agile economy that is expert in managing change and reflects the values of innovation, equity and environmental stewardship.

The ideal vision for economic development directs our city to a prosperous future and shows us how development can be an enabler of quality of life. Here is how this can be achieved:

**A prosperous, entrepreneurial and globally competitive city**

Ottawa is a prosperous G8 city, known internationally as a technology innovator. Our goal is not just to maintain this status level but to reach beyond it through knowledge, creativity and collaboration. Though driven by growth- and export-oriented enterprises, Ottawa’s economy will be supported by a range of strong local businesses in both its rural and urban areas.

**An agile economy expert in managing change**

The world’s economic climate is constantly changing. Ottawa’s businesses must be expert in anticipating and managing that change. Achieving this requires excellent business and market intelligence, and a skilled and flexible workforce.

**Reflecting the values of innovation, equity and environmental stewardship**

These values are the source of Ottawa’s competitive advantage; they focus our commitment to shared prosperity and quality of life.

If this vision is realized, Ottawa will remain a strong and agile economy supported by an evolving succession of export-oriented industries that collaborate and compete with one another and other city-regions to achieve a critical mass of shared knowledge and prosperity.

Locally, a diverse market sector will provide a wide range of products and services to residents, local businesses and the export-oriented industries. Ideally, this will include many of the unique local economy businesses that anchor neighbourhoods, foster entrepreneurs and attract tourism.
Downtown, urban Ottawa, the suburbs, villages and rural areas will all enjoy economic benefits—the goal is to share high-value opportunities to create a true urban-rural partnership.

2.1 How success will be measured

Ottawa will define success by monitoring progress against the strategic directions and policies in this Strategy. Detailed discussion of such measurements is presented in chapter 6 of this document.

In summary, the City will seek to achieve **prosperity overall**. For individuals, this means an increase in personal and household income, decreased gap between rich and poor, and lower average unemployment. On a business level, success is indicated by increased innovative activity, growth of individual businesses, strength of industry clusters and the creation of good, high paying jobs. The following are some of the ways to measure this:

- **Strong and diverse local economy**: Increased import replacement. Increased diversity of retail, manufacturing and service activities. Increased tourism and convention activity.
- **Participation/Accessibility**: Business climate promotes opportunity favourable to entrepreneurs and a city hall responsive to their needs. Citizens have easy access to municipal information and support, and participation in local affairs is high.
- **Prosperity**: High employment and participation in the economy. Increased quality of working conditions. Improvements in wages per person and household income. Healthy returns to shareholders.
- **Equity/disparity**: Reduction in the wage and opportunity gap between rich and poor. Increase in equity—opportunity, community quality and participation—regardless of where people live.
- **Sustainability**: Retaining mature companies and highly educated workers. Reduced “ecological footprint” for land and energy use, less waste and better waste management; clean air and water; no net loss of farmland or environmental performance—even as the city grows.
- **Quality of life**: Increased affordability and choice of housing, health care, cultural and recreational resources relative to economic growth. Personal and income security.
3.0 The new economy

This section sets out business relationships in the new economy. This new system is based on collaboration and innovation, rather than competition, as companies reorganize themselves into industry “clusters.” Industry clusters rely on economic foundations and the local economy to create a “vital cycle” of competition and success. This benefits the entire economy; our aim is to increase Ottawa’s ability to capture maximum value from these transactions for the benefit of all.
Figure 2 – The Vital Cycle of Prosperity
3.1 Foundations for competitiveness and innovation

Ottawa is competing with other cities for new investment and quality jobs. Globalization and the Internet have lessened the importance of proximity to customers. However, proximity to a skilled labour force remains a critical factor in determining business location. The modern workforce is very mobile—attracted to the best jobs in the best cities for the best wages. To win its share of the global markets for our export industries, Ottawa needs the right conditions to attract those workers. The city’s skilled workforce, quality jobs, green spaces, low crime rate, clean air and water are part of that attraction.

Though competitiveness requires agility, timeliness, access to information and the ability to innovate, cities and businesses draw their ability to compete from a range of assets. All of Ottawa’s businesses, whether cluster or market-sector industries, whether located in the downtown, suburbs, villages or countryside, depend on these foundation elements to prosper.

3.2 Clusters lead the city economy

A cluster is more than an interdependent group of related companies. It reflects a city’s advanced degree of specialization in a particular field. This is measured by such factors as employment concentration and rate of growth. A city with a management-consulting cluster, for example, will have a higher percentage of management consultants than other cities.

In the Ottawa context, the telecommunications cluster, for example, includes manufacturers of phone sets, and fibre-optic and networking products, which rely on suppliers such as tool and die makers, plastics moulders and semiconductor developers. Both exporters and their suppliers depend for success on a foundation of public- and private-sector organizations that range from research centres and academic institutions to creative agencies and financial firms—as well as Ottawa’s unique culture and quality of life.

The “economic foundations” and local context are important because even if the exporters are not tied to a single place, their head offices and employees must choose a city to locate in. Economic foundations will determine whether a company finds the support systems it needs to establish, expand or meet competitive
Industry Clusters Evolve

Over time, different industries will emerge to lead Ottawa’s economy, but industry clusters will continue to be Ottawa’s prime economic generators.

pressure. A city’s quality of life will determine whether workers stay or move on, and whether companies can attract the skilled staff they require.

As the clusters compete and expand, the whole city benefits. Export growth brings new money into the economy. This generates more revenue and increased demand for local businesses. Competition between export companies pushes them to develop new products and provide better service. This increases opportunities and promotes new spin-off businesses inside the clusters and in the local economy.

There are corresponding forces for collaboration. The greater the collaboration—even with other cities—the greater the potential for innovation and success. Clusters within the growth sector are not static—over the next 20 years individual industries will grow or shrink. For the moment, here is what Ottawa’s industry clusters look like:

- **Expanding Clusters** (high growth, high employment concentration): telecommunications equipment, microelectronics/semiconductors, tourism
- **Transforming Clusters** (low growth, high employment concentration): software and communications, professional services
- **Emerging Clusters** (high growth, low employment concentration): photonics, life sciences
- **Seed Clusters** (low growth, low employment concentration): wireless, creative industries, environmental technologies, micro electromechanical systems (MEMS)

### 3.3 The market sector employs most

If clusters provide specialization, it is the responsibility of the market sector to supply diversity—all the products and services that local residents and businesses need. In Ottawa, rural and urban market sector businesses employ 75% of all private-sector workers. In addition to creating jobs, market sector businesses help to create the quality of life that makes a city unique: arts and culture, recreation, retail, restaurants, health and educational services. They also supply export cluster businesses with support services such as courier services, printing, office supplies and so forth.

While market sector industries lack the employment concentration or rate of growth of the industry clusters, it is recognized that some, such as agriculture, are exporters. Nevertheless, within their local markets, all businesses are very important to overall economic prosperity.
The success of the urban and rural economy depends partly on the propensity for local businesses, cluster industries and the public sector to spend their money locally. Loss of sales to businesses in other cities is a potential source of conflict between local business and the cluster industries and represents leakage from the local economy. The better the linkages between these two sectors, the higher the probability that both will benefit from local opportunities and efficiencies.

Most market sector businesses are locally owned and operated. They rely on entrepreneurship training, continuing education to upgrade skills and all the factors that contribute to a favourable business climate. The regulatory environment, taxation, municipal services and availability of trained workforce can all be concerns. Staffing is especially a concern when small businesses must compete against larger high-paying companies for the same employees. The economic foundations, therefore, are equally critical to the success and expansion of the market sector as they are to the industry clusters.

3.3.1 The urban economy

Health care, retail and education dominate the urban economy, employing almost 115,000 people. Health care and educational institutions are essential to Ottawa’s ability to compete. Together they create a critical backbone of research and application capability for Ottawa’s businesses and entrepreneurs. The synergy for example created by companies and research facilities within the life sciences cluster accelerates Ottawa’s innovative capacity and competitiveness, and boosts the economy overall. Furthermore, health care and educational institutions attract new research talent, which ultimately enriches Ottawa’s innovative capacity. Other sectors within the urban economy include:

- Professional, scientific and technical services
- Finance, insurance and real estate services
- Accommodation and food services
- Construction industry
- Information and cultural industries
- Arts, entertainment and culture
- Transportation and warehousing
- Wholesale trade
### 3.3.2 The rural economy

Ottawa is unique in having a vast rural area—that comprises almost 90 per cent (more than 2,200 sq. kms) of Ottawa by land area. Because it is geographically distant from the city centre and often includes unique businesses not represented in the urban area, the rural economy depends on access to services, open decision-making and sensitivity to its particular challenges. Dominant rural sector industries include:

- Agriculture
- Manufacturing (including aggregates)
- Rural Tourism
- Retail
- Home-based business

**Building an Innovation Pipeline**

Both clusters and individual businesses from all sectors of the economy benefit from innovation, which follows a logical sequence that can best be viewed as a pipeline. In the development of a single product or enterprise, the innovation phases are sequential from idea to product to market. In an economy or a company, all innovation phases co-exist concurrently.

**Figure 3: The Innovation System: A 3-D Pipeline to the Marketplace**

The innovation pipeline works best when the volume and quality of ideas and discoveries are high and move at a good speed from one point to the next. This means that ideas quickly turn into discoveries, and discoveries into products, and products go to market and are sold. When the system is working at maximum potential, the whole economy and society benefits.

Within clusters, the **Discovery** stage is the creation of new ideas and knowledge based on research along with input and inspiration from the marketplace. The **Development** stage is the generation of new products
or services, and practical applications of this knowledge. The Deployment stage is new or expanded commercial enterprises—from start-ups to multinationals—that take these products or services to market.

In an individual business, there are similar stages of discovery, development and deployment. A business or product begins as an idea, which needs to be developed and then marketed. When there is a weak product-to-market culture, entrepreneurial training or expertise may be lacking. The result is that products miss their window of opportunity and fail.

**How to measure the success of the pipeline**

The innovative economy fosters an environment where creative thinkers and workers collaborate within a highly interconnected community to develop competitive and innovative products and services. Their dynamism permeates the whole economy and sets the stage for the emergence of new industries and clusters. Progress can be measured in these ways:

**Discovery**: Change in research dollars, in number and type of projects, number and type of collaborations, capacity for research (scientists, institutions, training).

**Development**: Capacity to develop ideas into commercial products (funding, expertise, workforce), number of institutions involved, patent activity, revenue from various streams, successful incubators, business plan activity.

**Deployment**: Number of new businesses and start-ups, company growth, companies moving to Ottawa (especially head offices), business finance, effective marketing and advertising, export sales.

Too frequently, good ideas fail to become products and good products fail to be marketed successfully. Many Ottawa businesses lack a clear product-to-market focus and the expertise to position their products properly. This is particularly true for entrepreneurs who may be brilliant in their field but lack sufficient management or marketing experience. It is equally problematic for chefs who dream of opening restaurants as it is for technology entrepreneurs or restless workers who want to buy a franchise. These entrepreneurs would benefit from mentoring from experienced managers, and training in management, finance and marketing.
4.0 Ottawa’s economic performance in 2003

This section looks at how Ottawa’s economy is doing now and in the last decade. It measures our prosperity according to outcomes such as employment growth. It also reviews the economic inputs that determine a city’s innovation and competitiveness.

