



# Ottawa WORKS

A MOSAIC OF OTTAWA'S ECONOMIC  
AND WORKFORCE LANDSCAPE

# 2

**REPORT II:**  
PROFILING OTTAWA'S WORKFORCE

**PREPARED BY**

Center on  
**Governance**  
University of Ottawa



Centre d'études en  
**gouvernance**  
Université d'Ottawa

**FUNDED BY**



Human Resources  
Development Canada

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ressources humaines Canada



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A Mosaic of Ottawa's Economic  
and Workforce Landscape

Report II:  
Profiling Ottawa's Workforce

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# Executive Summary

This report is the second of the series *Ottawa Works: A Mosaic of Ottawa's Economic and Workforce Landscape*. These reports, which focus on Ottawa's workforce, are being prepared by the Centre on Governance at the University of Ottawa. In the first report, *Ottawa's Workforce Environment*, over 50 indicators were presented covering nine workforce-related dimensions (state of the economy, costs of doing business, innovation, income level, employment profile, workforce transitions, access to technology, skills and education, and quality of life) to broadly depict the context in which Ottawa's workforce functions. Data were compiled from a wide variety of sources and presented to help identify trends (where possible) and establish comparisons with eight other cities in Canada and the United States. This document extends this contextual background by painting a supply and demand picture for Ottawa's workforce and identifying major issues and concerns among various industry employers and job seekers.

Through a process that involved a survey of over 500 Ottawa residents, interviews with over 60 key informants, and 12 focus groups representing each of the nine major industry sectors of Ottawa's economy, anecdotal data were systematically gathered, distilled, summarized and interpreted to present this workforce profile of the city. As well, careful attention was given to the concerns of the unemployed, immigrants, persons with disabilities, and groups advocating on behalf of these segments of the workforce. This process is depicted in Figure 1.

The research team has developed a picture of Ottawa's workforce that reveals the depth of its quality and its flexibility. The report shows how the city's talent pool could enrich the local economy in the future and build a community that benefits everyone. Attention was given to cross-cutting talent issues among the nine industry sectors in the community, such as skills transfer and multi-skilling. This report synthesizes and presents the patterns and concerns, 34 basic issues in all, that emerged from the data collection phase. From this list of 34 issues we have culled a top 10 list of key workforce challenges. A summary of these is presented on page V. Readers may wish to explore the full list of 34 issues in Part 3, or examine the

comments and concerns of industry employers and job seekers in Part 2. The Top 10 Key Workforce Challenges are the issues and concerns that will be the major focus of the third report of the *Ottawa Works* series.

The identification of 34 workforce issues, with varying levels of significance and urgency, should mitigate any complacency about the city's many talent strengths, such as its high level of educational attainment. Most of these issues are not sector-specific, and therefore cannot be addressed by even the collective action of sector or professional associations. To address many of these concerns, several sectors must be involved, various authorities and mandates will need to be consulted, and addressed, and accountability to numerous and sometimes competing audiences must be taken into account. This is precisely why these concerns have proved thorny and intractable in the past. Balancing and prioritizing these issues, and recommending practical solutions for addressing them, will be the work of the third TalentWorks report of the *Ottawa Works* series, *Ottawa's Workforce Development Strategy*.

For purposes of completeness, Appendix K includes some of the many comments and recommendations made by interviewees and focus group participants. This valuable input will serve as the starting point for the strategy-building exercise of the third report of *Ottawa Works*. However, we must underscore that these recommendations are not those of either TalentWorks or the Centre on Governance — they are simply a compilation of the feedback we received.

## The Process of Developing Ottawa's Workforce Profile

<b>Nov. 2001 – May 2002</b>	Data, survey, interviews, focus groups, industry reports, secondary sources
<b>June 2002</b>	Ottawa Workforce Profile short list of areas of concern for a Workforce Development Strategy
<b>June 2002</b>	TalentWorks Steering Committee input into what recommendations should be examined further over the summer (prioritizing exercise)
<b>July 2002</b>	Key informant interviews and feasibility study of recommendations
<b>September 2002</b>	Ottawa Workforce Development Strategy document to City
<b>October – December 2002</b>	Ottawa Workforce Development Strategy serves as basis for City's "Charting Course" consultations

# Top 10 Key Workforce Challenges

Ottawa's top 10 workforce priorities, based on this report, are the following:

## 1 Insufficient Linkages and Partnerships

The inadequacy of cross-sector linkages among businesses, government, the community, institutions of higher education, and schools was a recurrent theme during this consultation. In particular, industry participation in shaping curricula and in guiding career trajectories was deemed inadequate.

The disconnect between the available education and training programs and the needs of Ottawa employers was often described in terms of networking failures — the failure to exchange personnel between industry and education; the inability to use industry input in the formulation of curricula; the failure to develop effective internships and co-op placement systems beneficial to both students and employers; and an absence of a widespread system for mentoring or “training the trainer” initiatives.

Respondents also felt that better links between businesses and educational institutions would make more cost-efficient use of local resources. The Master's of Aerospace Engineering program in Montreal and the business-education partnerships forged by the Canadian Micro-electronics Corporation (based in Kingston) were both cited as best practices in this regard. In Ottawa, while this sharing of industry and academic resources is being done through the National Capital Institute of Telecommunications and through Algonquin's Bachelor of Information Technology program, it was felt that this type of partnership needs to be expanded.

## 2 Lack of a Single Window for Information on Ottawa's Workforce Demands and Training Resources

There is a lack of clear, timely and comprehensive information on Ottawa's current and future workforce demands, and on the available training programs that might address

these demands. Such information should be easily accessible to employers, employees, the unemployed, and potential immigrants. There is a need for a “one-stop shop” of reliable information rather than a multitude of sources. An online solution should be included.

## 3 The Threat of a Triple Crunch (Growing Economy, Retirements, Double Cohort)

The need to establish a new and more effective system of workforce governance is strongly underscored by the coming together of three unfolding challenges. First is the demographic challenge of 30 percent of the senior professors, trainers, and teachers in the workforce retiring. Given that Ontario is also creating fewer Ph.D.s today than in 1990, we know there will be fewer people, particularly at the post-secondary level, to provide the training that is currently needed. Secondly, the next big wave of students, the children of the baby boomers, is currently moving through the post-secondary school system. This, combined with the impact of the double cohort in 2003 (the elimination of grade 13 causing two graduating classes to finish high school at the same time), will add significant demand to the already stretched resources of the post-secondary system. This spike in demand will last for five to eight years. Lastly, the talent demands of the next wave of advanced technology growth will probably begin in the next two to three years. These demands will likely siphon off specialists from the education system, as happened from 1997 to 2001. The net result of this “triple crunch” is that just as the demand for talent reaches its highest point, our capacity to meet that demand will be significantly diminished.

## 4 Insufficient Career Counselling

There is a clear need for significant reinvestment of time, money and people in career counselling across the region at the secondary, post-secondary and adult levels. This message comes across the board from industry, job seekers, placement organizations, and education and training

organizations. The standard message from existing career services is to get a university education to get a job in the advanced technology sector. Obviously, any community is built on more than one sector, and Ottawa is no exception. Career counsellors need to familiarize themselves with a wider range of career options, and they need more up-to-date information on where the job market is heading, what skills (both technical and employability) are required, and what education and training options will deliver those skills effectively. The need for more effective career counselling applies not only to youth but to all employed and unemployed people.

### 5 Underutilization of Foreign-Trained Professionals

Due to artificial barriers created by immigration policies, provincial regulations, and certain professional associations' regulations and standards, foreign-trained or immigrant professionals are underutilized in Ottawa. Further, the lack of policy coherence among the federal government, provincial government and the professional associations creates an odd situation: individuals are encouraged to come to Ottawa because of a talent they may never be able to use in Ottawa. This lack of coherence relates to the lack of investment in screening processes in countries of origin, the recognition of immigrant qualifications, and funding for immigrant skill upgrading.

### 6 Insufficient Employer Commitment to Employability Skills and Failure of Educators/Trainers to Integrate Employability Skills in Curricula

There is an overriding recognition of the importance of "soft skills" or employability skills, but there is no long-term vision or commitment to the systematic development of these skills, backed by appropriate incentives. In today's job market, firms are selecting candidates on the basis of employability skills. However, if, as we've heard, technical skills are "what you train for" and employability skills are "what you hire for," then education/training develops a skew towards technical skills, and treats

employability skills as a given. Such a bias can eliminate good candidates without thought to employability upgrading.

Education and training providers (private and public) are not integrating technical skills, business skills and interpersonal skills effectively. As a result, employees are frequently underutilized, because it takes time for them to acquire these integrated skill sets (which will benefit their employers). The often expressed need for several years of experience (which is seen by many as a barrier to employment) is based on the assumption that, given sufficient experience, employees develop business and personal skills and integrate these with their technical skills. Since educators and trainers have failed to bring about this skills integration process, employers must rely on employees going through "the school of hard knocks."

### 7 Insufficient Mapping of Industry Skills and Training Requirements to Aid Transferability

Few industry sectors have developed a detailed map of the skills and training requirements of their sector (an exception is the mapping conducted by the Software Human Resource Council). This limits skill transferability within a sector and limits the ability of job seekers and employers to assess skill transferability across sectors. This lack of knowledge reduces the flexibility of the workforce to adapt to the fluctuations in any given industry.

### 8 Need to Reduce the Lag Time Between Skill Identification by Employers and the Educational/Training Response

Educational institutions and government do not respond adequately to changes in skill sets. There is a significant lag time between when an industry recognizes a need for a particular skill and when the educational organizations respond to that need. In the case of colleges and private sector trainers, this delay may be from nine to twelve months; at the university level the delay may be as much as three to five years. Closer ties between industry and the education/training sector are needed. In addition, given

the increasingly technical emphasis of education, and therefore the short life span of the skill sets taught, educational institutions seem to be consistently preparing for the past. For example, we have successfully doubled the pipeline for ICT education just at the time when the demand for ICT graduates has been cut in half. At the same time minimal attention is paid to the more universally required employability skills that have long life spans in a worker's career.

## 9 Regular Collection and Publication of Data Found in *Ottawa Works*

A number of people spoke about the ongoing need for the type of broad contextual data on Ottawa that were presented in the first report of the *Ottawa Works* series. The City has its own needs for information, and employers, workers, educators/trainers and prospective workers have different information needs. All tend to agree that a single window approach is desirable and has considerable value. This raises a series of questions. Which organization(s) should do it? What resources are required, and where will they be found? Where should it be housed? In what form? How should it be governed for maximum credibility?

## 10 Need to Revitalize Trades Education in Secondary Schools

There is insufficient coverage of the seven broad-based Technological Studies programs in area high schools. There is an over-concentration on ICT studies at the expense of the other broad-based technologies. Therefore, students generally are not being introduced to the full range of trades. When compared to schools in other school districts, the number of Ottawa students enrolled in the broad-based Technologies Studies program is low. This imbalance, combined with the inadequate levels of career counselling available to students, may result in students failing to develop career paths in the professional trades.

The seven Technological Studies programs offered by the various local boards of education in Ottawa's secondary school system are broad-based and not trade — or vocation-specific. The purpose of the broad-based approach is to provide graduating students with transferable skills that will allow them to seek employment, further education, or training in a number of trade- and vocation-specific areas. The seven programs are:\*

- Communications Technology
- Construction Technology
- Hospitality Services
- Manufacturing Technology
- Personal Services
- Technological Design
- Transportation Technology





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# INTRODUCTION

This report, *Profiling Ottawa's Workforce*, builds on the first report of the *Ottawa Works* series - *Ottawa's Workforce Environment* - and serves as the second step towards the generation of a Workforce Development Plan for the City of Ottawa. As stated in Part I, the Plan will have three related focuses:

- 1 Creating opportunities for the unemployed, under-employed and currently employed to acquire the skills they need to participate more fully in Ottawa's economy or advance their careers.
- 2 Creating more effective ways to develop, attract and retain a regional talent base that is knowledgeable, skilled and responsive to the changing needs of a knowledge-based economy; that provides a foundation for the development of local employers; and that attracts outside employers, potential employees and investors.
- 3 Creating new ways to facilitate ongoing workforce development and permit a wide range of community stakeholders to work towards the innovative solutions needed to meet Ottawa's workforce challenges.

## Methodology

This phase of the three-part *Ottawa Works* project used a variety of research methods. These approaches helped determine what to look at, how to look at each element,

and how to draw conclusions from the data gathered. The research team interviewed key people in each of the nine economic sectors and in various advocacy groups, held focus group sessions with representatives from each sector, and held focus group sessions with advocacy groups and job seekers. Notes were taken during each interview and focus group session, and nearly all of these sessions were recorded and transcribed. Summaries of anecdotal data taken from interviews, and focus groups related to each sector, capture key points and allow comparisons across sectors. The Centre on Governance also designed a survey (conducted by Decima Research) that addresses workforce and quality of life issues in the Ottawa area.