4.1 How does Ottawa compare?

As the largest economic centre between Montreal and Toronto, Ottawa dominates the economy of Eastern Ontario. It has strong ties within Ontario and Western Quebec. Through its technology companies, Ottawa is also aligned with technology centres in the United States. Ottawa was amalgamated from 11 municipalities and the regional government (including four mainly rural municipalities) in January 2001. Between 2000 and 2003, the Ottawa economy has experienced the turbulence of the technology boom, subsequent downturn and recent strengthening.

Ottawa leads Canada in quality of life and prosperity.

Ottawa in 2003 is one of the most prosperous cities in Canada. It enjoys healthy financial growth, has the best-educated workforce in Canada and the second-highest salary per person. Ottawa celebrates its status as a capital city and all the benefits this brings. Total revenue for the city in 2003 is $33.378 billion; federal government revenue is an additional $173.315 billion—a percentage of which is spent in the national capital.

Geographically, Ottawa is one of Canada’s largest metropolitan areas with a land area of over 2,600 square kilometres. Almost ninety per cent of the city’s area is rural countryside. Most of the 819,000 residents live in the urban area; 80,000 live in rural Ottawa – 20,000 also work there. There are 51 villages and hamlets in rural Ottawa.

During 2001, Ottawa’s gross domestic product grew by 8%, the largest in Canada. Despite a shaky global economic climate in 2002, the Ottawa and Canadian economies remain strong. Job growth is steady.
Ottawa’s unemployment is relatively low—7.1% in mid 2002, a full percentage point below the national average.

As of June 2002, Ottawa had 434,500 jobs. It is estimated that technology employs about 67,000 or 15.4% of the total jobs. From January 1999 to January 2003, Ottawa created about 58,000 new jobs, an increase of 14.7%.

**Capital advantages**

Because it is Canada’s capital, Ottawa’s economy is unique among other Canadian cities. The federal government is a key driver of Ottawa’s economy along with technology industries and tourism. Though Ottawa is sometimes negatively referred to as a government town, the federal government is a rich source of both employment and expertise. Its research institutes are centres of excellence that benefit Ottawa businesses directly. As both a buyer of technology goods and services and a collaborator in science and technology, the Government of Canada is invaluable to Ottawa’s economy. It is an economic driver in the strongest sense—greater than any other growth cluster. Far from having a limiting effect on Ottawa’s economy, the federal government’s presence (and especially its research centres) was the genesis of Ottawa’s technology boom. From those beginnings, technology giants grew and spawned countless other companies and capabilities.

**Ottawa has strong R&D tradition and resources**

Ottawa has a well-developed science and research community, which includes academic and health care institutions. Their shared knowledge includes discoveries at the forefront of science. There is a global trend towards R&D institutions becoming active in forming new businesses—in addition to pursuing their primary research missions. Canada’s institutions do form spin-offs, but such activities are not a cornerstone of the country’s science culture. While improving, Ottawa’s universities and national laboratories still lack the entrepreneurial and spin-off culture of technology-related industries. The result is that there are relatively fewer product and company spin-offs from Ottawa’s national laboratories and universities.

**What cities does Ottawa compete with?**

Ottawa’s industry clusters compete primarily with cities in Canada and the United States. Like other cities in Ontario, much of Ottawa’s trade is directed south rather than east-west. The cities that Ottawa competes with specialize in the same export-oriented industries as Ottawa does. Ottawa’s key competitors, based on the analysis in *Innovation Ottawa: A Strategy for Sustaining Economic Generators*, are Raleigh-Durham in North Carolina, which competes with Ottawa in four industry clusters; and San Jose and Orange County in California, and Austin in Texas, all of which compete in three clusters.
Other competitors include Boulder (Colorado), Portland (Oregon), Seattle (Washington), Washington DC and Boston (Massachusetts) which compete with Ottawa in two industry clusters, as well as Fort Lauderdale (Florida), Rochester (New York), San Diego and San Francisco (California), Chicago (Illinois), and New York City which compete in one industry cluster.

Four of those cities (New York City, Chicago, San Francisco, Boston) are on the roster of “world cities.” Other city-regions in Canada that may offer competition include Vancouver, Calgary, Edmonton, Winnipeg, Hamilton, Montreal and Toronto.

While providing competition, Ottawa’s industry clusters also collaborate with these cities, where synergies and opportunities exist.

### 4.2 Ottawa industry cluster performance

Ottawa’s industry clusters employ fewer people than its local market sector but they are economic drivers – bringing new money into the economy from export sales and high-value transactions. Ottawa’s clusters industries grew 5% annually from 1990 to 2001 (6% annually for the last five years), compared to 1.3% for Ottawa’s economy overall.

Several Ottawa clusters are North American leaders when benchmarked against other regions. The telecommunications cluster, for example, performed better than competitors anywhere else in North America, in spite of the global downturn. While the telecommunications downturn has hit technology-based clusters, Ottawa’s strong public sector presence and tourism industry have lessened the impact.

Background research for Ottawa’s Economic Strategy evaluated the performance of 10 industry clusters—both established and upcoming. This Strategy recognizes that the industry clusters are just one segment of Ottawa’s economy and that other industries are important to its overall prosperity. The Strategic Directions and Policies outlined in this document consider all of Ottawa’s business sectors.

The 10 industry clusters fall into four groups, each with different growth and employment characteristics.

**Expanding clusters** lead the economy. Compared to Canada as a whole and competing cities, they employ more workers and grow faster.
Transforming clusters are slow-growing industries that may have peaked and require renewal. Still, relative to other cities, these industries have high employment.

Emerging clusters are the new entrants—they have relatively low employment and growth relative to competitors but high potential.

Ottawa’s expanding and transforming clusters include telecommunications, software and communications, microelectronics, tourism and professional services. The adjacent chart shows their relative performance. The bigger the circle, the more employed by that industry. For example, professional services and tourism employ about the same number. The height of the circle rates Ottawa’s degree of specialization in this industry. The farther right the circle, the faster this industry is growing relative to competing cities. Telecommunications, at 37% between 1998 and 2001, is off the chart.
The following charts for leading industries show Ottawa’s strength relative to its competitors.

Expanding cluster: Telecommunications equipment—global player, facing challenges

Strategic directions: protect innovation capacity and energize diversification

Expanding cluster: Microelectronics—semiconductor segment growing rapidly

Strategic directions: preserve R&D capacity and build value-chain
Expanding cluster: Tourism—strong growth

Strategic directions: encourage diversification and synergies with other clusters

Transforming cluster: Software and communications—industry maturing, focus shifting to software and system design

Strategic directions: energize growth in software
Transforming Cluster: Professional services—good specialization but growing slower than competing regions

Strategic directions: consolidate, expand export services & partnerships

4.3 Ottawa market and rural economy performance

Market sector industries are those that sell primarily to the local market, although some do export goods or services. This domestic economy (statistics here include the rural economy) accounts for 75% of private sector employment and the vast majority of economic activities. Education, health care and retail lead the domestic economy.

The education sector is an important contributor to quality of life and the economy in terms of employment, education and research. Ottawa is home to six institutions of higher learning (including 2 major universities and 2 large colleges) that offer diploma, undergraduate and post-graduate degrees. The city’s four public school boards also provide continuing and adult education, and along with numerous private schools who provide kindergarten to grade 12 education. Combined, the education sector employed 28,900 in June 2002 and spent more than $2 billion.
With 43,100 staff and $1.3 billion in expenditures, health care is Ottawa’s largest local employer and an important economic driver. Ottawa is a centre of health expertise for Eastern Ontario and parts of Western Quebec. Its health facilities (such as the Heart Institute), have national and international renown. Opportunities in medical research and teaching (along with Ottawa’s high quality of life) attract excellence and make Ottawa a major centre of health expertise within the province.

With 42,800 employees and an annual contribution of more than $11 billion to the local economy, the retail industry is one of Ottawa’s three largest industries. It benefits from the city’s growth and affluence and has traditionally been a strong and profitable sector. Overall, retail industry sales are estimated to increase to $14 billion over the next 10 years.

Ottawa is a popular tourism and convention destination, bringing $1.1 billion into the economy annually. Many market sector businesses benefit from the strong tourism cluster. Arts, entertainment and recreation are also strong, leading the market sector industries with 15.9% growth in the last six years.

At 6% of total employment, Ottawa’s manufacturing sector—most of it technology-related—falls well short of Canada’s 15% average for this sector. Accordingly, support industries such as wholesale trade, transportation, warehousing and distribution are weak.

The rural economy contributes over $1 billion to Ottawa’s economy. Agriculture accounts for $400 million—of which $136.7 million is farmgate sales. The diversity of the rural economy is manifested in the full range of sectors, from agriculture, retail, construction, forestry and mining (aggregates), to tourism, manufacturing, personal and business services, transportation and several other sectors. It provides a significant range of livelihood, investment and related economic opportunities for many Ottawa residents. Rural employment expanded by a healthy 18% from 1996 to 2001. In comparison, Canada's total employment grew by 10.5% from January 1999 to January 2003.

See Appendix 1 for further information on Ottawa’s market sector and Appendix 2 for further information on Ottawa’s rural sector industries. Appendix 3 details the value, employment concentration and growth of Ottawa’s industry clusters.
## Employment and Revenue Snapshot

### Employment

The top 10 employers are:

<table>
<thead>
<tr>
<th>Employer</th>
<th>Jobs</th>
<th>% of total employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal, provincial and municipal governments</td>
<td>92,300</td>
<td>21.2</td>
</tr>
<tr>
<td>Health &amp; social services</td>
<td>43,100</td>
<td>9.9</td>
</tr>
<tr>
<td>Retail</td>
<td>42,800</td>
<td>9.8</td>
</tr>
<tr>
<td>*Professional, scientific and technical</td>
<td>42,100</td>
<td>9.7</td>
</tr>
<tr>
<td>Education</td>
<td>28,900</td>
<td>6.7</td>
</tr>
<tr>
<td>*Manufacturing</td>
<td>27,100</td>
<td>6.2</td>
</tr>
<tr>
<td>Food &amp; accommodation</td>
<td>21,100</td>
<td>4.9</td>
</tr>
<tr>
<td>Construction</td>
<td>19,600</td>
<td>4.5</td>
</tr>
<tr>
<td>Finance insurance and real estate</td>
<td>18,500</td>
<td>4.3</td>
</tr>
<tr>
<td>Information and culture</td>
<td>15,200</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Total (Top Ten)</strong></td>
<td><strong>350,700</strong></td>
<td><strong>80.7</strong></td>
</tr>
</tbody>
</table>

*Includes high technology sector employment cumulatively estimated at 67,000

### Revenue

<table>
<thead>
<tr>
<th>Revenue source</th>
<th>$ Million</th>
<th>Ottawa</th>
<th>Elsewhere</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal government</td>
<td>173,315</td>
<td></td>
<td>unreported</td>
</tr>
<tr>
<td>Retail</td>
<td>11,264</td>
<td>92.8%</td>
<td>7.2</td>
</tr>
<tr>
<td>Technology</td>
<td>10,500</td>
<td>5</td>
<td>99.0</td>
</tr>
<tr>
<td>Municipal government</td>
<td>2,200</td>
<td>100.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Education</td>
<td>2,000</td>
<td>90.5</td>
<td>9.5</td>
</tr>
<tr>
<td>Construction</td>
<td>1,787</td>
<td>85.0</td>
<td>15.0</td>
</tr>
<tr>
<td>Publishing &amp; printing</td>
<td>1,500</td>
<td>93.3</td>
<td>6.7</td>
</tr>
<tr>
<td>Health care</td>
<td>1,300</td>
<td>75.0</td>
<td>25.0</td>
</tr>
<tr>
<td>Tourism</td>
<td>1,100</td>
<td>little</td>
<td>100.0</td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>607</td>
<td>unknown</td>
<td></td>
</tr>
<tr>
<td>Professional total</td>
<td>1,040</td>
<td>81.2</td>
<td>18.8</td>
</tr>
<tr>
<td>- Legal</td>
<td>200</td>
<td>80.0</td>
<td>20.0</td>
</tr>
<tr>
<td>- Accounting</td>
<td>250</td>
<td>80.0</td>
<td>20.0</td>
</tr>
<tr>
<td>- Architectural and engineering</td>
<td>260</td>
<td>70.0</td>
<td>30.0</td>
</tr>
<tr>
<td>- Management and scientific</td>
<td>250</td>
<td>90.0</td>
<td>10.0</td>
</tr>
<tr>
<td><strong>Total Sales/Revenues</strong></td>
<td><strong>$206,693</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.0 A strategy to achieve Ottawa’s economic vision

It is the goal of the Economic Strategy to achieve improved liveability and prosperity for Ottawa through thoughtful economic growth. Prosperity is created when there are high quality jobs, increased social and financial equity, and increased investment in the foundations that support our economy: people, place and knowledge. Ottawa will use the tools of the new economy—innovation, collaboration and continuous learning—to achieve its vision.

This Strategy is a beginning, not an end. At the City level, the policies contained here will give rise to a series of tactical plans for implementation. These plans will rely on the support of all economic partners: the private sector, public institutions such as research centres, universities, colleges and hospitals, the voluntary sector and every level of government working together.

Consultations with business individuals and groups uncovered several clear themes related to Ottawa’s strengths and challenges. These themes give rise to five strategic directions:

- Invest in people and place
- Share knowledge and ideas
- Link innovation to the marketplace
- Strengthen industry clusters and entrepreneurship
- Promote Ottawa to the world

These strategic directions give rise to 26 policies, whose intent is to increase the innovation and competitiveness of Ottawa’s businesses, institutions and workforce; to attract and retain high-value jobs and companies; to reinforce quality of life and environment; and to ensure long-term prosperity. A preliminary list of priority actions arising from these policies follows.
Immediate Priority Actions

The Economic Strategy suggests that immediate priority be given to the following actions, which are integral to the success of our vision. They are listed in an order corresponding to the related strategic directions outlined in the following sections—not in order of priority.

Strategic Direction 1: Invest in people and place
1. Increase two-way communication with business community to improve customer service and improve access for all businesses to assistance, information, technology and resources. [See policy 1.]
2. Implement a targeted business visitation program to better understand issues and opportunities of local businesses. [See policy 1.]
3. Implement the Talent Plan recommendations. [See policies 2, 3 and 7.]

Strategic Direction 2: Share knowledge and ideas
4. Implement the Broadband Plan recommendations. [See policies 12, 13 and 14.]

Strategic Direction 3: Link innovation to the marketplace
5. Develop a collaborative-based project between targeted clusters and research and academic institutions that will increase the commercialization of research and technology. [See policy 15.]
6. Assess Ottawa’s business incubation capacity and the potential to bring similar resources to other clusters and sectors in the economy. [See policy 16.]
7. Assess business marketing capacity and identify ways to strengthen companies’ ability to market their products and services internationally. [See policy 18.]

Strategic Direction 4: Strengthen industry clusters and entrepreneurship
8. Establish strategic support capacity for industry clusters to ensure that collaborative activity is initiated, managed and is productive. [See policy 19.]
9. Capture more revenue for the local economy by identifying potential supply-chain linkages between the industry clusters and local businesses, and between urban and rural businesses. [See policy 21.]
10. Develop a program that will strengthen and support the economic vitality of Ottawa’s main streets through promotion and business retention initiatives. [See policy 21.]
Strategic Direction 5: Promote Ottawa to the world

11. Market and promote Ottawa domestically and internationally as an ideal location for people, companies, tourism and investment. [See policies 24 and 26.]

12. Given its essential role in supporting conventions in the city, move forward the expansion of the Ottawa Congress Centre. [See policy 25.]
5.1 Strategic Direction 1: Invest in people and place

People are the source of innovation, ideas and knowledge. The Economic Strategy therefore recognizes that people power the economy. Ottawa must develop a sustainable culture of lifelong learning and recognition of personal values through the excellence of educational institutions, training/retraining opportunities and professional/occupational support organizations.

Ottawa has the highest educated workforce in Canada—an enviable asset that must not be squandered. Care must be taken to ensure that there is sufficient connection between the business and research communities and educational institutions to engage the best and brightest in innovative undertakings. It is also necessary to mine Ottawa’s workforce to bring forward those with aptitude for continuous learning and new challenges. In particular, the underemployment of foreign-trained professionals must be addressed.

This Strategy acknowledges the value of Ottawa’s outstanding quality of life, and sets as a goal the preservation and enhancement of all its assets. Ottawa’s success is the result of the energy, innovation and entrepreneurial spirit of the people who have chosen to live here. Our future and ability to attract both people and investment depend on maintaining both quality of life and quality of place. That includes a vital downtown, strong suburbs and a viable rural economy.

Ten percent of Ottawa’s residents live in 90% of its area—the green countryside that encircles the urban centre. It is no longer acceptable to consider this land “urban in waiting.” Ottawa must recognize and value the contribution of Ottawa’s rural businesses and communities as stewards of our countryside and promoters of rich choices in lifestyle and business opportunity.

Another environment—that of business climate is equally important to Ottawa’s competitiveness. The Economic Strategy seeks to reinforce the creative, cost-competitive environment in which businesses are promoted and appreciated as the creators of employment and prosperity, which benefits the future prospects and quality of life for all residents.

The viability of individual enterprises and the economy at large is ever more dependent on so-called “soft” infrastructure: worker skills, research and development, management training, risk financing and technology transfer. However hard infrastructure—our transportation and telecommunication networks, built environment, industrial and business parks, schools, hospitals, theatres, museums, parks and public
transit—have a direct impact on quality of place and quality of life. The City of Ottawa with the assistance of seniors levels of government must continue to invest in and improve the quality of its built and natural environment to maintain its lead as a city that offers excellent opportunities for start-ups, local enterprises and incoming businesses, including head offices.

5.1.1 Business communications

Challenge – When communication between the City and its small- and medium-sized enterprises falters, this vital economic sector suffers.

Supporting the development of small- and medium-sized enterprises (SMEs)—whether they are new, established or mature—is essential to growing a strong supply chain and accelerating the growth and viability of start-ups. The needs of these businesses can drop below the radar in a bigger city. Both group and individual communication strategies are necessary to prevent this from happening. Group communications channels include business associations such as chambers of commerce, business improvement areas and business associations. Individual channels include informal networking and one-to-one business visits, which aid business retention and expansion, and facilitate two-way communication. Celebrating business accomplishment and leadership is another excellent way for the City to forge solid relationships with the SME community.

Policy

1. The City is committed to building a two-way relationship with the business community, and to achieving clarity, completeness and equity in its business communications. [See priority action 1 and 2.]

5.1.2 Knowledge and skills development

Challenge – Workforce skills and training is a priority in both urban and rural small- and medium-sized enterprises.

Matching talent and aptitude is essential to intelligent workforce management. In some cases, workers lose sight of their direction in the employment market and end up in the wrong job. When businesses spend time and money training the wrong person, results are frustrating and costly. Ottawa’s economy may be losing as much as $100 million dollars annually due to mismatches between people and jobs. Underemployment also has its cost. It is estimated that Canada loses $5.9 billion annually by under-employing foreign professionals—people who are already trained but need support and orientation to find the right job.
Skilled workers and expert managers are essential to Ottawa’s prosperity and ability to compete. Ottawa first addressed workforce issues with the Partners for Jobs program and TalentWorks—a TOP initiative managed by OCRI. This commitment continues in the current Talent Plan.

**Policy**

2. The City is committed to addressing workforce shortages and underemployment with its government and community partners. [See priority action 3.]

**Challenge – Local small- and medium-sized enterprises have difficulty competing with industry clusters and government for skilled employees.**

Unable to pay salaries equivalent to cluster industries or the public sector, small- and medium-sized businesses (SMEs) often suffer staff shortages. Rural employers have particular difficulty finding skilled staff willing to work in their area. Service sector businesses that traditionally pay low wages have the additional challenge of a transient workforce. Service and physical labour are perceived as having less value or status than office or professional careers. Consequently, few people train for these careers.

**Challenge – Lack of skilled, professional tourism workers is a detriment to the tourism industry.**

The service industry related to tourism is traditionally low paying entry-level work. In contrast with other successful tourism destinations, there is little awareness or appreciation in Ottawa of the range of skills and career opportunities within the industry. Those employees who do achieve excellence are highly valued and in demand. Although training exists for frontline workers and senior management, Ottawa needs to help middle management and supervisors achieve their potential, and to encourage tourism business entrepreneurs and start-ups. Continued collaboration between educators, the tourism cluster and all levels of government is required to increase awareness of the opportunities and to develop a professional tourism workforce.

**Policy**

3. The City will work with community stakeholders to identify and carry out industry-specific talent projects that support targeted sectors. [See priority action 3.]
5.1.3 Rural economy

**Challenge – Ottawa’s agricultural sector is disconnected from urban markets and policies.**

When Ottawa amalgamated, four rural townships—West Carleton, Goulbourn, Osgoode and Rideau—joined eight urban municipalities (two of which, Gloucester and Cumberland, had extensive rural areas) to create a new city. Although the rural countryside is a considerable asset for the urban area, the reverse is not necessarily true. Agriculture is treated as a local business but competes on global markets and is subject to international forces such as trade policy, commodity subsidization and climatic change. There is little commerce between Ottawa’s food producers and its urban shops and restaurants. In fact, rural businesses inevitably lose trade to urban businesses.

The City must create a system of high-value linkages that benefit both the urban and rural economies. Unique local businesses are important to village character and tourism but need support. However, so does the thoughtful integration of Ottawa’s industry clusters with rural opportunities.

**Challenge – Ottawa’s agricultural land base and rural countryside are threatened by urban sprawl.**

Both urban green spaces and the rural countryside are central assets contributing to Ottawa’s quality of life and economy. In the past, lands zoned agricultural have been treated as “urban in waiting.” It has been more lucrative for farmers to sell to developers than to continue farming. It is essential to incorporate agricultural business interests in City decision-making and growth management plans if Ottawa is to preserve its green spaces, agricultural land and countryside. The latter are essential to the preservation of rural character and the success of rural tourism and agriculture-related businesses.