Time was the biggest constraint faced in collecting the data on which the Workforce Strategy is based. The Steering Committee and the funding stakeholders agreed that timeliness was a priority - there was no point in compiling a detailed report with recommendations based on outdated information. Therefore, the Centre on Governance took a "key informant" approach to collecting anecdotal data by inviting active community leaders to participate. The goal of this approach was to get input from individuals who have extensive experience in their sectors and who have a broad perspective on the economic context in which their sectors reside. The Centre also got input from all industries in the Ottawa area, which the team categorized into nine sectors. As well, comments from individual job seekers and the community groups who assist them were solicited.

A large amount of data was collected and examined. Using the conceptual framework outlined in Appendix I, the researchers prepared sector summaries that identify the training/education gaps in the Ottawa workforce, the skills that are transferable within and across the nine economic sectors, the need areas to which the training/education sector can respond, the particular needs of job seekers, and some policy/practice areas that could be adjusted by various agencies to facilitate job acquisition.

A three-dimensional model was used to help identify which skills are transferable within each sector and across sectors (see Appendix J). This model permitted the data from job seekers and advocacy groups (the third dimension of the model) to be included in an organized way. Key information about each sector and how it relates to other sectors was summarized, which made it easy to identify “high profile” skills that play a key role in attracting, training and retaining a talented workforce. Training issues became obvious through data trends and an absence of data in some areas.

## About This Report

In this phase of the investigation, researchers examined the needs of employers and workers in the nine major sectors that make up the Ottawa economy. The characteristics and growth needs of the various sectors were examined. The potential mobility of workers within and across sectors was investigated from the perspective of skills transferability. As well, the needs of job seekers were identified along with the obstacles they might face in moving from one type of work to another to find a sustainable place in the city's economy. The patterns and issues presented in this report are based on community-wide data gathered in the previous *Ottawa Works* report (*Ottawa's Workforce Environment*), a telephone survey of Ottawa residents, over 60 key informant interviews, 12 focus group meetings (involving representatives from each of the nine industry sectors, job seekers and local advocacy organizations), and various sector reports and studies.

## How to Read This Report

The Centre on Governance research team spent eight months collecting statistical and anecdotal data related to workforce issues for nine industry sectors in Ottawa. The

team created a short list of the major areas of concern (see “Ottawa's Top 10 Workforce Issues” in Part 3). The second part of this report, the “Discussion of Findings” (from the Ottawa Employment and Skills Telephone Survey, the industry summaries, and the summary of input from job seekers and advocacy groups), presents the feedback gathered during the research phase. These findings are the basis for the third part of the report, “Identifying Key Workforce Challenges.” The most prominent and commonly heard concerns are also addressed by the 10 key workforce challenges included in the third part. In turn, these key challenges are the foundation for the last report of the *Ottawa Works* series, *Ottawa's Workforce Development Strategy*. This final report will address the basic issues presented in this report and focus on the 10 key challenges.

Readers should remember that the data and conclusions presented here are based on a relatively small number of interviews with key community members. We cannot claim to be exhaustive or perfectly representative in our description of each industry's workforce situation, but we were careful to invite input from individuals who could best paint a “broad strokes” picture of their sector. In short, the research team from the Centre feels confident that the research methodology used has resulted in a fair and accurate picture of Ottawa's workforce.

# Recapping *Ottawa Works I* — Ottawa's Workforce Environment

To begin, we offer a brief summary of the findings from the first *Ottawa Works* report. That report studied data related to nine indicators - state of the economy, costs of doing business, innovation, income, a profile of area employment, workforce transitions, access to technology, a skills and education profile, and community quality of life. Most of the information had already been reported elsewhere, but the pattern that emerges by putting them all together is novel. Since the significance of the emerging patterns is open to interpretation, we encourage readers to examine the detailed indicators themselves.

## Strong Economy

Ottawa's economy is strong and has significantly outperformed the national average in recent years. Ottawa is Canada's R and D leader and a major player in a number of high-tech sectors. Analysts predict that Ottawa will meet or exceed the Conference Board of Canada's expectations for municipal economic growth. But the lack of diversity in Ottawa's economy leaves it vulnerable to the swings of government and advanced technology.

When the costs of doing business in Ottawa are compared with those of eight selected Canadian and U.S. cities, Ottawa's remarkable cost advantage is revealed, especially over the U.S. centres. The cost structure for Ottawa businesses is approximately 14 percent lower than for their American counterparts. This suggests Ottawa is a great place to do business.

## Highly Educated Workforce

Ottawa's current workforce is the most highly educated in Canada and seems to be producing another generation of extremely well educated people. This educated talent pool is one reason for Ottawa's high R and D levels, and it suggests a highly innovative workforce. Venture capital investment, which is a very practical indicator of innovation, increased in Ottawa more than tenfold between 1998 and 2001. Many small companies have started up and a significant number of area residents have become self-employed. Employment growth has generally outpaced population growth over the past five years. Taken together, these facts suggest that a strong entrepreneurial culture has evolved in the city in recent years.

The presence in Ottawa of two universities, two colleges of applied arts and technology, and approximately 1,000 private-sector training organizations bodes well for a community already rich in education and training. The post-secondary institutions have responded to changing workforce demands and new employment categories by increasing enrolment in strategic areas. As well, collaborative research with the private sector is encouraged and continuing education programs are provided to meet the needs of life-long learning. The presence of these institutions in the community enhances Ottawa's investment potential and its attractiveness to residents.

## Increasingly Diversified Workforce

Most of the venture capital investment attracted to Ottawa has been directed towards ICT. More than 17 percent of the workforce is in the ICT sector, and almost 50 percent of the workforce is employed in one of ICT, public administration or business services. However, when employment by industry is cross-referenced with actual occupations, a greater diversity in the workforce is revealed. In both the public service and business service sectors there are a significant number of workers in occupations related to other key sectors, such as education, social services, science and engineering, and agriculture. This suggests that Ottawa's workforce has a great deal of flexibility to respond to shifts in employment patterns. This was demonstrated when 8,000 laid-off technology workers recently found jobs in the federal government.

## Prosperous Workforce

Over the past five years, residents of Ottawa have enjoyed an increasing level of income; they are now among the most prosperous in Canada. Ottawa's median family income is higher than the Ontario average and the national average. In fact, it approaches the median income of much larger centres, such as Toronto and Vancouver, where higher costs of living tend to drive wages up.

## Vulnerabilities

In spite of the average prosperity of citizens in Ottawa and the decline in social assistance and employment insurance (EI) cases, Ottawa has a vulnerable underbelly. EI levels are below provincial and national averages, but social assistance levels are higher than these averages. If this is linked to the high levels of self-employment, there may be policy implications for either EI or social assistance. In addition, as many as 25 percent of lone-parent, low-income families live below the Low-Income Cut-off (LICO) established by Statistics Canada in 1998, compared to 17 percent of families overall.

## Changing Demographics

As the baby boomer generation moves into retirement, demand for certain services will increase. This may create job opportunities for both highly skilled replacements and for less skilled workers in the service sector. The latter may help relieve those who are currently in the LICO group. However, waiting for changes in demographics to solve problems for the less fortunate is not enough to help those who are in need today. Ottawa needs action plans to improve opportunities and help job seekers find meaningful work. Recommendations for such plans will be made in the third phase of the *Ottawa Works* project. The changing demographics also suggest a need to identify the skills of retirees and develop ways to draw on them as the needs of the economy change.

At the same time, the aging baby boomers will place increasing demands on health care providers and health care facilities. At present, Ottawa is well served by hospitals, but the ratio of long-term care beds to all other available hospitalization and care facilities is an ongoing concern.

## High Quality of Life

The well-being of the less fortunate and the general quality of life in Ottawa are enhanced by the high level of volunteerism and spirit of giving in the city. The number of people who make donations to charities and volunteer their time to help institutions is impressive, although the average donation and time spent volunteering are below the provincial and national averages. Crime rates are low and falling, public transportation is widely available, parklands are plentiful, and outdoor air quality is good. Ottawa's housing costs (both rental and purchase prices) make it a relatively inexpensive North American city to live in, which offsets the low wages relative to other North American centres. When combined, this suggests that the average Ottawa resident enjoys more disposable income after shelter costs are paid. While this picture seems rosy for those with roughly average incomes, it excludes those with lower incomes, such as lone-parent families. In addition, this positive view of Ottawa's high quality of life should be tempered by the increases in waiting lists for public housing and child welfare admissions.



## DISCUSSION OF FINDINGS

### Telephone Survey of Ottawa Residents

#### Profile of Respondents

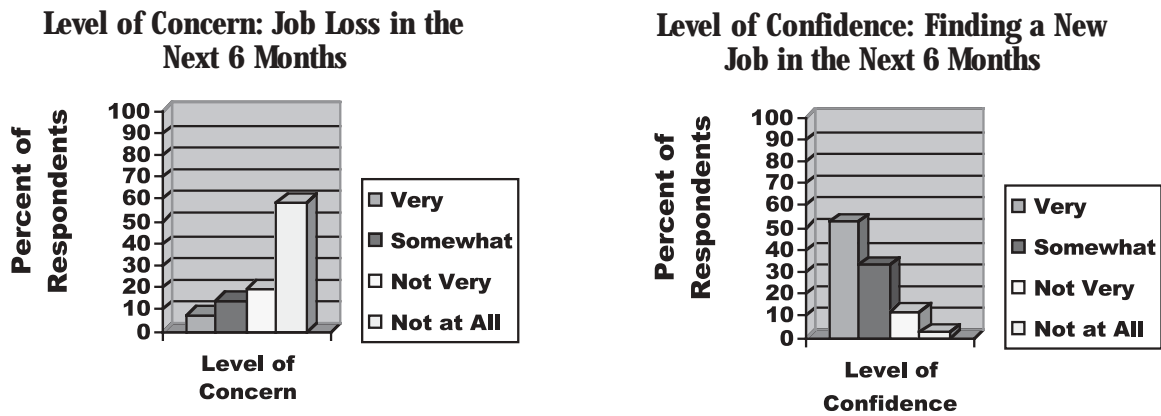
**A** survey of 504 residents of the National Capital Region (NCR) was conducted in late February 2002 by Decima Research Inc. The survey's objectives were to assess general confidence levels in employment opportunities; training and support programs for unemployed and employed persons; the appropriateness and availability of continuous learning; and perceptions of the city's attractiveness. The major findings of the survey have been summarized below according to four major themes — economic and employment confidence, lifelong learning, workforce transitions, and workforce mobility and the attractiveness of Ottawa.

Among respondents, 32.4 percent were not in the workforce (retirees, students, homemakers, disabled and others), 51.9 percent were employed, 12.4 percent were self-employed and 3.2 percent were seeking work. This suggests an unemployment rate of 4.8 percent for Ottawa, a figure that compares reasonably (within the  $\pm 4.4$  percent variance of the survey) with the February Labour Force Survey estimate of a 7.1 percent unemployment rate in the NCR.

Considering the NCR as a whole, 52 percent of respondents worked for the public sector or government, 40 percent for private sector firms, and 6 percent for non-profit organizations. In Ottawa, 48 percent were from the public sector, 41.5 percent from the private sector, and 7 percent from non-profit organizations. The highest concentration of private sector employees in Ottawa was in the west end of the city, at 52 percent. Ottawa's recent emergence as an entrepreneurial, advanced technology mecca is reflected in the survey demographics — over 50 percent of those under age 34 worked for private firms, compared with 66.7 percent of those over age 55, who worked for the public sector.

Among households earning \$100,000 or more, 57 percent of the wage earners worked in the public sector and 37 percent worked in the private sector. The ratio is similar for the \$55,000–\$100,000 range. But for households earning \$35,000 or less, 32 percent were in the public sector and 57 percent were in the private sector.

In the past, the federal government attracted many highly educated people to Ottawa — 60 percent of public sector employees have a university degree or higher. Since educated parents are likely to produce educated children, the high level of education among public servants is likely the main reason for the extremely high level of education throughout the region.



The above figures correspond to respondents in Ottawa.

## Economic and Employment Confidence

Ottawa workers remained confident in their employment prospects despite the recent job losses (over 20,000 in 2001 alone) in the city's technology sector. Moreover, individual self-confidence in finding new work and the tools to do so in the event of a job loss was very strong.

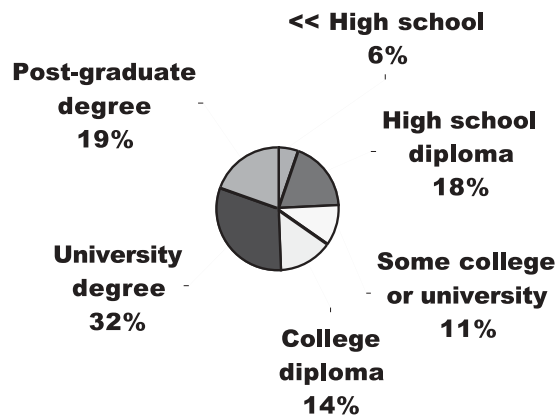
When asked if they felt concerned about the possibility of losing their job in the next six months, only 21.7 percent of Ottawa residents were very concerned or somewhat concerned. This is half the level of concern reported by a Maclean's/CBC News national poll in December 2001. In fact, this level of optimism was little changed from the peak of Canada's employment optimism, experienced in early 2001 when Ipsos-Reid reported 2 out of 10 were concerned.

Ottawa residents were even less concerned about their long-term job prospects. Fewer than 5 percent of respondents expressed any concern that they would lose their jobs over the next one to two years. Men were almost

twice as concerned as women about losing their jobs, and those with high school education or less were eight times as likely to be concerned as those with graduate degrees, whose concern was negligible (3 percent). In addition, the level of confidence in finding a new job in the event of job loss supported this high overall level of employment confidence. Eighty-seven percent of Ottawa residents said that if they were to lose their jobs they would likely be re-employed within six months.

This extraordinarily high level of employment security may be partly due to the high level of education among area residents. Among area survey respondents, 64 percent had a college diploma or university or post-graduate degree, making Ottawa's workforce the best educated in Canada. This level of education probably provides more transferable skills and thus is the basis of the area's high employment security. Indeed, the survey found that the unemployment rate among university graduates was 2.1 percent, compared to 4.3 percent for those who have less education.

### Ottawa Educational Attainment (% of Pop. 18+ yrs.)



Further, nearly 89 percent of respondents felt they had skills that could be used in another occupation in their industry, and 79 percent felt their skills applied to other industries as well. This perception about skill transferability was highest in Gatineau (95 percent) and Ottawa East (84 percent) and lowest in Ottawa West (69 percent), but still averaged 76 percent across Ottawa. Gatineau and Ottawa East have a high proportion of bilingual workers, while the west end has the highest proportion of advanced technology workers.

Ottawans appear to be very willing to switch to self-employment as an alternative to a traditional job. Approximately 70 percent of Ottawa respondents felt they could use their skills for self-employment, compared with 55 percent of Gatineau respondents. This aligns with *Ottawa Works* data that suggest Ottawa's culture has become very entrepreneurial in the last decade and with interview comments about the entrepreneurial nature of Ottawa's workforce. Post-graduates seemed most willing (85 percent) to go into self-employment, while only 58 percent of those with less than university seemed willing to take that risk. This correlation between education and entrepreneurship underscores in another way how knowledge helps to create new companies and employment opportunities for Ottawa.

Underemployment exists when workers are involuntarily working part time rather than full time or are in positions that do not fully use their training or education.

According to the survey 13 percent of the population was underemployed, as defined by involuntarily working part time. When compared to the 6.2 percent reported in the 1998 report on *Ottawa's Hidden Workforce*, this may suggest a deterioration in recent years in getting people more fully employed (but note that the sample size from the survey is small). More significant is underemployment among full-time workers, which can lead to increased worker mobility. In the survey, 12.2 percent of respondents who were working full time indicated they were not using their skills sufficiently. Combining involuntary part-time and underutilized full-time leads to an underemployment rate of 12.3 percent, or approximately 50,000 underemployed workers in Ottawa.

The respondents also revealed that education affects the degree of freedom they have in their mode of work. Those with university education tended to work part time only because they chose to (90 percent), while those with less education worked part time by choice in only 70 percent of cases. Language also seemed to influence mode of work — 90 percent of anglophones worked part-time by choice compared with only 43 percent of francophones.

Language seemed to have an important influence on unemployment as well. Less than 2 percent of franco-phones reported being unemployed, compared with 6 percent of anglophones. Bilingualism is a common requirement of employment; this gives area

francophones, who are more likely to be bilingual, an employability advantage. In fact, among anglophones who work full time and feel underemployed, one-third cited the language barrier as an obstacle to getting a job that otherwise met their skill level. Among unemployed anglophones, 18 percent cited language as an obstacle in obtaining employment in Ottawa (small sample). By comparison no one in Gatineau cited language as an employment barrier.

For those whose first language was neither English nor French, the unemployment rate in the survey was twice that of the principal language groups. However, allophones did not report underemployment at a rate higher than anglophones or francophones, nor did they indicate that language was a barrier to getting a job at their level of skill. Rather, their most common response (30 percent) to questions about obstacles to employment was simply a lack of jobs in their field.

## Lifelong Learning

Of respondents who were working or looking for work, 66.3 percent believe training or education within the next two years would enhance their employment opportunities, and 56 percent believe they need to upgrade their skills. Interestingly, 31 percent of the population saw no need for additional training while 29 percent — half of whom already have degrees! — saw a need for training in the next six months.

Based on the survey results, someone most likely to seek training is an unemployed allophone with some college or university, either younger than 34 or older than 55, with an income of less than \$55,000. Linguistically, francophones were least likely to seek training in the next six months (20 percent) compared to anglophones (31 percent) and allophones (38 percent). Despite the interest in training, only 6 percent of the unemployed felt that their outdated skills or experience were an obstacle to obtaining more challenging work. However, almost all (87.5 percent) of the unemployed felt the need for training and nearly half (44 percent) said they would indeed take training in the next six months.

Respondents were asked to specify the types of training they would likely seek, from among computer training, language training, high school equivalency, diploma, bachelor's degree, graduate degree, trades certification, professional development, professional certification, accounting/financial certification, or business/management training. The most likely training to be undertaken across all demographics is computer training (30.2 percent). Professional development (17.3 percent) seemed next in importance, with men being twice as likely as women to seek professional development. This was followed by university degrees (17.3 percent), business/management training (8.9 percent) and professional certification (8.4 percent).

Several areas of training solicited little interest. Among them were trades, education, nursing and child care, and other health-related professions. This lack of interest may present problems for Ottawa's future physical and social infrastructures.

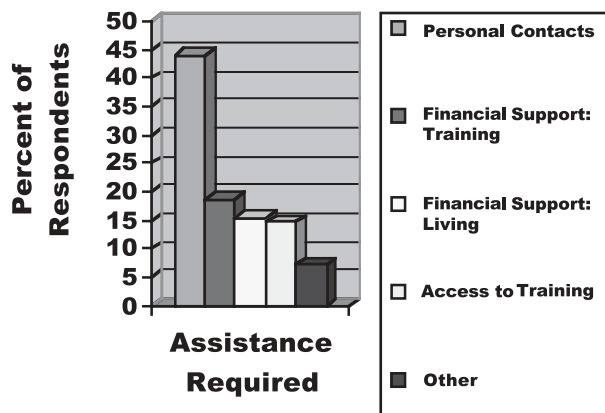
## Workforce Transitions

Of those participating in the labour force in Ottawa (sample size = 273), 8.4 percent worked part time, 68.5 percent worked full time and 18.3 percent were self-employed. In the centre of the city 23 percent of part-time workers were part-time involuntarily. In the east and west part-time work was largely by choice. As mentioned earlier, language appears to be a factor — 90 percent of anglophones work part time by choice and only 43 percent of francophones do so (small sample).

When asked about the kind of help they needed to switch to another occupation or industry, participants replied that access to a network of personal contacts was most important (44 percent), followed by financial support for job or skills training (19 percent), financial support for essential living expenses (16 percent), and access to training (15 percent). Interestingly, help in identifying training opportunities ranked low in importance (3 percent). It seems that while much emphasis is placed on financial support for training, the kind of help people want most is to find ways to connect with those who may be able to

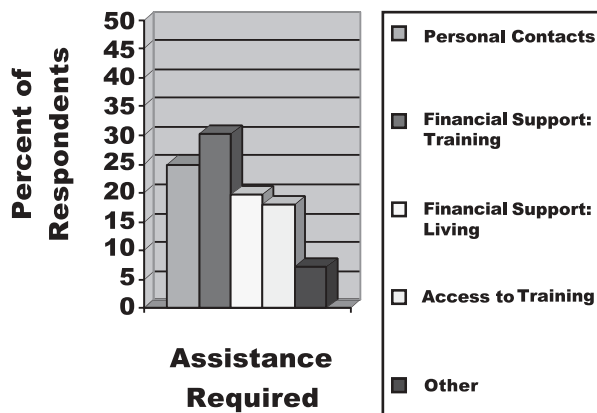
## Ottawa

**Switching Occupation or Industry:  
Assistance Required**



## Gatineau

**Switching Occupation or Industry:  
Assistance Required**



supply job opportunities. Residents of Ottawa were more likely to stress personal contacts (44 percent) than residents of Gatineau (25 percent). Gatineau residents instead stressed financial support for training (30 percent versus 19 percent in Ottawa). Networks were also the most preferred support among the richest and poorest households (57 percent and 40 percent respectively) and among the most educated (54 percent). In contrast, those with less than university or college education preferred financial support for job and skills training (31 percent).

## Workforce Mobility and Attractiveness of Ottawa

Nearly a third (29 percent) of NCR residents indicated that if given the opportunity they were likely or somewhat likely to leave Ottawa. (As a basis of comparison, the December 2001 Maclean's/CBC News annual national poll found that 25 percent of Canadians would move to the United States if given the opportunity.) The tendency to move was 30 percent in Ottawa and 23 percent in Gatineau. It was more pronounced among anglophones (29 percent) than among francophones (26 percent) or other language groups (23 percent).

Half (49 percent) of the Ottawa residents who said they were likely to move would do so to follow job opportunities elsewhere. Some offered the cost of living as a reason

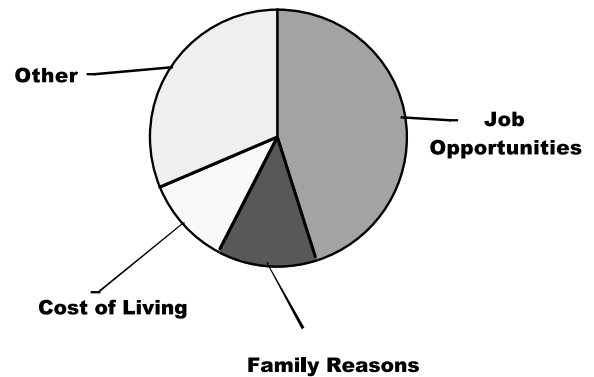
to relocate (12 percent), even though Ottawa is a fairly low cost area relative to other urban centres in Canada. Family seemed to be a more important reason to leave in Gatineau (17 percent) than in Ottawa (12 percent).

The difference in the mobility figures across age groups was significant, with 43 percent of those 18-34 years old likely to move and only 16 percent of those 55 or older. Among the younger age group the principal reason given was the search for job opportunities (54 percent). The high mobility rate among young people is understandable since most of these respondents were students, who are likely to seek new experiences and new horizons. As observed, once people get older, start raising families and put down roots, their inclination to move declines. The desire to escape taxes was a principal reason for leaving among seniors (20 percent), but in the population in general this reason was given by less than 7 percent of respondents (which is fewer than the number who thought the weather was a reason to leave).

Among those unlikely to move, the largest factors keeping them in Ottawa were family (27 percent) and an appreciation of the city (27 percent). Existing job opportunities and local roots were less of a factor in keeping people in Ottawa (16 percent). However, those with university degrees were more inclined to stay for job opportunities (21 percent), indicating a high level of satisfaction with work or, at least, a high expectation of work in Ottawa.

In contrast, respondents cited a variety of quality of life factors<sup>1</sup> (liking the city, access to nature, arts, culture, sports, beauty of the city, size, general quality of life, services, safety, education, location, comfort, bilingualism, diversity, weather, friendliness, good for raising children, transportation, a non-stressful environment) that collectively presented a strong reason to stay (94.5 percent). Social factors (friends, family and a personal network) were noted by 69 percent of those unlikely to leave. Economic reasons (job opportunities, low cost of living and of property ownership) amounted to a much less significant reason to remain in Ottawa (21 percent).

### Most Popular Potential Reasons for Leaving the NCR



## Individual and Focus Group Interviews by Industry Sector

The following section summarizes the statistical and anecdotal data collected during the consultation phase of this study. The Centre has organized industry feedback according to the nine industrial sectors<sup>2</sup> listed below. The definitions used here for these sectors do not always follow the definitions of the North American Industrial Classification System codes. The definitions were modified so we could present each industry in a way that would be more familiar to Ottawa residents. For example, NAICS does not include an ICT classification, but people in Ottawa would say such an industry does indeed exist here. The nine sectors we are reporting on are the following:

1. Agri-Food
2. Construction
3. Education
4. Health, Social Services and Life Sciences
5. Information Communications Technology (ICT)
6. Public Administration
7. Tourism, Arts and Entertainment, Accommodation and Food
8. Services
9. Transportation

Each industry summary includes a discussion of the following topics:

- Statistics and Overview (statistics, numbers, short description of sector)
- Labour Supply (recruitment, transferability of skills in and out, current and projected supply and demand)
- Skills (recruitment, high-demand areas (areas of greatest opportunity), low-demand areas (areas at risk of layoff))
- Gap Analysis (education and training issues, quality and accessibility of existing workforce information, comments on demographics)
- Challenges and Opportunities for a Workforce Strategy (challenges, any vulnerable areas if strategies not employed, any opportunities if identified)
- Best Practices

The size<sup>3</sup> of an industry is given by the number of employees in that sector.<sup>4</sup> The types of occupations found in each industry are given by the Standard Occupational Codes (SOC) groupings. Detailed industry surveys were beyond the scope of this project, but the information that is available has been included. Information on talent shortages or over-supply, skills profiles for key occupations, descriptions of recruitment tactics, and summaries of key issues

1. Multiple responses noted

2 Refer to NAIC code definitions in Appendix M.

3 As per Statistics Canada, Labour Force Survey, Annual Averages, 2001.

4 Note: In the employment tables that follow, the total employment is not additive from major occupation sub-groups. This is because Statistics Canada represses data under 1,500. Thus a sub-occupation group may appear blank when in fact it could have employment levels from 0 to 1499.



and industry concerns are largely based on feedback received from key informant interviews and focus groups. Each industry summary concludes with a list of areas of concern. These individuals lists are consolidated to form a list of 34 Basic Issues, which is presented in Part 3. Best practices stem from either local anecdotal feedback or from a literature review.