**Policy**

4. The City will preserve the agricultural land base and work with stakeholders to ensure that Ottawa’s agriculture industry remains viable, innovative and competitive.

5.1.4 Business climate

**Challenge – Business climate and costs require continual evaluation.**

Economic success requires a cost-competitive and supportive environment in which businesses thrive and are appreciated as the creators of employment and prosperity. Although it is cost-competitive on international markets, Ottawa must ensure that it is competitive domestically as well. This is even more so for rural businesses, which may have a higher cost of doing business than urban businesses, and higher
taxes than competitors in adjacent rural townships. It is essential for municipal and senior levels of government to be aware of and responsive to the tax and administrative needs and perspectives of the business community. This must include providing a timely, predictable and consistent decision-making process at City Hall so that entrepreneurs can capitalize on opportunities when market conditions are right.

**Challenge – Rural businesses tend to be disconnected from urban resources and City decision-making.**

There is no systematic analysis of the rural economy (e.g. sectoral profile, trends, employment and labour force characteristics, diversity, specialization and vulnerability assessment, linkages and input-output structure, performance and competitiveness assessments) on which to build a complete rural economic strategy. However, rural businesses consider some urban regulations and policies to be inappropriate and counterproductive to their interests. Some essential City services and programs are geographically distant from many rural businesses. For example, in some instances, it is necessary to drive into urban Ottawa to obtain a specialized building permit.

Gaps between rural and urban interests tend to be intensified because rural businesses are represented by multiple organizations. Establishing a single umbrella organization to speak for rural interests would advance positive communication and produce better results.

**Policy**

5. The City will continue to make municipal customer service and responsiveness a priority.
6. The City will evaluate, monitor and report business conditions, and seek to maintain its cost-competitiveness.

**5.1.5 Quality of life**

**Challenge – Ottawa’s ability to retain and attract business is at risk unless we take positive steps to protect its unique environmental assets and quality of life.**

Ottawa’s quality of life is a celebrated part of our identity. The City is committed to achieving growth without compromising its landscapes, its clean air and water, and unique recreational resources. Maintaining the vitality of our healthy business districts, residential communities, excellent health care and educational institutions, vibrant downtown and rich cultural assets is equally essential to competing in the global marketplace. Any possible degradation of Ottawa’s quality of life threatens its ability to attract and retain the most highly qualified people, which would have serious detrimental effects on Ottawa’s economy.
Ottawa understands that equitable distribution of these benefits is a determinant of community quality of life. The decisive test for equitable development is whether the gap between rich and poor is narrowing or widening.

**Policy**

7. The City will address the needs of the unemployed, underemployed and employers to achieve liveable incomes and a job-ready workforce. [See priority action 3]

8. The City will promote arts, culture and creativity by fostering collaboration between the creative community and other business sectors.

9. The City will support and encourage employment programs and support services to improve access to the workplace for disadvantaged groups.

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**Celebrating business**

Publicizing business success contributes to the virtuous cycle of accomplishment. The City should celebrate business accomplishment and leadership in both the public and the private sectors, possibly by:

- Continuing to support programs and events that recognize the contributions of public and private sector leaders.
- Creating an organizational environment within the City of Ottawa to encourage innovation, leadership and risk-taking.
- Investigating the feasibility of a local leadership exchange program between different sectors of the local economy (public and private) to encourage a cross-fertilization of ideas, methods and networks.

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**5.2 Strategic Direction 2: Share knowledge and ideas**

Ottawa must actively pursue collaboration between knowledge institutions—public and private research centres, colleges and universities and hospitals—to create a critical mass of shared knowledge. This knowledge must be shared with all participants in the economy.

The progression of knowledge from ideas to competitive intelligence to implementation demands strong collaborative linkages within and between industries, clusters and economic sectors—both public and private. Ottawa must actively pursue such collaboration by convening stakeholders. Stakeholder groups must build bridges between knowledge institutions—public and private research centres, colleges, universities and hospitals—to create the critical mass of shared knowledge. Linkages must also be forged
between and within the industry clusters to ensure that discovery and development stages of the innovation pipeline are firmly connected to the deployment stage.

One way to refocus marketing strategies and increase entrepreneurial energy is to increase linkages between mature enterprises in the industry clusters and Ottawa’s small- and medium-sized enterprises—both export-oriented and in the market sector. This will create a synergy of knowledge and ideas to advance development of innovative products and services in both sectors. Increased energy and innovation in the economy creates favourable conditions for competition and strengthens the cluster supply chain.

### 5.2.1 Collaborative linkages

**Challenge – Ottawa clusters and sectors do not collaborate sufficiently to capture shared knowledge, innovation and experience.**

In the new economy, cities that promote and achieve high levels of collaboration dominate export markets. Despite some success, Ottawa’s universities, government research centres and private industries still collaborate sporadically. To compete in international markets, Ottawa requires a critical mass of knowledge and expertise only possible through disciplined collaborative effort.

Collaboration must be the focus not just within and between industry clusters, but between Ottawa’s industry clusters and its market economy. Fuelled by the resulting cycle of innovation and excellence, Ottawa’s products and services will challenge and win export markets and the entire city will prosper.

Ottawa clusters and their supporting foundation institutions cannot be isolated in these endeavours. They must reach out to each other and to clusters in other cities to exchange ideas, combine efforts and develop mutually beneficial strategies and alliances. This should include taking a leadership role in national and international initiatives such as standards development, regulatory guidance, research networks and industrial consortia.

**Policy**

10. The City in partnership with its economic agencies will facilitate collaboration within/between clusters, institutions and other city-regions to ensure effective knowledge sharing.
5.2.2 Knowledge sharing

**Challenge – Ottawa’s inconsistent collaborative culture limits linkages between research and business, and creates roadblocks to knowledge sharing and technology access.**

Among the many riches of Ottawa’s various public and private research institutions, lie knowledge and technology with unexploited commercial potential. Because the missions and research mandates of these institutions vary greatly, linkage *between* institutions and *with* business is often weak. Ottawa research institutions often work in isolation from one another and the marketplace, and may have little incentive to work together and make breakthroughs to feed the innovation pipeline.

In an economy where researchers and companies tend to work in isolation, many opportunities are missed. New technology and discoveries are not systematically tracked and promoted. Cluster industries lose the benefit of rich relationships with potential suppliers and partners. It is essential for Ottawa to track and leverage its knowledge network so that all stakeholders—including market sector companies—have access to patents/discoveries, ongoing research and available technology in the city.

**Policy**

11. The City will work with public- and private-sector partners to develop and promote initiatives that increase access to available technology and discoveries.

5.2.3 Broadband infrastructure

**Challenge – Ottawa’s incomplete broadband infrastructure hampers economic agility and competitiveness.**

Ottawa’s innovation, competitiveness and prosperity depend on having a telecommunications infrastructure that facilitates transmission and sharing of knowledge between all participants in the economy. Competitor cities in the United States, Canada and Europe are building broadband infrastructure into their planning and development. The *Broadband Plan* puts forward a detailed strategy to extend access to all areas of the city and build a state-of-the-art telecommunication infrastructure to service old and new areas. The City must also foster the development and marketing of new high-bandwidth applications and services that will further enhance its attractiveness to knowledge-based workers and companies.

**Policy**

12. The City will work with non-profit, public- and private-sector partners to ensure that high quality, equitable broadband access is extended to all Ottawa addresses, both urban and rural. [See priority action 4.]
| 13. The City will ensure that broadband capabilities are an integral part of its planning and built infrastructure. [See priority action 4.] |
| 14. The City will partner in the development and usage of broadband applications that improve productivity, competitiveness and quality of life. [See priority action 4.] |
5.3 Strategic Direction 3: Link innovation to the marketplace

Too often good ideas fall on barren ground, either not developed into products or, as products, fail to be marketed properly. Only by adopting the entrepreneurial mindset at every stage of the innovation system will Ottawa develop a true product-to-market culture.

Ottawa’s strength in research, technology and innovation comes to the forefront in every economic analysis. The city is a leader in the telecommunications industry and is creating critical mass in microelectronics, software and communications, tourism and professional services. Another six industries are coming up quickly to create the next wave of the new economy: photonics, life sciences, wireless, creative industries, micro-electromechanical systems and environmental technologies. Only one element is missing—the continuous linkage from these innovators to the marketplace.

Link innovation to the marketplace suggests building bridges from the sources of innovation—individual creativity, science and research centres of excellence, and private-sector R&D laboratories—to the next step: technology, product development and business start-up.

These linkages and the culture supporting them must be strong enough to carry ideas all the way to market. Link innovation to the marketplace recognizes Ottawa’s wealth of innovative resources and assists entrepreneurs and businesses to take the next step—creating marketable products and services, and successfully selling these to the local and global communities.

5.3.1 Research, discovery and development

Challenge – The discovery network is not sufficiently connected to the marketplace.

While a great deal has been done to facilitate and promote technology innovation, there remain gaps between Ottawa’s vast science capacity and its business sector. Many of Ottawa’s public research and development institutions (national laboratories and universities) have intellectual property, contract or employment policies that make serving business or commercial needs difficult.

It is necessary to assist Ottawa’s researchers and their organizations to understand the needs of the market and to see potential commercial applications for their work. In some cities, independent intermediary institutions act as bridges between science and industry. This permits university researchers, for example,
to maintain independence from commercial influences, while also benefiting from collaborative networks and industry test-beds for their research.

The gap between available technology and business is doubly problematic for the enterprises in the market and rural sectors, which exist on the peripheries of industry clusters. As such, they may miss opportunities to create innovative specializations that could help diversify the economy. Capturing ongoing research, research capacity and new technologies in an accessible and timely way would benefit every sector of the Ottawa economy.

**Challenge – Innovative ideas without structure and direction are bound to fail. Without adequate support, too many Ottawa start-ups fail before maturity and fewer marketable products are developed.**

Innovation, competitiveness and prosperity depend on having an infrastructure that facilitates transmission and sharing of knowledge to all participants in the economy. Ottawa’s industry clusters lack critical mass partly because the innovation pipeline is working below capacity. Ottawa’s innovation system needs more and better business incubators to accelerate the formation of new enterprises. Incubators can also facilitate development of new regional seed money pools to help innovators get their enterprises through “proof of concept,” thus bridging the gap between scientific discovery and technology development.

Technology-based industries are especially dependent upon this ingredient for success. Non-technology start-ups such as creative industries and the renovation industry would also benefit from networks of complementary businesses. All start-ups require better linkages with existing resources such as OCRI’s Entrepreneurship Centre, Human Resources Development Canada, Business Development Bank of Canada and professional organizations.

Formal incubation capacity now includes the Ottawa Biotechnology Incubation Centre and incubators within research and academic institutions and private companies. Virtual incubators that arise through the enlightened self-interest of academics, investors and entrepreneurs are equally effective—or perhaps more so—than brick and mortar incubators.

Even where incubation capacity does exist, product developers require access to small-scale manufacturing to test and refine their discoveries and products. This can take the form of contract-manufacturing networks and/or pilot-scale production capacity. The Ottawa Life Sciences Council is already taking steps to establish such next-stage linkages to product marketing but they are needed for all sectors.
Policy

15. The City will support the ability of Ottawa research institutions and industry clusters to turn research and discoveries into products and services. [See priority action 5.]