## Agri-Food

### Statistics and Overview

Ottawa's agri-food sector, which is the largest agricultural industry found in any Canadian city, employs approximately 8,700 people. Agriculture accounts for 75 percent of employment in this sector, with food manufacturing accounting for the remainder. Seventy-seven percent of the jobs in this sector are unique to agriculture. Also worthy of note is that of the 45 percent of people who work on farms, approximately 80 percent are farmers or farm managers.

### Labour Supply

There is no over-supply of workers in the agri-food industry.

The largest group of recent layoffs in this sector has been among agriculture researchers employed by the federal government. The trickle-down effect of these layoffs has been the dropping or downsizing of whole programs at the Dominion Experimental Farm.

The most vulnerable groups in this industry are small family farm owner-operators and low-skilled farm workers. Farm subsidies in the United States and the European Union, fluctuating commodity prices and "fickle wholesalers" put pressure on dairy and food producers. In response to this, farms need to grow to make investment in heavy equipment and new technologies more cost-effective — the goal is to produce more with fewer person-hours.

Hampering this "Americanization" of Canadian farming is the rising cost of land. Small farmers are using this asset as their retirement security, and fewer and fewer farms are being passed on within families. In some cases, two or

### Food Production – Employment Profile

	Key Industry Segments	Total Employment	Jobs Unique to Agriculture (excluding contractors & labourers)	Farmers or Farm Managers
NCR		576,100	5,100	3,000
Agriculture		6,600	3,700	3,000
	Animal Production	3,400	2,800	2,200
	Cattle Ranch & Farm	2,900	2,400	1,900
Food Manufacturing		2,100	-	-

Source: Statistics Canada Labour Division, LFS 2001, Annual Average.

But this data does not paint a complete picture of the agri-food sector as seen by some of the sources consulted in this study. For example, commercial food preparation, machinery sales and service, the sale and management of nutrients, and agriculture research are not accounted for in the data. That being said, some of these supporting activities may be captured in the data for other industry sectors.

more farmers in a family are amalgamating their farms into larger entities. With the emergence of large, highly specialized farms, the traditional generalist occupation is disappearing. Focused or specialist jobs, such as machine operator, milker, accountant, and nutrient specialist, are appearing in their place. In some cases retired farmers find a new role for themselves as heavy equipment operators or "custom workers" (an owner of a large piece of equipment who goes from farm to farm doing specialty work for farmers, who then do not have to buy their own expensive equipment that sits idle for long stretches).

Local employers, especially food growers and manufacturers, find most of their workers — 90 percent of whom are women — in the local area. Frequently, they provide prospective low-wage earners with a trial period on the job to see how well they learn the technical skills and work with others. This, then, is part of the recruitment process.

Newspaper advertisements, HRDC (through EI) and word-of-mouth are the main recruitment approaches to fill low-level jobs. High-level jobs are advertised the same way, along with web-site postings and national magazine ads. There is no conscious effort to hire people with disabilities, and the fear of being disabled haunts farm workers.

### Skills

Some but not all occupations in the agri-food industry require post-secondary education. Many people with less than grade 12 make effective workers if they have the necessary soft skills (such as interpersonal skills, communication skills and problem-solving skills).

Despite this, there is a shortage of competent farm workers and machine operators. Competency criteria include a willingness to take on the challenges of hard physical work and to cope with repetitive tasks, an ability to follow instructions, an ability to manage one's own time unsupervised, and an ability to communicate and resolve problems effectively with others. In addition, a competent farm or food production worker may need to have one or more of the following technical skills: milking, calf care, machine operation, computer usage (record keeping), measuring chemicals (nutrients), and electrical/mechanical installation and repair.

The main message from those consulted is that employability skills are of primary importance. If employees have these soft skills, the particular technical skills can be learned on the job. This does not, however, remove the need for some basic preparation in technical skills in school or college. It should also be noted that farmers in some areas of Ottawa, particularly in the east, prefer to hire French rather than English speakers.

The broad range of technical skills that farm workers have is easily transferable to the construction industry. As well, the work ethic of these people generally carries them easily to other sectors. Companies such as Bell Canada, Ontario Hydro and truck/coach operators show a preference for people with farm experience. Closely linked industries such as landscaping and turf management (golf courses) absorb many who have an agriculture background. Some workers can transfer easily from other sectors into specialty jobs in larger agricultural enterprises. Workers from transportation, construction, machinery service, and similar areas can make such transfers. Similarly, agricultural researchers can easily move into related scientific research and development.

There are ongoing discussions between local colleges and the agri-food sector with respect to what should be included in training curricula. Ontario colleges have been criticized for not following the lead of MacDonald College (McGill), the Alberta colleges and the Dutch colleges, which all have lengthy practicum periods attached to their programs. Critics believe these extensive internships give candidates the kind of training that would otherwise be left to employers at their own expense. Small farm operators working close the margin find the training period for farm workers to be costly. It should be pointed out that only about 10 percent of those graduates from agricultural schools go into farm work; most go to the supporting businesses, and receive 4 to 10 job offers.

Employers in the supporting agri-food businesses (i.e., agricultural machinery sales and service) take advantage of the training programs provided by equipment manufacturers. They report that these short courses are very effective. Such courses make up for one of the shortcomings of the colleges — that is, their inability to provide opportunities to work with new heavy equipment and technologies. In some cases, colleges are forging strategic partnerships with equipment manufacturers because the cost of purchasing current equipment is beyond the capital and operating budgets of the colleges.



## Gap Analysis

Attracting people to agriculture work is hampered by the long hours, low pay, lack of benefits, and lack of housing in rural areas. Many farms no longer provide housing for farm workers because it was a part of overhead that provided inadequate returns. At the same time, there is an information gap between public knowledge of the breadth of the agri-food sector and what really exists vis-à-vis job opportunities in the industry. It is felt within the industry that career counsellors and various government agencies do not identify the various well-paid careers in the agri-food industry. This presents a challenge for recruiting talent to the industry and for managing realistic expectations for career development and working conditions.

## Challenges and Opportunities for a Workforce Strategy

As small family farms disappear due to the pressure to produce more with less, specialized roles (as mentioned above) will become more the norm. Newcomers to Canada, especially from northern Europe, have come to the area and bought farms. Land here is still comparatively cheap. Many of these newcomers have settled in southwestern Ontario, where they have had an effect on existing local producers by buying up milk quotas. Until 2002, there was an annual net outflow of milk quotas from the Ottawa area.

A new trend affecting agriculture is the increasing demand for organic foods. Health interests and European Union import regulations are driving this change. The production of organic foods is more labour-intensive and the crop yields are lower, so farmers see themselves as having to absorb more costs in a market where cheap foods are expected. Many farmers see this public expectation as a side effect of government policy.

Trade and economic policy have a strong influence over the agri-food industry and, by extension, the state of its workforce. The subsidy gap between what is provided to Canadian farmers by the federal and provincial governments and what is provided by the United States or European Union governments is large. European governments subsidize 70 percent of the cost of agricultural

production, on average. In the United States, the subsidy was 25 percent until the Bush administration recently increased it by another 25 percent. Canadian agricultural subsidies average 5 percent, although this varies widely depending on the agricultural product. This puts Canadian producers at a significant cost disadvantage in the global produce markets.

Industry representatives also point to policy gaps between public pronouncements in support of farm producers and a lack of guidelines for the evolution of the industry. For example, family farms are extolled but factory farms are encouraged. It was noted that agriculture remains one of the few industry sectors without an HRDC Sector Council to review it. While many participants in the industry feel there is a training gap in the education of farmers, the federal government has no policy to guide training initiatives for the industry, and seems unprepared to deal with this political element of the industry.

## Best Practices

None identified for this report.

## Construction<sup>5</sup>

### Statistics and Overview

The importance of the construction industry to any community was underscored by a comment from one interviewee that "quality of life starts with a roof over your head." Ottawa's construction sector employs 28,300 people, or 5 percent of the total workforce of the NCR. Management and administration accounts for only 20 percent of the employment in this industry. The other 80 percent is composed of tradespeople (carpenters, electricians, stone masons, etc.) and other labourers. Interestingly, only two-thirds of Ottawa's construction employees live in the City of Ottawa. Most of the remainder live in Quebec. The industry is segmented by type of contractor; primary or trade. As shown in the table on the following page, the primary job categories in the construction sector are management, support staff and tradespeople.

5. Note: Due to other studies on the construction industry being conducted during the same time frame as the *Ottawa Works* research, there was a sense among stakeholders of consultation "fatigue" in this sector. The comments presented here in the Construction section reflect in large measure a wealth of information and insight gathered by Mr. Kie Delgaty, a researcher contracted by Algonquin College to make recommendations regarding the College's apprenticeship-related programs. His report, entitled *Market Analysis of the Short Term Demand for Apprenticeship Training at Algonquin College*, was prepared for John Paul Tapp at Algonquin College after conducting approximately 50 interviews with employers, unions, industry associations and training institutions in the area of skilled trades.

## Construction – Employment Profile

	Key Industry Segments	Employed	Mgmt. & Admin	Carpentry	Masonry & Plaster	Other Trades	Electricians	Labourers
NCR		576,100	178,700	2,800	3,100	2,000	2,200	5,900
Construction		28,300	5,400	2,700	3,000	1,800	2,200	2,300
	Primary Contractor	8,900	2,300+	-	-	-	-	-
	Trade Contractor	17,500	-	-	2,600	1,600	2,200	-

### Labour Supply

There are many labour shortages reported for the construction sector, some of which are real and some of which may be misconceptions. For example, it is true that the number of people choosing to become stonemasons is dwindling. However, this is a direct result of the decreasing demand for stonemasons since, because of the costs of materials, people do not often contract stonemasons.

Another shortage that was mentioned is that of electricians. However, “on any given day there are about 200 electricians without work.” This apparent contradiction arises because contractors no longer employ “journeymen” electricians — they use skilled labour instead, in order to save money. These are just two examples of the many that make the case for completely revamping the apprenticeship system. As it stands, the system is out of date and not serving its intended purpose for anyone. The system needs to respond to the market and evolve with the times.

There is not much transferability within this sector, as each trade requires a specific set of skills. However, individuals may move from residential construction to commercial construction or into management/contractor positions.

Word of mouth appears to be the most common recruitment method, and employers tend to keep their search local. In unionized trades the union looks after staffing. Some of the obstacles to finding employees are that the trades are not seen as a career, there is a lack of trade programs in high schools, and salaries vary greatly by trade.

This is another sector in which the issue of foreign-trained workers is an issue. Many of these workers have training from abroad that is not recognized in Canada, which prevents them from seeking work in their trade.

### Skills

There are definite technical skills that must be learned in order to succeed in this industry. In addition to the requisite technical skills, employers are looking for people with problem-solving skills, organizational skills, employability skills, and an aptitude for learning new technical skills. These soft skills are becoming more important at all levels, not only at the management level.

Enrolment in college trades training programs has remained steady. Entrance requirements have recently changed and students are now required to have completed grade 12. However, there are allowances made for mature students who may not have completed high school. Generally, students do not apply immediately after high school, but try other careers for a few years before deciding to enter a trade. In addition to the school component there is a practical apprenticeship component. Under this system, becoming a tradesperson takes approximately four years, but many students do not complete their apprenticeship program because they are able to find adequate employment as skilled labourers. However, as industry standards and government regulations continue to change, there is a need for a more highly skilled labour force in order to keep pace.

## Gap Analysis

The principal gap observed is the misalignment of incentives for apprentices, tradespeople, employers/contractors, unions, and consumers under the current system of trades apprenticeship. Apprentices have no incentive to complete their training once they have a specialized skill, such as framing. Employment does not require certification; in fact, journeyman papers can be an obstacle to employment. Employers do not want to pay journeyman rates and don't want the economic burden imposed by the archaic apprenticeship training rules, such as the requirement for four journeymen carpenters for every apprentice. The incentive for unions to participate in the training and development of apprentices is diluted by employer attitudes to tradespeople and competition from colleges. The incentive for consumers to pay for quality workmanship is undermined by the fact that much of the construction is carried out by persons who are not journeyman tradespersons.

## Challenges and Opportunities for a Workforce Strategy

Many of the comments made by respondents related to the need to improve the education and training system for trades and to increase awareness of career opportunities in the industry. Suggestions included reforming the apprenticeship system to bring it in line with the 21st century; revitalizing trades education in secondary schools; improving awareness, among career counsellors, of opportunities in the sector; and improving linkages among employers, provincial and federal ministries, and local colleges.

## Best Practices

None identified for this report.

## Education

### Statistics and Overview

Elementary and secondary schools account for two-thirds of the 42,900 people employed in the education sector in the NCR. The other key industry segments are colleges and CEGEPs, universities, and other schools and instructional centres. Teacher is the major employment category.