16. The City, with its economic partners, will nurture business incubators for cluster industries and assess the opportunity to provide this capacity to other sectors of the economy. [See priority action 6.]

17. The City will work with its economic partners to improve the ability of entrepreneurs to take their products to the next stage, including access to contract-manufacturing networks and/or pilot-scale production capacity.

5.3.2 Product-to-market culture

Challenge – Ottawa companies often lack the knowledge and resources to position and market their products and services effectively.

Incubating entrepreneurial ideas to the business plan stage is a worthwhile strategy for every sector of the economy—from photonics to tourism to retail. However, follow-up support for developing and marketing new innovative products or services is essential if inexperienced entrepreneurs are to succeed.

Building a product-to-market culture builds on Ottawa’s wealth of innovative resources to assist entrepreneurs and businesses to take the next step—creating marketable products and services, and successfully selling these to the local and global communities. Taking this step requires knowledge and access to resources. Entrepreneurship training in marketing, finance and management is essential for small- and medium-sized business owners, managers and employees. Academic institutions and private enterprise must be encouraged to plan, develop and fund curricula and training programs focusing on entrepreneurial and product-to-market capabilities. Public resources such as OCRI’s Entrepreneurship Centre can assist by promoting and expanding online tools and resources for self-paced learning, both for export and non-export businesses.

Policy

18. The City will work with local economic stakeholders to develop and promote marketing expertise to improve product-to-market success. [See priority action 7.]
5.4 Strategic Direction 4: Strengthen industry clusters and entrepreneurship

Local economic activities of the federal government together with the export-oriented industry clusters determine the performance of the Ottawa economy. Our industry clusters drive economic prosperity because exports bring wealth into the city. This money circulates through the local economy, helping create the quality of life that we value.

Since 1999, business, government and community leaders, working through The Ottawa Partnership (TOP) have achieved substantial progress in fostering strong economic foundations that fuel the growth and resilience of the export-oriented industry clusters. However, a high performing regional economy must continually renew itself to maintain its position in the global market and its capacity for growth.

The economy has changed significantly in the last three years; the technology recovery presents both challenges and opportunities. To maintain its competitive position, Ottawa must increase its capacity for innovation and the competitiveness of its economic foundations.

It is essential that Ottawa continue to strengthen its major industry clusters, and increase synergy and collaboration between related businesses, education, training and research institutions to achieve competitiveness, innovation and prosperity. The cluster industry workgroups must be revitalized and expanded.

Building the industry clusters does not detract from Ottawa’s commitment to supporting its market sector. Indeed, the vitality of cluster enterprises fuels the local economy. It would be an advantage to increase linkages between the market sector and the industry clusters. This Strategy proposes to facilitate the start-up, growth and expansion of local businesses by increasing entrepreneurial capacity and by connecting them to the new economy and technology.

5.4.1 Industry clusters

Challenge – Ottawa’s industry clusters need a better infrastructure for collaboration to capitalize on the window of opportunity created by Canada’s strong economic performance.

In the years since the publication of Choosing a Future, the 2000 study of Ottawa's economic generators commissioned by The Ottawa Partnership, business and industry have consciously increased their joint
activities—particularly precompetitive and marketing networks. Ottawa is rich in assets compared to many other North American cities, however collaboration within and between industry clusters is fragmented. While some clusters have strong supporting organizations, others lack the capacity to manage and develop cluster activities. Intermittent efforts to leverage opportunities are not enough to maintain momentum or sustain an accelerated rate of innovation.

**Policy**

19. The City will work with its economic agencies and TOP to manage collaboration and advance cluster development. [See priority action 8.]

20. The City will work with its economic stakeholders and TOP to increase cluster growth and specialization.

**5.4.2 Entrepreneurial capacity**

**Challenge – Unless entrepreneurial effort is valued and supported, Ottawa will not reach its economic potential.**

Entrepreneurial spirit fuels Ottawa’s ability to compete with other city-regions and maintain its quality of life. Enterprise development and private-sector success depend on a strong entrepreneurial culture. If entrepreneurs lack support, the vitality of Ottawa’s business community is weakened. Support should include promoting and extending the reach of entrepreneurial training programs, developing ways to identify and develop entrepreneurial talent, and creating programs that value and support entrepreneurial effort.

**Challenge – Ottawa’s manufacturing capabilities are weak, which is detrimental to every sector’s ability to compete.**

Ottawa’s prosperity depends on its ability to capture a high percentage of the value of business activity. The more products and services are purchased outside the city, the lower this “value capture”. It is estimated that such imports cost Ottawa’s economy an estimated $3.2 billion annually. When cities import products or services, they fail to develop their own capacity or

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Ottawa’s underdeveloped manufacturing capacity can hamper product development and marketing. Possible strategies to develop pilot and contract manufacturing capacity include:

- Build a network linking private outsource contract manufacturers of MEMS, photonics, biomedical and environmental products.
- Promote regional contract manufacturing.
- Build pilot-scale production capacity.
- Develop a “buddy system” to connect entrepreneurs to mature companies with excess manufacturing capacity.
under-use the capacity they do have. This is the case for manufacturing. The printing sector, for example, has excess capacity that could be marketed to local enterprises and governments.

Ottawa’s underdeveloped manufacturing capacity affects all sectors: the market sector and industry clusters, and both urban and rural economies. In the agricultural sector, local processing capacity has actually decreased. Ottawa’s undersized manufacturing sector causes related weaknesses in the transportation and warehousing sectors.

**Challenge – Supply chain linkages between the market and rural sectors with industry clusters are underdeveloped; the value of imported products and services is higher than it should be.**

Business with industry clusters offers a substantial opportunity for small and medium-sized companies. However, import statistics show that cluster companies frequently purchase from suppliers in other cities. In other cities, regional buyer-supplier networks help local companies find “outsource” partners, and promote recruitment of local suppliers and producers, including contract manufacturers. This connects local businesses to the new economy and technology, thereby increasing entrepreneurial capacity and facilitating the start-up, growth and expansion of businesses.

As is the case for cluster industries, a healthy local economy depends on adequate financing and business resources. Supply-chain networks could be supported by strategies to further “grow” the market sector to ensure that it remains viable, innovative and competitive. Candidate subsectors include: legal services; management, scientific and technical consulting services; street front retail; health and education; and agriculture. Strategies might include identifying and promoting alternate sources of capital for start-ups and expansion of small businesses in the rural and market sector industries.

**Policy**

21. The City will work with senior levels of government and its local economic partners to develop and promote Ottawa’s economic diversity. [See priority actions 9 and 10.]

22. The City will support and strengthen entrepreneurial capacity by promoting its value and improving access to training and development.
5.4.3 Financing

Challenge – Investment capital is not as easily procured as previously. Small companies are at risk of failure or take-over due to financing difficulties. Entrepreneurs with good ideas have difficulty getting started.

High-technology clusters, with their long product-to-market cycles, are especially dependent on venture capital. Some technology companies benefit from federal research and development tax credits. Other sources of financing include the federal Business Development Bank, individual “angel” investors and mainstream banks. One thing is certain: financing—whether venture capital or angel investment—is much harder to obtain since the technology downturn. That difficulty is causing a financing gap that retards the progression of innovative products through the pipeline.

This is problematic for SMEs in particular. Small innovators aren’t growing fast enough to qualify for sustainable financing or to avoid being acquired. When they are acquired, Ottawa risks losing them to another city. Small- and medium-sized enterprises have trouble convincing lenders to risk capital for their ventures. Sources of start-up and venture capital money are very limited for rural businesses.

Another strategy for SME survival is to encourage partnerships or mergers of start-ups with complementary local firms that serve distinct markets. These partnerships will help companies to

Food for thought

Ottawa has a unique status as a city with extensive rural assets; it is to our advantage to promote and develop our agricultural capacity. One way to do this is to promote local food producers and related industries. Possible ways to do this include:

- Leverage existing R&D infrastructure to support agricultural and rural communities’ natural advantage within the bio-based economy (e.g. bioproducts, alternative uses of crops, natural products).
- Commission a study on the popularity, trends, existing sales and market potential for health food and organically grown products in the capital region.
- Assist Ottawa restaurants and agriculture industries to develop mutually beneficial programs, logos and cuisine created based upon local food products.
- Investigate the feasibility of more food-related production, storage, warehousing and distribution facilities.
- Assist local food producers and truck transportation companies to arrange for the refrigerated delivery of fresh local farm products on a consistent basis to Ottawa grocery retailers.
survive, build scale, and grow, and in doing so possibly avoid failure or acquisition by firms outside Canada.

Financing problems for entrepreneurs are due to inexperience preparing acceptable business plans, reticence on the part of lenders to lend money to small risky ventures and—at times—lack of knowledge on the lenders’ part to sufficiently gauge the risk. Where the lack of a credit rating or poor credit rating is a barrier to obtaining financing, micro loans (from sources such as the Ottawa Community Loan Fund) can be very effective.

**Policy**

23. The City in collaboration with other stakeholders in Ottawa’s economy will facilitate access to investment capital and identify and promote alternate sources of capital for business start-up and expansion.

### 5.5 Strategic Direction 5: Promote Ottawa to the world

Through the OTCA, OCRI and other stakeholders, Ottawa needs to develop and promote its unique assets to attract people, tourism, companies and investment.

Ottawa has all the natural assets needed to ensure success as a tourism, convention and investment destination. The Economic Strategy recognizes the importance of infrastructure—including convention and hotel facilities—to this success and to Ottawa’s stature as a capital city. It is now time to build on past successes to advance the city’s reputation as a dynamic centre for business, tourism and investment.

#### 5.5.1 Attract tourists and conventions globally

**Challenge – Infrastructure inadequacies and the lack of a collaborative marketing strategy prevent the tourism cluster from reaching its potential.**

Tourism depends on both hard and soft infrastructure for competitive success. As Canada’s capital, Ottawa has the benefit of national facilities, museums and galleries, and is renowned for its beauty. Although Ottawa is a successful tourist destination—it is one of the growth industry clusters—questions remain whether it is achieving its full tourism and convention potential. The delay in expansion of the Ottawa Congress Centre is jeopardizing Ottawa’s ability to compete for larger conventions.
Through the OTCA, cultural industries and other stakeholders, Ottawa needs to develop a marketing strategy for new tourism attractions, products and services, such as new national and local museums; and rural, environmental and sport tourism strategies and initiatives.

This marketing strategy would depend on increased use of information technology, including the World Wide Web. It would celebrate and promote Ottawa’s established and emerging creative industries: the arts, culture and entertainment sector, and film and television sector. Implementation would depend on increased funding for destination marketing to put Ottawa on the global radar.

### Policy

24. The City will support the OTCA and other stakeholders to develop a collaborative strategy to market Ottawa as a global tourist and convention destination. [See priority action 11.]

25. The City will facilitate development of infrastructure to support Ottawa’s status as an international convention and tourism destination. [See priority action 12.]