The education sector plays a dual role in the economy of Ottawa. It is both an employer and a provider of education/training, so its interaction with other industry sectors is pervasive. Interviews with college presidents, university representatives, and school board personnel were conducted, and a focus group session was held for the education/training sector.

The estimated gross budget for education (kindergarten through post-secondary) is between \$1.5 and \$1.7 billion. The chart below indicates the number of people employed and the breakdown of occupations within the sector, with teaching being the largest category. The ratio of teachers to management and support staff is extremely low when compared to the ratio of rank and file workers to administrative and technical support staff in other sectors.

### Education Employment Profile

	Key Industry Segments	Employed	Managers, Admin. & Clerical	Teachers	Univ. Prof	Sports & culture	Sales & Service	Childcare & Homecare
NCR		576,100	178,700	27,300	2,000	26,600	134,800	16,200
Education		42,900	5,500	26,500	2,000	2,700	4,300	2,400
	Elementary & Secondary	28,400	1,900+	19,000	-	-	3,900	2,400
	College & CEGEP	1,800	-	2,400	-	-	-	-
	University	8,700	-	5,000	2,000	-	-	-
	Other Schools & Instruction	3,000	-	-	-	2,000	-	-

## Labour Supply

The major personnel shortages in this sector are at the post-secondary level. In particular, professors for the “hot” (most in demand) skills connected to advanced technology, such as site computing, electrical engineering, multimedia and biotechnology, are in short supply. As well, there is a growing shortage of qualified teachers in the area of teacher education. These shortages are the result of a combination of program growth and retirements.

The age profile of teachers in post-secondary institutions suggests that many will be in a position to retire over the next four years. In the same period, demand for student places will increase with the arrival of the double cohort. It is estimated that 32,000 new professors will be needed in Canada over the next 10 years to replace retirees and accommodate increased enrolment. Carleton University needs to hire, on average, 52 professors per year for the next two to three years to keep pace, while the University of Ottawa will need 55 to 60 new professors per year for the next four years. Only 8,000 students are registered in Ph.D. programs in Canada (the main domestic producer of post-secondary teachers). Ontario graduated 1,000 fewer Ph.D.s in 2000 than it did in 1990, demonstrating that we are not even keeping pace with population growth, let alone improving our competitive position in the global knowledge economy. The shortage looks acute, especially when we consider that not all Ph.D. graduates go into university teaching. Some will graduate in disciplines that are not in short supply, such as English, history and philosophy. In some subject areas, such as nursing education and rehabilitation therapy, post-secondary employers hire master's graduates and then provide them with opportunities to upgrade their education as a condition of employment.

The transfer of skills into and out of the education sector is extensive. At all levels, many entering the field are career changers. They bring with them some “people skills,” interest, and knowledge competency. But this does not guarantee they are effective teachers immediately, because these same people tend to be overly directive and not sufficiently interactive. Therefore, professional teacher training (for kindergarten to grade 12) via university degree programs, in-house programs and mentoring are very important.

A search for higher salaries and improved working conditions drives the outflow of teachers and support workers to other sectors. Support staff, especially computer technicians, move easily to work in the advanced technology sector. Similarly, secretarial staff who are competent in computer applications and have facility in two languages are in demand in other sectors. Teachers with programming skills at the kindergarten to grade 12 level can find employment quite easily in the private sector. As well, by virtue of their good communication skills, teachers move comfortably into high-paying jobs in the retail sector or into work as technical writers. The school year schedule and its compatibility with family life attracts workers (instructors and support staff alike) to the education sector to a point, but higher salaries in other sectors may outweigh this benefit. University researchers move very easily into positions in the private sector and vice versa. Colleges and universities try to sell their conditions of employment (lifestyle) to attract people from the private sector.

Schools have responded to continuing funding cutbacks by dropping low enrolment programs, laying off support staff, and not always replacing retiring professors and teachers. The result is that teacher attrition has outpaced the enrolment demand, especially at the post-secondary level. As a result, the system appears to be in a mild crisis.

There is a great shortage of bilingual teaching and support staff at the post-secondary level. Post-secondary institutions compete with each other and with the government sector for employees with this attribute. The local supply cannot meet the demand, so the outreach in hiring practices must extend beyond the community and the province. This situation becomes even more complicated when searching for people in the “hot skills” areas mentioned above. Even student recruitment for some programs (e.g., legal secretary) is difficult because of a shortage of candidates who are proficient in French writing skills.

Sunrise occupations in the private sector (such as optical engineering, bio-informatics, Internet technologies, e-business, e-commerce and e-learning) and the growing demand for people in the serving professions (such as elder care) are creating increased demands on educational institutions to extend beyond the programs traditionally offered. As well, as immigration becomes the predominant way to expand the workforce, education/training

institutions are increasingly being asked to recognize foreign qualifications. Associated with this is the need for these institutions to develop ways to assess foreign qualifications effectively and provide the language training these students need to succeed in the classroom.

There are opportunities for women, persons with disabilities, and mature workers in the education sector. Post-secondary institutions may also need to encourage retired professors to help out as needed.

The recruitment of teachers at all levels is done through web sites, nationally circulated newspapers, magazines, journals and even word-of-mouth. At the post-secondary level recruitment extends outside Canada.

## Skills

The technical skills required of teachers at the kindergarten to grade 12 level are acquired through programs at university faculties of education. Such programs are accredited by the Ontario College of Teachers. The faculties must meet criteria based on the Standards of Professional Practice delineated by the College. Entrance to teacher education programs requires an undergraduate degree except for those entering programs in technological education, where trades certification and job experience are prerequisites. As well, all teachers at this level must engage in a program of professional improvement in order to retain their certification. At present, some private sector trainers are trying to take advantage of the demand for teacher upgrading courses by applying to the College of Teachers for recognition. Private training institutions tend to develop courses more quickly than public institutions, which are confounded by a cumbersome bureaucracy regarding course approval.

At the post-secondary level, teachers are hired primarily for their knowledge and experience. The technical skills of teaching are developed through in-house programs, mentoring, and other informal processes. Critical to successful teaching at this level is effective communication, which is assessed initially through the interview process. Many candidates for post-secondary teaching positions have been teaching assistants during their graduate studies years and, as a result, they have acquired some good teaching skills. Some universities support a strong in-service program for their professors and teaching

assistants. The colleges frequently run teaching skills development programs for new staff during the summer prior to their first term of teaching.

As one interviewee put it, at the post-secondary level, "We hire for the hard skills and fire for soft skills." This underlines the importance of communication and teamwork skills in this setting. As part of their teaching responsibility, professors must work with peers to plan programs and interact effectively with representatives of industry sectors that have an ongoing interest in post-secondary programs.

Computer literacy is a significant problem across the economy, in the education sector as well as others. Teacher graduates for the kindergarten to grade 12 stream must be able to handle the record keeping and reporting practices imposed on them by the Ontario Ministry of Education. It is almost imperative that teachers have their own computer with the capability to run the software — some school computers do not meet the software requirements.

## Gap Analysis

Weaknesses in the present system include the following:

- In recent years, faculties of education have not been able to replace retiring staff with full-time, tenure-track appointees who have both extensive field experience and research degrees. (The ability to communicate with aspiring teachers is required as well as academic credibility with the university.)
- There are not enough pre-service programs (kindergarten to grade 12) offering extensive internship experience with appropriate supervision.
- The number of appropriate co-op opportunities is on the decline.
- It is difficult to find middle managers at the college level (especially at La Cité collégiale).
- Technicians working at the post-secondary level need theoretical training, practical training and some project management skills. A combination of theoretical and practical training is not available in either the colleges or the universities.
- Government is slow to respond to the increasing demand for new places in certain university and college programs.



- Students can neither describe the skills they are learning nor relate them to the marketplace.
- Career counselling is not comprehensive enough.

### Challenges and Opportunities for a Workforce Strategy

The principal challenges in the education sector include the following:

- Although they require equivalent levels of post-secondary education, there is a wide gap between the pay scales of private sector trainers and teachers in education institutions. There is also a wide wage gap between teachers in elementary and high schools and university faculties of education. An experienced teacher/school administrator holding a Ph.D. must take a large pay cut to join a university staff.
- For support staff in the education sector, salaries and workload are better in government than in universities (the difference in pay is 7 percent).
- Three successive Ontario governments have reduced their operating grants to schools, colleges and universities. In addition, there has been little or no investment in expanding capital assets in these areas.
- Post-secondary programs are financed on a three-year rolling average, but student demand for programs fluctuates annually as the students make choices “in the light of day” (i.e., based on currently popular preferences or availability).
- Funding shortages to elementary and secondary levels of education are seen as being not only large but also a threat to existing programs, the reason that new ventures and innovation are curtailed, and the cause of school closures.
- There appears to be a gap between the skills taught in secondary schools and the skills required by students entering post-secondary institutions.
- There is a significant lag time (as much as three to five years for universities) in the ability of post-secondary institutions to respond to changing program needs through strategic planning and hiring.

- The language gap experienced by new Canadians makes it difficult for them to acquire the technical and soft skills training they need. This is especially true of soft skills, which are based on effective communication.
- Despite the language obstacle to workforce development, HRDC is not allowed to fund language training projects.
- Employment Insurance and Ontario Works guidelines on training do not always coincide with Ontario Ministry Training Colleges and Universities guidelines on training and education, which makes it difficult for applicants to get approval for training. In response, local officials frequently bend or break the rules.

### Best Practices

None identified for this report.

## Health, Social Services and Life Sciences

Consultations included interviews and focus group sessions with representatives from hospitals, community health and social services, home care services agencies, and an affiliated vocational school, a long-term extended care facility, and the Ottawa Life Sciences Council.

### Statistics and Overview

The Health and Social Services sector includes ambulance services, hospitals, nursing homes, residential care, and social assistance. Also included in this category is the Life Sciences sector, which covers biotechnologies and products in the areas of health (the prevention, diagnosis and treatment of disease), food and agriculture, management of the environment, bio-energy, biomaterials, et cetera. The Health and Social Services sector of the National Capital Region employs 56,400 people. Approximately 75 percent of these jobs are in the City of Ottawa. Although over 10,000 are employed in management and administration, only 15 percent of this category are actually managers — most are clerical and support staff. The table<sup>6</sup> on the following page outlines the distribution of jobs in this sector.

6. Note: Life Sciences does not have a distinct NAIC code at the 3- or 4-digit level. Therefore, those employed in the Life Sciences professions are dispersed among several sectors. For example, those associated with universities may be found under the education sector, while those associated with the government will be found under the public administration sector. Those employed in medical and diagnostic laboratories are accounted for under this sector.

## Health, Social Services, Life Sciences – Employment Profile

	Key Industry Segments	Employed	Mgmt. & Admin.	Physician/Dentists/Vets	Reg. Nurses	Technical Occupations	Social Workers	Sales & Service
NCR		576,100	178,700	3,200	8,800	6,800	2,200	-
Health & Social		56,400	10,100	3,200	8,700	5,600	1,800	15,000
	Ambulatory Services	13,500	2,700	2,200	1,700	2,500	-	-
	Hospitals	18,200	2,800	~1,000	5,800	2,900	-	-
	Nursing Homes & Residential	5,500	-	-	-	-	-	-
	Social Assistance	19,200	1,500	-	-	-	-	11,900

The major occupations in this sector include health-related ones such as physicians, registered nurses (RNs), registered practical nurses (RPNs), personal care attendants/personal support workers (PSWs), and allied health professionals such as physiotherapists, occupational therapists, nutritionists/dieticians, pharmacists and psychologists. In community and social services, the main occupations are social workers, counsellors, community developers, community workers, volunteer coordinators, administrators and finance officers.

In 2000, there were over 11,000 people in Ottawa in various private and public sector research, commercialization, and regulatory organizations in this sector (approximately 3,600 in private industry, and the rest in the public sector). Over 75 individual disciplines have been identified for this sub-sector, each of which has jobs with requirements at the diploma, bachelor's degree and graduate degree levels. At the same time, many occupations are multi-disciplined (or, at least, specialists must function in multi-disciplinary teams) and are found in research and development (lab technicians/technologists and positions in biochemistry, genomics, plant biotechnology, oncology, infectious diseases, epidemiology, neurobiology, combinatorial chemistry, and proteomics, to name just a few); manufacturing and production (computer science and engineering, mechanical or electrical assembly); administration/operations; clinical laboratory; MIS/IT; marketing and sales; quality control; and clinical research. Over

35 percent of employees are in research and development or clinical research fields, and over 20 percent are employed in manufacturing.

### Labour Supply

An over-supply of talent is not an issue in the health and life sciences sector.

Shortages in major health categories have been identified, particularly for physicians (e.g., geriatric specialists), nurses (RNs), personal support workers/personal care attendants, pharmacists, physical therapists, occupational therapists, physiotherapy aides, and occupational therapy aides. In the case of nurses, the needs have been identified as far exceeding the number of places at the university level, with the number of graduates "nothing in line with what the needs are." Despite the shortage, there are not enough spaces available in nursing programs. A further barrier to extending the student numbers in these programs is the shortage of nursing professors.