### 5.5.2 Investment destination

**Challenge – Renewed effort and investment is essential to accelerate Ottawa’s marketing successes.**

Essential to Ottawa’s competitive strategy is increasing its visibility as a unique and desirable location for business, investment and talent. Ottawa has the assets to attract the brightest and the best—but we must tell the world. Ottawa, its economic agencies and its individual businesses must cast their net wider to include contacts with clusters and cluster organizations in other cities across North America and Europe.

Ottawa Global Marketing, a division of OCRI, leads the city’s efforts to market Ottawa internationally. Through a focused program carried out in close collaboration with the OLSC and OTCA, the private sector and all three levels of government, Ottawa Global Marketing has significantly raised Ottawa’s profile in global technology centres. Implementation will require continued funding for investment attraction.

### Policy

26. The City will support OCRI’s Ottawa Global Marketing and other stakeholders to promote Ottawa as a unique global centre for business, talent and investment. [See priority action 11.]
6.0 Monitoring economic progress

The City of Ottawa is committed to monitoring the city’s progress against that of other cities. This section sets out the parameters and indicators for evaluating our progress against each of the five strategic directions.

6.1 Invest in people and place

Evaluate progress in improving business climate, promoting the rural economy and supporting knowledge and skills development, and by benchmarking Ottawa’s status against similar cities nationally and internationally.

Establish performance indicators and data sources for comparison, schedule for monitoring and strategy for updating/acting upon findings.

Possible indicators:

- **Prosperity**: High employment and increased quality of working conditions. Improvements in wages per person and household income. Healthy returns to shareholders.

- **Equity/disparity**: Reduction in the gap between rich and poor (based on average household income). Increase in equity—opportunity, community quality and participation—regardless of where people live. Reduction in the employment gap between foreign-trained professionals and Canadian-born and trained professionals.

- **Sustainability**: Retaining mature companies and highly educated workers. Reduced “ecological footprint” for land and energy use, less waste and better waste management; clean air and water; no net loss of farmland or environmental performance – even as the city grows.

- **Quality of life**: Increased affordability and choice of housing, health care and cultural resources relative to economic growth. Personal and income security.

6.2 Share knowledge and ideas

Evaluate progress in increasing collaborative linkages and building systems for knowledge sharing, and by rating Ottawa’s innovative and competitive status against similar cities nationally and internationally.

Establish performance indicators and data sources for comparison, schedule for monitoring and strategy for updating/acting upon findings.
Possible indicators:

- number and type of collaborations
- penetration/uptake of technology into the market/rural sector
- ease of access to research and technology information
- business Internet usage
- broadband penetration

6.3 Link innovation to the marketplace

Evaluate progress in helping ideas take shape and building a product-to-market culture, and by rating Ottawa’s innovative and competitive status against similar cities nationally and internationally.

Establish performance indicators and data sources for comparison, schedule for monitoring and strategy for updating/acting upon findings.

Possible indicators:

- research investment and activity
- number of researchers and institutions
- patent activity
- capacity to develop ideas into commercial products and services
- business start-ups/failures
- number of products and services marketed

6.4 Strengthen industry clusters and entrepreneurship

Evaluate progress in building innovative clusters and sustaining an entrepreneurial market sector, and by rating Ottawa’s innovative and competitive status against similar cities nationally and internationally.

Establish performance indicators and data sources for comparison, schedule for monitoring and strategy for updating/acting upon findings.
Possible indicators:

- **Strong and diverse local economy**: Increased import replacement. Increased diversity of retail, manufacturing and service activities. Increase in tourism and convention activity.

- **Prosperity**: High employment and increased quality of working conditions. Improvements in wages per person and household income. Healthy returns to shareholders.

- **Increased cluster activity**:
  - **Formation**: Higher rates of enterprises being started, surviving and growing to international scale within clusters.
  - **Expansion**: Improved retention and growth of members of existing and emerging industry clusters.
  - **Attraction**: Increased immigration of companies and new investment in existing and emerging industry clusters.

- **Increased value-added specialization** (employment concentration)

- **Better average annual growth rate** relative to competing municipalities for each regional cluster

- **Movement of clusters** from seed to emerging to expanding stages of the life cycle

### 6.5 Promote Ottawa to the world

Evaluate progress in creating a global presence, and by rating Ottawa’s innovative and competitive status against similar cities nationally and internationally.

Establish performance indicators and data sources for comparison, schedule for monitoring and strategy for updating/acting upon findings.

Possible indicators:

- Tourism and convention revenues and participants
- Number, size and quality of conventions
- Increased attendance at festivals and fairs
- Number of nights accommodation booked
- Value of tourism increases in both urban and rural settings
- Increase in international investment in the Ottawa economy
- Arts and culture funding
7.0 Interpretation and implementation of the Economic Strategy

This Strategy acknowledges that there is significant work to be done. Achieving the goals set out here requires the collective support of private and public sectors, volunteer organizations, labour, research centres and academic institutions. Success depends on the people of Ottawa, who have the skills, resources and creativity to achieve these goals.

Implementation of this strategy and the realization of its vision depend on the will and collaboration of Ottawa’s business, educational and research communities. Ottawa’s leading economic partners include The Ottawa Partnership (TOP), economic agencies (OCRI, OLSC, OTCA), chambers of commerce, business improvement areas, Ottawa Federation of Agriculture, business and professional associations including cluster groups, and educational institutions. These economic partners already have a track record of collaboration, often with City involvement. Their successful partnerships will be the foundation for new collaborative ventures.

Depending on the involvement and support of other agencies, the City’s role would range from facilitation, enabling and support to actually sustaining programs. In every case, the City’s goal will be to leverage its investment and assets to the greatest degree possible.

It is the mandate of Ottawa’s elected representatives to ensure that the spirit of the Economic Strategy is respected and built upon. The mission of Ottawa’s Business Development Branch is to provide the linkages between business interests and opportunities to ensure that the content of the Strategy is implemented. It is the responsibility of both to review and update the strategy as required, and to create action plans for its implementation.

The next step is the development of tactical plans to implement the Economic Strategy. The progress of all Ottawa 20/20 plans will be assessed every year in a Report Card that will be based on quantitative and qualitative indicators. This will allow all stakeholders to keep a watchful eye on the cumulative effects of change. It will also allow us to determine whether public spending is serving real needs and achieving the desired results. The Ottawa 20/20 plans will be reviewed every five years to assess whether amendments are necessary.
8.0 References

_Ottawa 20/20 Economic Strategy Supporting Plans_

Broadband Plan, (City of Ottawa, 2003). Ottawa’s strategy to extend broadband connectivity to unserviced areas and to integrate telecommunications strategy into the City’s planning and development.

_Talent Plan_, (City of Ottawa, 2003). Ottawa’s strategy to improve workforce assets and training.

_Broadband Plan_, (City of Ottawa, 2003). Ottawa’s strategy to extend broadband connectivity to unserviced areas and to integrate telecommunications strategy into the City’s planning and development.

_Talent Plan_, (City of Ottawa, 2003). Ottawa’s strategy to improve workforce assets and training.

**Background Reports and Previous Studies**

Choosing a Future: A New Economic Vision for Ottawa, (ICF Consulting, 2000). Prepared for The Ottawa Partnership (TOP), this report examined the area’s economic wealth generators and the relationship (vital cycle) connecting its foundation institutions, businesses and quality of life.


Serving Ottawa: Economic Strategies to Develop Ottawa’s Local Economy, (Doyletech Corporation, McSweeney Associates Management Consultants, Market Research Corporation, 2002). An examination of market sector businesses that sell to residents and other Ottawa businesses.

Appendix 1 – Market Sector Industry Economics

Health Care and Social Assistance

Value: 43,100 employees as at June 2002  
Concentration: average  
Employment Growth:  
  Canada (1996 – 2002 avg.): 2.2%  
  Ottawa (1996 – 2002 avg.): 4.5%  
Growth Prospects: Employment: 2 to 4%; Sales: 0 to 2%

Retail Trade

Value: 42,800 employees as at June 2002  
Concentration: below average  
Employment Growth:  
  Canada (1996 – 2002): 2.1%  
  Ottawa (1996 – 2002): -1.9%  
Growth Prospects: Employment: 0 to 2%; Sales: 2 to 4%

Professional, Scientific And Technical Services

Architectural, Engineering & Related Industry

Value: 6,500 employees as at June 2002  
Concentration: above average  
Employment Growth:  
  Canada (1996 – 2002): 7.4%  
  Ottawa (1996 – 2002): 0.0%  
Growth Prospects: Employment/Sales: 2 to 4%
### Management, Scientific and Technical Consulting Services Industry

**Value:** 6,000 employees as at June 2002  
**Concentration:** above average  
**Employment Growth:**  
- Canada (1996 – 2002): 5.6%  
- Ottawa (1996 – 2002): 7.1%  
**Growth Prospects:** Employment/Sales: 4 to 6%

### Legal Services Industry

**Value:** 5,300 employees as at June 2002  
**Concentration:** above average  
**Employment Growth:**  
- Canada (1996 – 2002): 6.8%  
- Ottawa (1996 – 2002): 7.9%  
**Growth Prospects:** Employment/Sales: 4 to 6%

### Accounting, Tax Preparation, Bookkeeping, Payroll Service Industry

**Value:** 1,600 employees as at June 2002  
**Concentration:** below average  
**Employment Growth:**  
- Canada (1996 – 2002): 5.4%  
- Ottawa (1996 – 2002): -7.8%  
**Growth Prospects:** Employment/Sales: 0 to 2%

### Computer System Design & Related

**Value:** 18,600 employees as at June 2002  
**Concentration:** above average

### Other (Advertising and Specialized Design)

**Value:** 4,100 employees as at June 2002  
**Concentration:** average
## Education Industry

**Value:** 28,900 employees as at June 2002  
**Concentration:** average  
**Employment Growth:**  
  - Canada (1996 – 2002): 1.8%  
  - Ottawa (1996 – 2002): -1.3%  
**Growth Prospects:** Employment: 0 to 2%, Sales: 2 to 4%

## Finance, Insurance and Real Estate Services

### Finance (Credit & Related) Industry

**Value:** 7,800 employees as at June 2002  
**Concentration:** below average  
**Employment Growth:**  
  - Canada (1996 – 2002): 0.7%  
  - Ottawa (1996 – 2002): -0.8%  
**Growth Prospects:** Employment/Sales: 0 to 2%

### Securities and Commodities Industry

**Value:** 3,500 employees as at June 2002  
**Concentration:** average  
**Employment Growth:**  
  - Canada (1996 – 2002): 8.4%  
**Growth Prospects:** Employment/Sales: 0 to 2%

### Insurance Industry

**Value:** 2,800 employees as at June 2002  
**Concentration:** below average  
**Employment Growth:**  
  - Canada (1996 – 2002): -0.3%  
  - Ottawa (1996 – 2002): -10.2%  
**Growth Prospects:** Employment/Sales: 0 to 2%
Real Estate, Rental & Leasing Services Industry

| Value: | 4,400 employees as at June 2002 |
| Concentration: | average |
| | Ottawa (1996 – 2002): -6.9% |
| Growth Prospects: | Employment/Sales: 0 to 2% |

Tourism* (Accommodation & Food Services)

Accommodation Industry

| Value: | 3,400 employees as at June 2002 |
| Concentration: | below average |
| Employment Growth: | Canada (1996 – 2002): 2.9% |
| | Ottawa (1996 – 2002): 18.8% |
| Growth Prospects: | Employment: 4 to 6%; Sales: above 6% |

Food Services Industry

| Value: | 17,700 employees as at June 2002 |
| Concentration: | below average |
| | Ottawa (1996 – 2002): -2.2% |
| Growth Prospects: | Employment: 4 to 6%; Sales: above 6% |

* Growth prospects assume the expansion of the Congress Centre and a hotel room levy dedicated to marketing.

Construction Industry

| Value: | 19,600 employees as at June 2002 |
| Concentration: | below average |
| | Ottawa (1996 – 2002): 10.3% |
| Growth Prospects: | Employment/Sales: 2 to 4% |
### Information and Cultural Industries

#### Newspaper, Periodical, Book, Database & Software Publishing Industry

<table>
<thead>
<tr>
<th>Value</th>
<th>900 employees as at June 2002</th>
</tr>
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<tbody>
<tr>
<td>Concentration</td>
<td>below average</td>
</tr>
<tr>
<td>Growth Prospects</td>
<td>Employment/Sales: 2 to 4%</td>
</tr>
</tbody>
</table>

#### Motion Picture & Video Industry Overview

<table>
<thead>
<tr>
<th>Value</th>
<th>800 employees as at June 2002 (est.)</th>
</tr>
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<tbody>
<tr>
<td>Concentration</td>
<td>average (est.)</td>
</tr>
<tr>
<td>Growth Prospects</td>
<td>Employment/Sales: 4 to 6%</td>
</tr>
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</table>

#### Broadcasting Industry—Radio, TV, Pay TV, Cable, Specialty TV

<table>
<thead>
<tr>
<th>Value</th>
<th>1,700 employees as at June 2002 (est.)</th>
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<tbody>
<tr>
<td>Concentration</td>
<td>above average</td>
</tr>
<tr>
<td>Employment Growth</td>
<td>Canada (1996 – 2002): -1.6% (radio /TV)</td>
</tr>
<tr>
<td></td>
<td>Canada (1996 – 2002): 8.4% (other)</td>
</tr>
<tr>
<td>Growth Prospects</td>
<td>Employment/Sales: 2 to 4%</td>
</tr>
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</table>

#### Telecommunications Industry

<table>
<thead>
<tr>
<th>Value</th>
<th>7,500 employees as at June 2002 (est.)</th>
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<tbody>
<tr>
<td>Concentration</td>
<td>above average</td>
</tr>
<tr>
<td>Employment Growth</td>
<td>Canada (1996 – 2002): 1.1%</td>
</tr>
<tr>
<td></td>
<td>Ottawa (1996 – 2002): -4.6%</td>
</tr>
<tr>
<td>Growth Prospects</td>
<td>Employment/Sales: 2 to 4%</td>
</tr>
</tbody>
</table>
## Information Services Industry

**Value:** 3,600 employees as at June 2002 (est.)
**Concentration:** very high
**Employment Growth:**
- Canada (1996 – 2002): 2.6%
- Ottawa (1996 – 2002): 20.8%
**Growth Prospects:** Employment/Sales: 4 to 6%

## Data Processing Industry

**Value:** 700 employees as at June 2002 (est.)
**Concentration:** very high
**Employment Growth:**
- Ottawa (1996 – 2002): 2.8%
**Growth Prospects:** Employment/Sales: 2 to 4%

## Arts, Entertainment & Culture Industry

**Value:** 13,500 employees as at June 2002 (est.)
**Concentration:** above average
**Employment Growth:**
- Canada (1996 – 2002): 6.3%
- Ottawa (1996 – 2002): 15.9%
**Growth Prospects:** Employment/Sales: above 6%

## Transportation and Warehousing Industry

**Value:** 13,500 employees as at June 2002 (est.)
**Concentration:** below average
**Employment Growth:**
- Canada (1996 – 2002): 1.9%
- Ottawa (1996 – 2002): 1.8%
**Growth Prospects:** Employment/Sales: 0 to 2%
Wholesale Industry

Value: 11,100 employees as at June 2002 (est.)
Concentration: below average
Employment Growth:
- Canada (1996 – 2002): 5.0%
Growth Prospects: Employment/Sales: 0 to 2%

Other Ottawa Market Sector Services

Administrative and Support Services

Value: 14,200 employees as at June 2002 (est.)
Concentration: average
Employment Growth:
- Canada (1996 – 2002): 6.9%
Growth Prospects: Employment/Sales: 2 to 4%

“Other Services” Industry

Value: 22,800 employees as at June 2002 (est.)
Concentration: above average
Employment Growth:
- Canada (1996 – 2002): 1.0%
- Ottawa (1996 – 2002): 4.4%
Growth Prospects: Employment/Sales: 0 to 2%

Public Administration

Federal Government

Value: 73,000 employees as at June 2002
Concentration: extremely high
Employment Growth:
- Canada (1996 – 2002): 0.7%
- Ottawa (1996 – 2002): 5.3%
Growth Prospects: Employment: 4 to 6%; Sales: 2 to 4%
### Defence Services Industry

<table>
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<tr>
<th>Value</th>
<th>6,900 employees as at June 2002</th>
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<td>Concentration</td>
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<td>Employment Growth</td>
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<td></td>
<td>Ottawa (1996 – 2002): 2.2%</td>
</tr>
<tr>
<td>Growth Prospects</td>
<td>Employment/Sales: 0 to 2%</td>
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### Municipal Government

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<td>Ottawa (1996 – 2002): 9.5%</td>
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<tr>
<td>Growth Prospects</td>
<td>Employment/Sales: 0 to 2%</td>
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Appendix 2 – Rural Sector Economics

Agriculture

Agriculture is the integral component to rural sustainability by virtue of the number of businesses, the employment it creates, its market responsiveness and its role as a steward of the countryside. Agriculture has many complementary interrelationships with the prosperity of other sectors such as rural tourism, as well as preserving the quality of rural Ottawa as a place to live and to set up a business.

As many as 10,000 jobs in the City’s overall economy are directly and indirectly associated with agriculture. Close to 300,000 acres is farmed by over 1,300 agricultural operations. Thriving and technologically advanced dairy, beef, pork, poultry and cash-crop sectors characterize Ottawa’s agriculture. Smallholdings contribute a significant diversity that includes Christmas trees, emus, horse farms and stable operations, vegetables, apiaries, berries, nurseries, greenhouse businesses, and many other niche operations.

Ottawa’s agricultural community has good linkages with research and development through the University of Guelph (which has campuses at Kemptville and Alfred), the Central Experimental Farm and commodity associations. Farmers are already part of the new economy, growing custom crops for applications such as ethanol and nutriceuticals. By 2020, it is hoped that Ottawa’s agricultural base will be linked to its biotechnology and life sciences industries to create a true urban-rural partnership.

Manufacturing

The manufacturing sector (e.g. processing, fabrication) is very small. Some parts of it relate to the food and beverages sub-sector for value-added production (e.g. cheese, honey). Some relate directly to the construction sector (e.g. trusses & cabinetry). Other manufacturing includes small metal (e.g. welding) and machinery operations. The number of manufacturing jobs in rural Ottawa is not likely to exceed 2,000 jobs and may well be less.
Rural Tourism

It is estimated that there are over 200 rural tourism businesses—most of which could handle more business than they do. The rural sector benefits from the adjacent urban market for day and weekend trips as well as tourist traffic to provincial parks and other attractions. It offers a rich array of facilities, natural resources and services, including a beautiful countryside of farms, forests, rock outcrops, the Ottawa River, the Rideau River and Canal, streams, wetlands and other physical features, interesting historic and attractive villages and hamlets, 26 parks and environmental areas, 19 farmers’ markets, fairs and festivals, 23 public golf courses, 10 campgrounds, raceways, numerous hiking trails and many other assets. The rural area’s farmers’ markets, festivals, fairs and other special events are the principal draw for the all-important adjacent urban market. These resources are complemented by an active bed and breakfast business sector, antique, crafts and other retail outlets, and the agricultural sector’s burgeoning array of specialty businesses (e.g. berries, llamas, horse riding centres).

Retail

The rural sector offers a full range of retail opportunities (e.g. groceries, hardware), and some “big ticket” outlets (e.g. automobile sales). However, a large percentage of rural income is spent by commuters in major shopping centres (e.g. Bayshore, Place d’Orleans) and specialty retail outlets in the urban areas.

The rural economy has an impressive array of specialty or niche retail operations. These range from bakeries, country cuisine and antique stores to pottery and craft outlets and related businesses. Indeed, they are essential to the rural “Main Street”. While such business usually centre on the interests and creativity of the owner-operator, they are fundamental to the “sense of place” and uniqueness of the rural villages. They enhance the community’s attractiveness to certain other small businesses and increase regional visitor and tourist traffic.

Other Sectors

The business services sector shows greater employment concentration in the rural economy than in Ontario as a whole. It is fuelled by advances in telecommunications and computers, increased broadband access and by societal shifts towards active retirement and non-urban lifestyle choices. The sector includes consulting, communications, advertising, editorial services, human resources development, interior and industrial design, and personnel training.
The rural home-based business sector includes professional services, bed and breakfast and other hospitality services, arts and crafts production, environmental and outdoor recreation services, processing of preserves and other specialty foods, antiques, residential environmental services, repair and maintenance services, woodworking and a host of other products and services.

The mining (e.g. sand and gravel) and the forestry sector employ approximately 200 people each. The transportation and storage sector is characterized by a small number of businesses in the rural area, as is the construction sector.

**Issues**

The City should collaborate with all other partners (e.g. provincial and federal governments, Ontario Federation of Agriculture) to do everything it can to ensure that agriculture remains a viable investment and business opportunity.

Ottawa’s rural enterprises could make significant use of municipal buildings across the rural parts of the City.

Rural businesses need easier and more reliable access to information.

Reinforcing the entrepreneurial resources of the rural economy is an important and relevant role for the City—this includes ascertaining the training, advisory and other support required by rural entrepreneurs and business operators.
Expanding Clusters

Expanding clusters lead the economy. Compared to Canada and competing cities, expanding clusters employ more workers and grow faster. If everything goes right, the total number of firms will increase at every stage of the innovation pipeline (Discovery, Development, Deployment).

Expanding cluster: Telecommunications Equipment

Global Player, Facing Challenges

Value: Ottawa has emerged as a leader in North America and the world. The city is home to several leading telecommunications firms and has numerous research and development institutes. In 2001, telecommunications employed about 11,400 people in Ottawa. Recent layoffs have decreased this number.

Concentration: Compared to its telecommunications competitors, Ottawa is now only second to San Jose in terms of size and employment concentration, having recently surpassed Raleigh-Durham. Ottawa’s concentration of telecommunications workers relative to competing cities grew from 4.2 in 1998 to nearly 13 in 2000 before dropping to 10 in 2001\(^1\). Significant layoffs caused this rapid drop in concentration. Firms with the most diversified product lines suffered the fewest layoffs.