In the community and social services arena, there is a shortage of experienced middle managers and a need for qualified, experienced social workers. Bilingualism is an issue in filling positions. There is also difficulty in finding program managers in fundraising and communications who have both the skill base and the "connections and linkages" in the community to function effectively. It is

difficult to get counsellors and social workers to work in community and social service agencies. This is largely due to the low wages and poor benefits offered compared to those offered by hospitals and school boards.

In life sciences, the number of jobs is expected to grow by more than 10 to 15 percent a year over the next decade or more. By 2004, existing organizations will add more than 4,000 new positions (an increase of over 36 percent). Over 700 federal government science and technology vacancies created by retirements will need to be filled. An estimated 400 positions will be created by new companies; most of this job creation is yet to be realized. As more companies bring products to market, the growth in the number of jobs will further accelerate. Increased funding for research and new technology development will increase the number of spin-off companies and hence the number of positions.

Despite the projected increase in the number of graduates in the biological sciences, there will be severe shortages in this area, compounded by employers' needs for specific skills and expertise. One industry leader notes that "the local sector will have to attract at least two master's graduates and three doctoral graduates for each one it produces. . . . The number of positions available for individuals with a college diploma is projected to exceed the number of local graduates by 100 percent." Production workers such as mechanical or electric assemblers are also in short supply, and the existing advanced technology community (e.g., photonics, microelectronics) are in competition for them.

While the technical requirements of many of the professions in this sector are not transferable, the "people skills" are considered transferable to many other professions within and outside the sector. Registered nurses (RNs), for example, "can find opportunities in federal government, provincial, [and] regional community services." "Nurses make very excellent real estate agents and financial advisors." With additional training and education, some have transferred into careers in social work. Many have also left the field to be entrepreneurs; for example, the president of GEM<sup>7</sup> started her own home care services business using the knowledge of the health sector she gained while employed as a nurse.

A person with a master's degree in social work can work in policy development in the federal government, hospitals, family service agencies, schools, boards of education, and

in private practice. In life sciences occupations, the highly specialized skills are difficult to transfer. Some of the lower-level skills may be transferable to other industries, such as high-tech (e.g., in assembly or manufacturing) or hospitals (e.g., lab technicians). The life sciences industry is so complex and varied, however, that the lines can sometimes be difficult to draw.

In the health sector, especially in home care services, the number of trained personal support workers (PSWs) is expected to increase to fill the demands of hospitals, long-term care facilities and private home care services. Together with patient/client sitters, PSWs are an integral part of a growth industry offering home care services.

The sector looks beyond the local region to recruit professionals in the health field. For those organizations with higher needs (such as the Ottawa Hospital), foreign recruitment (in the United States, for example) is necessary. For many of the life sciences occupations, the recruitment market is not only national but also international. Community service organizations, however, find most of their staff in the local community.

The most preferred recruitment source by far for the health professions is clinical placements — partnering with universities and colleges and accepting placements of students while they are in an academic program. Similarly, co-ops and internships are an important element of recruitment in the life sciences. These partnerships are considered a good investment because they are effective for building relationships and assessing candidates. Word of mouth is also strongly preferred and extensively used. The best candidates are often found by drawing on existing personal networks. The sector also uses job fairs, newspapers, and professional association publications. Interestingly, Internet job boards for health professionals are not greatly used. They are not the preferred method for new recruits, graduates or health professionals looking for jobs or seeking to identify opportunities.

## Skills

Many of the professions in the sector are governed by licensing and certification requirements to ensure workers have the required technical skills and knowledge. Beyond technical skills, soft skills (including interpersonal skills,

7. See "Best Practices Among Local Partnerships and Initiatives for Job Seekers" for more details on GEM



communication skills, active listening skills, client-centredness, conflict resolution skills, problem solving, and diversity awareness) are considered critical in this sector because the professionals (particularly health professionals) deal with people constantly, and often these are people in distress or in crisis.

In the community services area, the view is that “the soft skills are the technical skills required for this profession,” although good people skills alone are not sufficient for effective performance. The essential skills also include a solid education, the ability to combine theory with practice, and “the ability to understand the whole system and to apply it sensitively with the individual client . . . to know whether it is an individual barrier or a systems barrier that this person is facing . . .” Even in the life sciences that emphasize extensive technical skills and expertise, the consensus is that soft skills are vital.

Basic computer skills are considered essential for proper functioning in most of the jobs. However, there were observations from some respondents that “in terms of computer skills, these are surprisingly sometimes very low when people come to us . . .” Communication skills are also found to be inadequate, and further training has to be provided by the employer. Even for lower-level jobs such as personal support worker, language skills at least at the grade 10 level are needed.

In 2005, qualifications for RNs will change to a minimum of a bachelor's degree. It has been suggested that the role of nurses needs to be examined. For example, front line work such as bathing, feeding, dressing and other patient personal care can be done by PSWs, relieving nurses to be full-fledged, equal members of a professional team (that includes doctors and other allied health professionals). New initiatives such as Telehealth in Ontario will give nurses new challenges, requiring them to acquire some new skills.

Suggestions were also made that support workers (such as physiotherapy aides, personal care attendants and porters) in the health sector be cross-trained or multi-skilled to provide a larger pool of people who are more flexible in providing support to the professionals. However, in unionized environments, this must be negotiated with the union.

In the life sciences, there is increasing demand for people with experience, management skills, business skills, regulatory skills, and entrepreneurial skills (e.g., in bringing a product to market) — these are “critical skills that cannot be outsourced.”

## Gap Analysis

The effects of recent downsizing in health care are still being felt. Positions were cut; many RNs were laid off. Some retired, but many were no longer interested in health care and moved on to other careers. Since then, there have been shortages in both the number of positions and the number of RNs. “All hospitals have identified that a key to attracting and retaining our nurses in Ottawa requires full-time positions and part-time positions...”

Some hospitals, such as Sisters of Charity of Ottawa (SCO) Health Service, have found creative solutions to the layoffs. Even though SCO had to close the equivalent of three patient care units (with approximately 60 to 75 employees per unit), it managed to maintain staff by attrition, relocations or reassignments of people. It also created a mobile team of 12 RNs who are cross-trained for the different programs and specialties so they can go where they are most needed for either crises or shortages. It has also created weekend positions that allow people to work 30 hours but be paid for 37.5 hours. SCO is slated to close 40 beds, and is planning once again to do so without layoffs. There is also collaboration among the hospitals. “We agree that if we ever have some layoffs we would let other hospitals in Ottawa know so that if they had vacant positions we would be able to connect and make sure that we don't just lose these resources... [to another province or another city].”

Layoff decisions in community and social services have been based on budget and funding cuts. At the same time, new government initiatives (such as an Early Years Centre, or a shelter for women and children) will affect the programs or services offered, the number of positions and the skill requirements.

## Challenges and Opportunities for a Workforce Strategy

Sentiments were expressed that “any action from the City of Ottawa to assist in enticing people back [from the United States] would be great for health care.... Health care workers, RNs, physicians; there are more going to the States than there are IT people and less coming back. The demographic crunch definitely is very expensive for health care because of older workers. So the more that is done by the City to attract them to Ottawa . . . that is exactly what we need to go for . . .”

Following are some of the key challenges that were identified in the health sector:

- There is a lag between the demand for skills in the sector and the response of the educational programs. By the time there is action or concrete movement on issues, especially when it has to do with the programs and the training in colleges and universities, and government funding, the lag is about four to five years.
- The skills of foreign-trained health care professionals are underutilized because of licensing/certification requirements.
- There are shortages of RNs, physicians and other allied health professionals. “Because of demographics, because of shortages internationally, the RN issue and the physician issue will remain for at least 15 years.” There is a gap between the current supply and future needs.
- Funding for education programs and for positions is inadequate.
- More information about careers in health care should be provided to students at the high school level — even at the elementary level.
- There is a need to attract more men into the nursing profession.
- More full-time and part-time positions are needed to attract and retain RNs.
- There is a need for Personal Support Workers (PSWs) and patient sitters. (“There are waiting lists of people waiting for these services. . . As the baby boomers become seniors, in about 10 or 15 years, there will be more of a health care need. . . There has got to be a parallel workforce along the way. . . to grow as big as necessary to look after that group. . .”)
- PSW programs should be standardized to follow the Ministry curriculum, requirements and standards.
- Agility and a proactive approach are needed to forecast, attract, develop, train and cross-train the skills critical to the life sciences sector. Leadership in critical skills development would identify Ottawa as a “mecca,” which would help to attract talent to the region.

### Best Practices

See “Best Practices Among Local Partnerships and Initiatives for Job Seekers” — GEM

## Information and Communications Technology (ICT)

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### Statistics and Overview

This sector employs 74,000 people in the National Capital Region. Although there are many industry segments, the largest is science and technology consultants, which accounts for 40 percent of the employment. The majority of people employed in this sector (61,000) live in Ottawa, and half of the workers in this sector are in natural and applied science.

## Information and Communications Technology – Employment Profile

	Key Industry Segments	Employed	Mgmt. & Admin.	Natural & Applied Science	Computer Engineer	System Analyst	Computer Programmer	Electronic & Electrical Engineer	Manufacturing Staff
NCR		<b>576,100</b>	<b>178,700</b>	<b>76,600</b>	<b>6,300</b>	<b>28,600</b>	<b>8,100</b>	<b>4,800</b>	<b>12,200</b>
ICT		74,000	20,300	37,500	5,400	17,600	4,000	3,500	5,900
	Computer & Equip. Manufacturing	19,300	3,800	10,000	1,900	2,800	-	2,400	3,200
	Computer & peripherals	2,300	-	-	-	-	-	-	-
	Computer Equip.	11,400	2,200	7,200	-	-	-	-	-
	Semiconductor	4,300	-	-	-	-	-	-	1,500
	Broadcasting & Telecom	11,000	4,700	3,500	-	-	-	-	-
	Telecom	8,800	2,400	3,300	-	-	-	-	-
	Info. Services & Data Processing	3,500	-	-	-	-	-	-	-
	Science & Tech Consultants	32,200	9,000	-	-	-	-	-	-
	Comp. System Design	26,300	5,700	19,900	2,000	13,000	2,800	-	-
	Science & Tech Management	5,900	3,300	-	-	-	-	-	-
	Electrical & Appliance Manufacturing	5,500	-	1,600	-	-	-	-	2,700

The ICT sector is the second largest industry sector in Ottawa (the public sector is the largest). However, the actual size of the ICT sector is debatable, since ICT workers are found not only in the vertical sector that develops new products, software and services but also in the application of those products and services in every other sector. Informal estimates of the size of the ICT sector range from 35,000 to 200,000 workers, depending on the definition of ICT being used.

Our estimate of ICT employment in the NCR is 100,000. Seventy-four thousand<sup>8</sup> of these are in the vertical sector defined by the NAICS codes (see Appendix K) and approx-

imately 25,000 additional workers in other industry sectors operate ICT tools or conduct ICT research. The uncertainty about the size of the sector that has long plagued industry experts and policy makers is largely due to the completely inadequate definition used by Statistics Canada.

In this report, ICT is defined as covering jobs in telecommunications, security, wireless, photonics, microelectronics, and software development. Included in this last group are the seven major ICT job categories defined by the

8. From the LFS 2001 Annual Average published by Statistics Canada

Software Human Resource Council (i.e., informatics business, informatics data, informatics education, informatics evaluation, informatics integrity, informatics operations, and informatics technical) and bio-informatics.

The industry has a very youthful demographic. It employs full-time workers almost exclusively (98 percent) although 9 to 20 percent are contract workers and only 20 percent are covered under a collective agreement. These industry employees have a strong sense of entrepreneurship; if employment options don't work out, self-employment is a real option.

### Labour Supply

The recent downturn in ICT has resulted in an over-supply in many job categories, particularly software-related positions, mid-level managers, intermediate and junior engineers, business development positions, marketing positions, and advertising managers. However, there are critical shortages of microchip designers (this shortage is worldwide), optical systems designers, senior business leaders, and people with specific skills such as web designers, RF engineers, AFIT designers, top salespeople and some programmers (e.g., ERP, PeopleSoft, Oracle, Java). These shortages are not as widespread as they were in 1999–2000 but are nonetheless capable of severely inhibiting the growth of local companies that employ these workers.

Transferability between ICT and other sectors can be relatively easy, especially since 25 percent of ICT employment is already in other sectors. Even in the much more knowledge-intensive areas like microelectronics, 33 percent of employees end up working in other sectors. There are minimal obstacles preventing a move from a job classification group (e.g., LAN administrator) in one sector to the same job classification in another sector. However, across groups there is much more of a challenge. Scientists and engineers in other sectors can and have been integrated into the ICT sector, albeit at a cost, estimated by one respondent to be about \$50,000 and 18 months per person.