Growth: Ottawa’s employment growth (35% a year, 1991 to 2001) is several times greater than competitor regions. This has been true in the past three-, five- and ten-year periods. San Diego is a new, fast-growing competitor. While smaller, San Diego’s telecommunications equipment cluster benefits from the presence of Qualcomm and ongoing collaboration with the University of San Diego.

\(^1\) This number indicates the degree of concentration of cluster employment in Ottawa relative to the North American average. A value of 10 indicates that telecommunications employment as a share of total Ottawa employment was 10 times greater that the North American average.
Expanding cluster: Microelectronics

Semiconductor Segment Growing Rapidly

Value: The microelectronics cluster includes semiconductor and electronic component design, computer hardware design, and manufacturing and applications for defence and private industry. There are over 100 microelectronics companies, including over 40 fables semiconductor companies. Semiconductor activity is more diversified and resistant to slowdowns than computer hardware. In 2001, Ottawa’s cluster employed 6,600 persons (down from 7,600 in 2000).

Concentration: In the 1990s, the microelectronics cluster became increasingly specialized, competitive and increased its export earnings. Employment concentration increased from 1.1 in 1990 to 1.6 in 2001. However, this cluster is not doing as well as its competitors. Since 1998, total employment has declined. Larger and more concentrated clusters in Orange County, California and Portland, Oregon have grown. In those regions, semiconductors and other electronic components dominate the cluster. In Ottawa, computers and peripherals account for almost half of this cluster.

Growth: Relative to the rest of Canada, microelectronics growth in Ottawa has been rapid. Breakthroughs in new technologies, shifting markets and short product life cycles create a boom-bust dynamic in this cluster. Over the last three years, employment declined 3.7% a year, reflecting global market changes. The cluster grew 7.5% in the previous 5 years and 10.5% in the previous decade. Although Ottawa has experienced greater downturn than its competitors, history suggests it can be highly competitive.

Expanding cluster: Tourism

Strong Growth

Value: The tourism cluster in Ottawa employs about 48,000. These jobs are spread across sectors such as visual and performing arts, sports and entertainment, hotels, and eating and drinking establishments. Over the last decade, employment growth has been strongest in the eating and drinking establishments followed by entertainment and the arts.

Concentration: When compared to competing regions, Ottawa’s tourism cluster appears strong. Employment is both growing more rapidly and is more concentrated than all others, including major tourism and convention destinations such as San Francisco, New York and Washington, DC. In fact, among benchmark regions, the Ottawa tourism cluster is the clear leader in growth and concentration. Overall concentration increased to over 1.2 in 2001.
Growth: Employment growth over the last decade has been steady. The region even added jobs during the recent economic slowdown. Over the previous three-, five- and ten-year periods, employment growth for the tourism cluster outpaced overall growth in Ottawa.

Transforming Clusters

Transforming clusters are often the historic drivers of the economy. They are highly concentrated relative to the North American average yet are growing slower. Transforming clusters often reflect global market changes such as a movement of industries from higher cost regions to lower cost regions.

Transforming Cluster: Software and Communications

Industry Maturing, Focus Shifting to Software and System Design

Value: This cluster includes telecommunications services, computer systems design, data processing and other information services. These industries have experienced growth nationally but have peaked in Ottawa. In 2001, the software and communications cluster employed 38,500, mostly in computer systems design.

Concentration: Trends in concentration follow the rise and fall of the telecommunications sector. In 1990, Ottawa led software and information services (IT), but 60% of its concentration was in telecommunications services. As IT expanded and telecommunications was deregulated, employment fell and overall concentration dropped. By 1995, the cluster was adjusting to new market realities, and employment concentration grew relative to Canada and the US. The global technology downturn hit Ottawa particularly hard. However, employment in IT and systems design actually grew during that period, adding 1,300 and 4,300 jobs respectively.

Growth: Though still a leading cluster in North America, employment shrunk sharply between 1998 and 2001, while other regions surprisingly continued to register significant employment gains. This is a substantial shift from 1991 to 2001, when Ottawa’s cluster grew faster than any other benchmark region. Computer systems design has expanded at nearly 15% a year since 1990, accounting for nearly all the cluster’s recent growth. Communications services is still large, but stagnant.
Transforming Cluster: Professional Services

**Good Specialization but Growing Slower than Competing Regions**

**Value:** This cluster encompasses a broad array of skilled services, such as legal services, consulting (management, science, technical), advertising and contract research services. Sectors such as building services, advertising, legal services, and management, scientific and other consulting services are increasing their share of total cluster employment. The professional services cluster employed 43,600 people in 2001.

**Concentration:** The cluster lost significant employment during 1999 and early 2000 yet grew quickly again throughout 2001. The growing export orientation of professional services is reflected by employment concentration, which reached 1.6 in 1999 but then dropped to 1.3 in 2001.

**Growth:** Employment growth has been brisk over the last decade, growing nearly 5% annually—over 3.5 times faster than Ottawa’s overall economy. This signals that the cluster is increasingly exporting its services outside the region. The professional services cluster is relatively small, only the fourth largest out of the six benchmark regions. While the cluster’s overall growth rate relative to its base has been substantial, its rate of growth is considerably below its competitors.

Emerging Clusters

Emerging clusters have low concentration and growth but high potential.

**Emerging cluster: Photonics**

**Great Potential, Synergies with other Clusters**

**Value:** Photonics includes technologies related to the commercial application of light, including fibre optics, lasers, opto-electronics, imaging and optical processing of information. Ottawa is the home to 34% of Canada’s photonics organizations, the most in the country. Between 4,500 and 5,000 people are employed in photonics cluster, mostly in large companies. This does not include companies in the telecommunications, wireless and semiconductor sectors.

Technological synergy between telecommunications, microelectronics and photonics is strong and is one reason why Ottawa is well positioned. The National Research Council has pioneered photonics; its campus features both a new incubator facility and the Canadian Photonics Fabrication Centre (CPFC). The
Communications Research Centre (CRC), an institute of Industry Canada, supports Ottawa’s position as a world leader in photonics. Additional research capacity resides with Ottawa Photonics Research Alliance (OPRA), the University of Ottawa’s Centre for Research in Photonics, and Carleton University’s Carleton Photonics Group.

**Emerging cluster: Life Sciences**

**Good Base, Currently Lacks Scale**

**Value:** There are almost 100 life sciences companies in Ottawa employing close to 4,000. The region has cutting-edge research and new product development in the fields of medical diagnostic equipment, therapeutic equipment, implants/prostheses, biotechnology, pharmaceuticals, and a range of electromedical applications. This cluster also has strengths in the human, animal and agricultural sciences.

The cluster draws strength from the technical excellence found in the region’s excellent research centres. Local universities and university-affiliated hospital research centres further contribute to the strength of the cluster. If employment in research institutions and centres is included, the cluster employs 7,000 more.

Investments in the cluster have been encouraging; more than CDN$140 million was invested between September 2001 and May 2002. Innovative and novel technologies are receiving funding, especially in the areas of biotechnology and environmental technologies.

**Seed Clusters**

Seed clusters are components of a next-generation economy. While their overall employment level and concentrations are low, their growth rates may be quite high. They have potential to become drivers of the regional economy, if their distinct regional assets are harnessed.

**Seed Cluster: Creative Industries**

**Seeking Cohesion and a Critical Mass of Development**

**Value:** Creative Industries include the arts, TV, film, broadcasting and video, media, artists, design, marketing and advertising. There are natural links with other clusters such as professional services and tourism. As Canada’s capital, Ottawa enjoys access to such cultural institutions as the National Arts Centre,
the National Gallery of Canada, the Canadian Museum of Civilization and dozens of other museums, libraries, archives and historic monuments.

Film and television production in North America and the rest of the world is increasingly competitive. Worldwide production in 1999 (in US dollars) was $125,367 million, up from its previous high of $92,580 million in 1996. The European Union (EU) accounted for $2,558.96 million of the world figure. The United States accounted for $8,699 million and Canada represented $225 million. Film is one of the fastest growing sectors of the Canadian economy.

**Growth:** Ottawa’s production, production services and development expenditures rose by 70% per year since 1996 to $38.7 million in 2000. The industry’s strengths are documentaries, animation, comedy, children’s and lifestyle television. Despite recent high growth rates, employment in motion pictures, and radio and TV broadcasting declined in 2000-2001. In addition, Ottawa has not experienced the same rate of domestic and co-production growth as other provinces.

**Seed Cluster: Wireless Technology**

**Great Potential but Needs an Anchor Company and Increased Linkages and Investment**

**Value:** The numerous companies developing wireless and satellite components, systems, software, security and content delivery solutions ensure that Ottawa is a key player in global wireless innovation. Wireless Fidelity, satellite communications, software-defined radio, security, short message service and personal communication service are some technologies being developed in Ottawa.

**Growth:** Ottawa-based Communications Research Centre Canada (CRC), an institute of Industry Canada, helps identify and close the innovation gaps in Canada’s wireless sector by engaging in industry partnerships, building technical intelligence, and supporting technology start ups. Ottawa is also home to the National Capital Institute for Telecommunications (NCIT), who together with Carleton University are creating the Centre for Wireless Research. The Centre will provide access to a wealth of wireless expertise and equipment and conduct research into next generation wireless systems, both mobile and fixed.

**Seed Cluster: Micro Electromechanical Systems (MEMS)**

**Potential for Growth Leveraging Ottawa Clusters**

**Value:** MEMS is emerging at the convergence of the fields of telecommunications, microelectronics, semiconductors, material sciences and biotechnology. A microsystem is an integrated collection of small
devices and circuits capable of performing complex tasks such as controlling automobile airbags. The cost reductions and quality improvements that MEMS devices enable are significant because they use much less raw material and energy than traditional circuits and devices.

**Growth:** Ottawa and Edmonton lead Canada’s global presence in MEMS. Edmonton is growing a concentration of research, development and commercialization capacity, supported strongly by the University of Alberta. Ottawa should also be a leader in MEMS and should continue to grow in the coming years. The emerging MEMS sector has served the telecom market. In the recent downturn, growth has declined and ventures have been sold. However, some major firms are purchasing smaller companies at the cutting edge of MEMS to apply to the medical and biotech markets.

**Seed Cluster: Environmental Technologies**

**Synergies with Life Sciences, MEMS and Research Labs**

**Value:** This cluster applies technologies to prevent, treat or remedy environmental problems. Universities, environmental technology and industry-focused institutes, existing companies and new spin-offs support environmental technologies. The cluster is also linked with the life sciences and MEMS clusters. Promising segments include air pollution control technology ($3.8 billion, up 5.5% since 2000); strategic environmental management (emergency management, particularly flooding prevention and process engineering); wastewater and hazardous waste management systems.

**Growth:** The market for environmental technologies is growing but the future is largely dependent on the regulatory environment. Business demand for certain process-control technologies has peaked as industries have complied with basic regulations. Industry must adapt its technology to develop integrated systems; security will drive demand for diverse technologies and services.

**How Competitiveness is Measured**

**Value** – how much employment and revenue does the industry produce?

**Concentration** – how much revenue and employment does the industry have compared to the same industry in other cities?

**Growth** – how fast is the industry growing relative to other cities and compared to other industries in Ottawa?