### Sunrise occupations include:

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- photonics and optical systems
- Unix-based jobs
- security
- wireless
- biotech and bio-informatics
- IT within government
- interactive media developers
- web designers and developers
- self-employment

### Sunset occupations include:

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- MS Windows-based jobs
- fibre optics engineers
- computer programmers
- information systems and data processing managers
- electrical and electronics engineers

Most recruitment in this sector is restricted to candidates from the Ottawa area, due to the costs of hiring from outside the area and the large pool of talented people here. There are exceptions, including design engineers for the microelectronics field, optical systems engineers for telecommunications, and business leaders for the industry in general. Ottawa is increasingly seen as a source of recruitment for other regions but also as a preferred place of employment. Most recruitment sources for ICT are the usual ones — advertising (18 percent of new hires), recruiting firms (11 percent), universities and job fairs (8 percent), networking (7 percent), corporate web sites (5 percent), and Internet job boards (5 percent). But the largest single source of new hires is employee referral programs (25 percent).

Employee turnover was high (as much as 40 percent) but has come down to around 5 to 15 percent in recent years. The high skill occupations have the highest turnover, and one of the best ways to ensure the loyalty of employees in these areas is to invest in their training. Since what drives tech workers is not only money but the ability to move from project to project developing new things, learning new things, learning from new people, and developing new abilities, a higher level of mobility is to be expected here compared with other sectors.

Predicting ICT employment beyond a six-month window is usually avoided because there is no reliable means for doing so. Baseline data for the industry are incomplete, and although some of this groundwork has begun through the Software Human Resource Council, a more dedicated and better-funded approach is needed. In addition, business, municipal and education leaders should work together more closely to plan infrastructure investments. An off-the-cuff estimate obtained via this study is that ICT employment in the region might increase by 25 percent over the next five years.

Some layoff initiatives in recent years have followed Nortel's approach of eliminating whole business lines, thus affecting all skill ranges at once. Others have followed a more cautious approach of eliminating the people who are contributing less to the organization; these are typically but not always those with the least experience. In addition, as a result of outsourcing trends, individuals with more basic skills (such as programmers) may find their jobs have moved offshore.

The hiring of senior executives can be an important predictor of future (six months to one year) shifts in employment patterns. The hiring of local CEOs, COOs, CFOs and CIOs could each increase employment by 10 to 15 people a year. The hiring of these same people in foreign branches or subsidiaries would likely reduce employment in Ottawa in the same time frame. The demand for development talent at the executive level is dependent on investment, while the demand for application talent is dependent on expenditures on IT hardware and software assets.

Only about 27 percent of industry employees are women. It was suggested this is largely due to the fact that female students tend to be steered away from science, engineering and math from high school on. However, the industry is so under-staffed with people who have a combination of technical, business and interpersonal skills that demographics tend to be disregarded in hiring processes. Although those under age 25 are not likely to be hired because of their lack of education and experience (except as co-op students), entry-level workers are much less in demand today regardless of their age. While the industry as a whole has a somewhat youthful employee base, older people who have older technical skills and well-developed business skills are being increasingly welcomed and recruited.

It is easier for immigrant engineers to get into Canada than to actually find work because professional engineering associations tend to put fewer obstacles around accreditation than other licensing bodies. But newcomers are not likely to receive the security clearance needed for defence- or government-related ICT contracts. As well, the government's encouragement of ethnic diversity may end up being a disincentive for local companies if they cannot take on defence contracts because of the citizenship of their workers.

The following are some of the obstacles reported that restrict local ICT hiring:

- There are not enough engineering professors.
- The government's long and arduous hiring process, coupled with its low community profile, restricts its ability to attract ICT workers from industry.
- The disconnect between federal government security policies (which tend to restrict diversity) and hiring policies (which credit more diversity) restricts or disqualifies local contractors from drawing on local talent.
- Firms tend to make hiring decisions based solely on the candidate's technical skill, thus compromising on business and interpersonal skills. A different approach would be to demand only 80 percent of the technical skills required by the job and allow new hires to grow into the rest.
- Firms don't do a good job of workforce planning; most have very little future orientation.

## Skills

Work in ICT generally requires a high degree of education that, on the technical side at least, is continuous during a person's career. But in the current market technical skills alone are insufficient, so employers are trying to hire on the basis of a combination of technical, business and interpersonal skills. A technical background is viewed as a minimum requirement and hiring tends to be based on the development of a person's employability and business skills. All respondents emphasized the importance of continuous learning, but a prominent area recruiter put it best: "your skills [both technical and employability] are your security."



While core technical skills (those not pertaining to a specific tool or language) don't change much, the specific skill sets (unique to particular operating systems, wireless IPs, etc.) are continually evolving. It is therefore impossible to predict changes to the demand for particular language or tool-based skills. There is an increasing emphasis on business and interpersonal skills, but this is an area that is not receiving much attention in terms of training. Individuals who have a combination of technical, management and soft skills will do much better and have more stability than those without a diversity of skills. There is a fair degree of concern that the primary technical skill set needed could radically change in five years (for example, towards bio-informatics), in which case there is no obvious way local companies could develop or attract the needed talent. One suggestion we heard was that more of the ICT sub-sectors should work with the occupational skills profile model to better understand where there are potential crossovers between them. People need the right skill information for planning purposes.

Fifty percent of all new hires in the ICT sector tend to require additional training beyond their university or college-level education. Much of this is formal training that exceeds five days in length, and all options are used — in-house training; technical university, college, or private sector training; and web-based training. Most training is done internally in companies, but responsibility for a significant portion of technical ICT training is assumed by employees themselves in order to keep their skills current. To produce an employable software developer takes four years or more, although this can be fast tracked (as demonstrated by Vitesse reducing the time to as little as 18 months).

## Gap Analysis

The two most important gaps between skills demanded and skills available are related. The first is the demand by industry for people with technical skills and four or more years of experience in their sub-sector. The second gap relates to a need for people with a combination of technical, business and interpersonal skills. Generally, industry sees experience as the way for employees to hone their business and interpersonal skills, but they recognize that this does not always happen.

While universities and colleges tend to do a good job on specific technical skills, they do not produce the type of well-rounded employee that is of most interest to industry. Educational institutions should also do a better job of managing the expectations of their graduates. That is, new engineering graduates or MBAs are unlikely to be put in positions of large responsibility because they are unlikely to have the requisite business or interpersonal skills to complement their technical knowledge. This issue was even more significant with respect to private sector trainers, who industry representatives believe regularly oversell their graduates on how employable they are.

The academic community needs to do better than “developing curriculum five years after the need is there.” The community too needs to look at alternatives other than the traditional ones. E-learning, peer-to-peer training, industry-faculty teaching exchanges, and more cooperative research were some of the options proposed. In particular, respondents were looking for novel funding and incentive programs that would encourage companies and individuals to upgrade their skills more regularly.

On average nationally, ICT firms spend 5 to 6 percent of payroll on training, an amount that some think is insufficient. One focus group participant said, “I think the technology industry is absolutely abysmal at building their own talent, at training and at education.” There are some policy-related obstacles. On the whole people said that the level of funding for education and training was inadequate. They suggested that government could do more to support specific core industry areas (such as microelectronics) by providing more research and staffing funding to universities and colleges to hire more professors to train the needed graduates. It was thought that Canada had only one third of the professors needed to train the number of graduates required in the microelectronics industry.

One concern commonly raised relates to the lack of sufficient and timely information available to the ICT sector. That information gap included the following:

- Statistics Canada provides a wholly inadequate depiction of this sector that does not adequately reflect the developmental and operational sides of ICT.

- “Our need as a company would be to have research that is timely, that’s not data from last year or several years ago.”
- Timely information on where job markets are going in Ottawa is not available.
- Getting training information is too slow, whether from universities or private institutions.
- There is no way to compare various training providers.
- It is absolutely critical to have a consortium to pull together statistics for the microelectronics industry.
- There is a need for research funding to help determine what skills are required by industry.
- Keeping job descriptions up to date is a major obstacle that requires a dedicated resource.

### Challenges and Opportunities for a Workforce Strategy

The key workforce challenges identified for the ICT sector include the following:

- There is not enough education and training around the intersection of technical, business, interpersonal and leadership skills.
- Universities and colleges need to give more attention to occupational skills profiles in program development and career counselling.
- Industry must work more closely with universities and colleges. Schools are not producing enough graduates and they don’t know what training to give them. Schools are not in a position by themselves to keep tabs on the various industries or to monitor the changes in demand for skill sets and training directions.
- There is a need for more training time, money and availability; these are the three key obstacles in getting people the training they require.
- There is a lack of funding to hire enough professors and to provide research opportunities to train the graduates needed to meet the demands in microelectronics. An investment of \$100 million every year for five years is necessary to meet the demand for microelectronics experts in Canada.

- There is a need for more co-op programs and longer co-op placements (for as long as 8 to 16 months).
- The sector needs to have more case studies conducted. Employees need to have experience to gain experience, so a vehicle whereby a range of experience could be gained would be helpful. Sharing more business learning after a boom and bust cycle would be beneficial to all. In addition, there is a need for some academic assessment of what has happened in the ICT industry over the last four years — boom to bust — that draws on the experiences of a large number of local entrepreneurs and managers.
- The policy directives of federal departments should reflect talent concerns.
- There is a need for more online education from institutions that would focus on specific areas of academic excellence.
- There is a need for a not-for-profit training institution (other than traditional institutions) that could provide recognized, subsidized training for two to three weeks at a time.
- Finally, CEOs should participate in discussions of these issues.

### Best Practices

#### *Peer-to-Peer Training*

An alternative to traditional training is peer-to-peer training. This is a method of getting unemployed workers with a strong skill set in one area to train other workers in exchange for receiving training in a new area. This alternative would take advantage of the high skill levels among Ottawa’s current crop of job seekers and apply that knowledge for as little as the marginal cost of infrastructure support. For example, JAVA or C++ experts could train business development managers in return for training on business development issues. Since job seekers show little inclination to pay for training unless a direct connection can be made to employment, peer-to-peer training could contribute to skill upgrading among job seekers with little negative impact on training organizations.

### *Business-Academic Partnership*

Another interesting suggestion was the model presented by the Master's Program in Aerospace Engineering in Montreal. The program is co-sponsored by Bombardier, Spar Aerospace and other industry partners. It combines a traditional educational program with teaching and curriculum input from industry professionals to help close the gap for individuals between having an academic background and having a fully marketable skill.

### *Training Fast-Tracking*

Vitesse is Ottawa's original alternative training vehicle for fast tracking skill transferability from one occupation to another, usually in the ICT sector. It was frequently cited as a model that should be expanded upon.

## Public Administration

### Statistics and Overview

The Government sector employs 108,300 people, or almost 19 percent of the workforce in the region. Just over half of these government positions are in the management, administration or clerical occupational groups. The federal government is Ottawa's major employer. In fact, 85 percent of area employees in the government sector are employed in the federal government. Another 10 percent, 11,500 people, are employees of the City of Ottawa. One-third of these work in protective services (i.e., police and firefighters).

For the federal government, the primary occupational categories are management, scientific and professional, administrative and foreign service, technical, administrative support, and operational. Administrative services jobs have steadily increased over the last 10 years and clerical/secretarial (administrative) positions "are on the way out . . . as officers do a lot of their own support."

The newly amalgamated City of Ottawa employs 17,000 people, including full-time and part-time. The primary job categories are police, fire, and transit operators. There are also a significant number of people working in libraries, long-term care, homes for the aged, transportation, utilities, public works, people services, planning and development, emergency protective services, and corporate services.

### Labour Supply

Traditionally, the federal public service developed its own workforce. It "recruits them young and keeps them for life," and is basically "a closed system." Presently, however, it is losing people to the private sector at mid-career level. "Industry takes away your best people." "We are a perfect training ground for the private sector . . . After five to seven years of being with us, they go out and double their salary." Experienced professionals are scarce and difficult to replace because of the time it takes to develop that experience and expertise. Areas of shortage include regulatory inspectors, construction inspectors, traffic specialists, economists, legal secretaries, patent lawyers and engineers. Interestingly, the federal government did not have difficulty attracting IT people during the high-tech boom.

### Public Administration – Employment Profile

	Key Industry Segments	Employed	Managers, Admin. & Clerical	Natural & Applied Sciences	Protective Services	Other Professionals	Art & Culture Occupations
NCR		576,100	178,700	76,600	11,000	68,000	15,100
Government		108,300	56,000	23,400	6,400	17,900	5,000
	Federal Gov.	91,600	49,800	20,800	2,600	15,600	4,400
	Defence	5,400	1,900	1,900	-	-	-
	Provincial	3,300	-	-	-	-	-
	Municipal	11,500	2,800	1,700	3,700	-	-



The federal public service has gone through a series of downsizing initiatives in recent years, releasing people whom it is now trying to lure back into government (such as communications officers). It also has difficulty attracting good support staff and secretaries who “enjoy being support staff.” Many of them come in at these low levels but have higher career aspirations. Finding and retaining bilingual employees is also a major issue. Respondents did indicate, however, that new graduates are “better bilinguals than ever,” that 50 percent of the jobs being staffed do not require bilingualism, and that “[not being bilingual] may hinder your progression, but you will be able to get a job.” Bilingualism is imperative in 51 percent of executive positions.

The federal public service workforce is aging. Close to 27 percent of those working in Ottawa are over the age of 50, and 35.5 percent are between 40 and 49. Vacancies exist in middle management, and recruiting young executives is key. The municipal government, which is facing a similar scenario, is trying to bring more students (through co-op programs) and recent graduates into the system, and to provide them with exposure to different areas, training and mentoring to ensure a candidate pool from which to draw. (A formal exchange program between the municipalities of Mississauga and Waterloo was cited as an attempt to develop experience in different environments and broaden perspectives. Efforts have also been made to set up exchanges with the private sector.)

The municipal government is experiencing a shortage of city planners and building inspectors because these individuals have been picked up by the development industry in Ottawa. It is also in need of mechanics and other tradespeople. The City plans to recruit 150 bus operators a year for the next five years as a result of expansion and retirements. It has experienced significant problems in attracting and retaining IT people, and although this situation seems to have stabilized, a concern still remains. There are also concerns about the shortage of nurses and paramedics (since “schools are not producing enough of them, and municipalities are stealing from each other”), long-term care workers, and individuals to fill lower-paying jobs “that a lot of people don't want to do.” Several city manager positions are currently open and there is some

concern that there is a shortage of good leaders at the management levels. With major recruitment competition from the federal government, the municipality is also having difficulty finding experienced people.

Most of the recruitment in the federal public service is done nationally, in keeping with the government's policies of accessibility and transparency. For lower-level positions, however, local recruitment is done. Similarly, senior managers are recruited from across Canada by the municipal government. Many positions are recruited locally, such as firefighters and IT people, although searches are sometimes expanded to include the rest of the province.

The federal government has a web site where it posts vacancies that are open to the public. This site gets over one million visits per month. The advantage of this approach is its wide reach and great flexibility. The challenge is in managing the volume of applications received and making sure that the right person is hired. For executive positions, the Internet has been an ineffective tool (only 10 percent of the applications are serious ones). The federal public service also uses its Intranet, particularly for competitions restricted to current government employees. Word of mouth and networking are also used, as is HRDC, for low-skilled jobs. Newspaper ads are seldom used because they are costly.

In contrast, the City advertises extensively and mostly in newspapers. It is “trying to use the Internet more.” The provincial government also tends to advertise locally for its positions in Ottawa.

When the City of Ottawa was amalgamated, there was considerable downsizing (for example, from 12 city managers down to 1, and from 70 directors down to 30). Voluntary exit programs were offered, although care was taken not to offer these to people whom the organization did not want to lose. “I'm not going to pay people to go out the door and then have to go recruit them on the street.” The cuts were not made in essential job categories (such as bus drivers, firefighters, police officers); they primarily affected “people who do transactions type of things,” including administrative, clerical and support staff. As mandated by the collective agreement, the primary criterion used to determine who was let go was seniority.

Some criteria/processes mentioned for downsizing the provincial government were: start with the administrative support category because it is expected that everyone will do their own support; take out the layers (i.e., middle management); try to keep the field officers and the employees at the highest levels; and try to cause the least disruption to the public.

## Skills

Those we consulted concurred that soft skills are important in addition to the required technical skills. Employability skills are important at every level, but are most critical at the senior levels (“in terms of executive positions, you want the employability skill”; “management 100 percent, lower 50:50”). Important skills mentioned for managers/leaders included the ability to handle change, to think creatively, “to move the corporation into service delivery, value for money,” to challenge people “to do more with less and to become more efficient with the use of technology,” and to develop the crucial service orientation and people orientation in employees. Also cited were communication skills, change management skills and flexibility.

Technical skills are considered less transferable than soft skills in this sector. In some cases, there are dual capabilities, such as firefighters being fully qualified paramedics. More cross-training is considered desirable and should be pursued. Many of the jobs in the federal government are considered transferable to the private sector. “The private sector has discovered the public service as a pool to recruit from . . . There is experience, capability . . .” It is somewhat more difficult to move from the private to the public sector, however, since the government has its “unique ways of doing the job.” Employees need training to make that transition. (“There is not a lot of movement of the executive cadre from the private sector.”) One focus group participant informed us that a survey has found the gap (in skills required) between the public and private sectors is slowly closing.

Some respondents believe there is a lag between the skills demanded in the public service and the response of education/training providers to these demands, partly due to inadequate communication between the parties. It is felt that

employers should do enough forward thinking in the areas of demographics and workload needs to be able to identify their needs to the schools. “We’ve all got to do our part.”

## Gap Analysis

For the municipal government, an economic downturn has both positive and negative effects on workforce requirements. On the one hand, the City may not need as many of the people they are having difficulty hiring, such as city planners (because there is less land subdivision being done), or engineers (because “we’ll not be doing as many roads”). On the other hand, an economic downturn means more people on unemployment or social assistance and therefore a greater need for the municipal personnel who support those functions. Interestingly, a downturn may lead to more demand for staff to run recreational programs, since citizens have more time for affordable recreation. An economic downturn also finds “many people who went out from our organization to get bigger dollars, less easy jobs, are scrambling to come back in . . . for the security of the public sector. Even though it is not as secure as it used to be, we’re still in business.”

In terms of changes in skill requirements in the future, there is consensus that the need for purely clerical, transactional types of skills will slowly disappear (e.g., parking attendants will be replaced by machines). Computer skills will be required. New skill requirements may emerge from the municipality’s decision to move into or out of certain businesses (e.g., the City taking over ambulance services in January 2001). There are many other jobs whose basic tasks will remain the same and only slowly change, although the nature of the job may be changing (e.g., firefighters doing more rescue work and using different equipment, or police engaging in more community policing). It is anticipated, however, that certain complex and high-level skills will be in demand in the future, such as scientists, specialists, people who can interpret regulations, and professionals in emerging areas such as biotechnology. In addition, “big changes have been coming and will continue in the managerial leadership ranks,” which means that skills in managing change will become even more significant.

## Challenges and Opportunities for a Workforce Strategy

Key challenges within this sector include the following:

- Bilingualism in the federal government, including a push for all executives to be bilingual. This may also affect recruitment in general (i.e., an initiative for all new hires to be bilingual).
- The difficulty in reaching employment equity goals vis-à-vis the representation of all target groups.
- The need to recruit a more flexible and adaptable staff who have skills beyond technical ones, because of the constant changes in government and the need for employees to be in a continuous learning mode.
- The need to look at opportunities for public-private partnerships.

### Best Practices

None identified for this report.

## Tourism, Arts and Entertainment, Accommodation and Food

### Statistics and Overview

The National Capital Region employs 51,500 people in the tourism and arts and entertainment sector. Food and drink, the largest industry sub-segment, employs over 50 percent of the workforce in this sector. The largest job category in this sector is sales and service.

### Labour Supply

The major occupations in this industry can be described using the same categories as those in the services sector: front line personnel, support personnel, professionals, and management. Employers feel there are labour supply shortages across all categories. There is a demand for people with well-developed employability skills and a strong sense of customer service — “We don't need high-tech, we need high-touch.” Some specific shortage areas were kitchen staff (chefs, dishwashers, kitchen managers), middle managers in hotels, and entry-level event planning personnel. Also, as in many other sectors, there is a shortage of bilingual staff.

### Tourism, Arts, Entertainment, Accommodation and Food Employment Profile

	Key Industry Segments	Employed	Mgmt. & Admin.	Sales & Service
NCR		576,100	178,700	134,800
Tourism, Arts & Entertainment		51,500	9,600	30,500
	Performing Artists & Sports	4,600	-	-
	Spectator Sports	1,600	-	-
	Artists & performers	1,900	-	-
	Heritage Institutions	2,800	-	-
	Publishing	3,200	-	-
	Amusement & Gambling	9,600	1,700	3,700
	Gambling	2,000	-	-
	Accommodation	3,000	-	1,900
	Food & Drink	28,000	3,900	23,200

Some reasons for shortages are inherent in the work itself. This industry requires its employees to work evenings and weekends, and to be intently focused on the customer.

It requires individuals who are flexible, customer-service focused, detail-oriented, creative, patient, able to multi-task and able to communicate effectively with customers.

There is a high degree of transferability among jobs both within and outside this sector. One employer noted, "If you're good at hospitality you'll be good at anything." This is due primarily to the well-developed soft skills people in this industry possess. Moreover, generally the people who succeed in the industry love the industry; therefore, when the time comes for a career change they often move to peripheral industries (e.g., from chef to food writer or restaurant manager). This love of their careers shows up as a passion for lifelong learning.

## Skills

A foundation of technical skills is needed for some positions (e.g., computers skills, wine knowledge), but employers believe that if candidates have the soft skills, they can be taught the rest. As one interviewee said, "We hire for attitude and train for performance." The soft skills are further emphasized in practice formally through employee reward programs, recognition programs, and promotions, and informally through tips and better shifts. As is the case in many industries, computer knowledge is becoming more and more important. This has added new skill requirements to existing jobs and created new positions (such as IT manager).

Although much training is done on the job, individuals need the requisite degree or certification to become professionals in the field. Respondents felt that local education providers are doing an excellent job in providing training in these areas. Representatives from the tourism and hospitality business community sit on the boards of the colleges to ensure the programs are current and meeting employers' needs. However, we must do more to ensure the training programs are as practical as they can be. After all, being a good chef takes more than passing a written exam.

In addition, employers in this sector are very supportive of continuing education for their employees. They will often share the costs and offer more flexible work arrangements

to allow employees to pursue further training and education. Many of the employers in this sector have long emphasized the benefits of lifelong learning.

Because many workers in this sector tend to have well-developed soft skills but minimally developed technical skills, broadly based "poaching" took place during the high-tech boom. Also, in an effort to provide more efficient service, many restaurants had made their kitchens into assembly lines. People from lower-skilled positions were switching for higher pay and regular hours. Many of these workers have returned to the tourism and hospitality sector since the recent economic downturn. Perhaps one reason for their return is the promise of some job security. This industry does not usually experience massive layoffs. Although they do experience seasonal fluctuations, this is easily solved through attrition and reducing staff hours.

## Gap Analysis

One of the major obstacles to obtaining workers is the public's perception of the industry. In general, this sector is not perceived as one in which to build a career — a job in hospitality is seen as simply a job on the way to something else. Employers in this sector also have difficulty retaining employees due to the transient nature of the workforce. Transience is a natural part of this industry, since the skills required are very portable. Another retention problem is caused by employers poaching each other's staff.

## Challenges and Opportunities for a Workforce Strategy

Some of the key challenges for the Tourism, Arts and Entertainment, Accommodation and Food sector are the following:

- There is a need for more partnerships and linkages between education/training providers and the private sector.
- More emphasis should be placed on this sector as a viable career choice. This could be accomplished through improved career counselling.
- More opportunities for cross-training are needed to avoid oversimplification of jobs (and therefore worker boredom).

- There is a need for more organized continuing education opportunities (e.g., management training).
- Many of the front-line positions in this industry require bilingual staff.

### Best Practices

None identified for this report.

### Services

Our consultations drew comments from retail managers, business consultants, lawyers, real estate agents, travel agents, communications and graphic design professionals, call centre managers, and employers of administrative support personnel. While the service sector is in itself an important industry in Ottawa, service-oriented occupations (such as administrators, lawyers and accountants) are also found in every other sector.

### Statistics and Overview

Our study of Ottawa's services sector included retail and professional services. The sector is estimated to employ 73,300 people in the National Capital Region. Administration services<sup>9</sup> and Professional, Scientific and Technical Services<sup>10</sup> are the two primary industry segments, with each comprising one-third of the employment.

Occupations in this sector fall into four major categories: front-line personnel (and their supervisors and team leaders), professionals, support personnel, and management. Generally, employers in this sector do not describe the labour market in terms of over- or under-supply. The exception is employers' difficulty in attracting specialized workers (such as specialist sales representatives, real estate agents, lawyers, etc.). One employer noted that in the professional services sector, "the Ottawa market is not large enough to keep specialists busy 100 percent of the time," and that professionals may not have access to enough contracts in a specific area to build expertise. Therefore, local firms often affiliate themselves with larger firms in Canada and the United States in order to gain access to specialized professionals.

### Labour Supply

There is also a shortage of fluently bilingual professionals and support personnel. Noted as particular areas of concern were the need for bilingual legal secretaries to support local lawyers, bilingual staff for call centres, and bilingual and francophone trainers and consultants to supply the federal public service. It was also mentioned that it is difficult to find training in French for occupations such as legal secretaries and call centre personnel.

Employers use a variety of tactics to recruit employees and generally seek candidates from the Ottawa area. Retail employers use informal networks, post signs in their

### Services – Employment Profile

	Key Industry Segments	Employed
NCR		576,100
Business Services		73,300
	Credit & Securities	12,600
	Real Estate & Rental Service	9,300
	Insurance	3,500
	Professional, Scientific, Technical	23,300
	Administration services	24,300

9. Administration services include 3,700 business support workers, 9,200 building and dwelling, 4,000 people in investigation and security, 3,800 people in employment services.

10. Professional services include 6,800 legal, 1,120 consulting, 5,700 architects and engineers, 4,200 accountants

storefronts and sometimes place an advertisement in a local newspaper. Employers of professionals and specialists tend to use informal networks as well as more formal channels such as head-hunters, colleges and universities, and their respective professional associations. We heard, particularly from front-line service organizations such as retail, that employers like to have a lot of applicants so they can assess the candidates and select the most suitable ones.

## Skills

Every employer we spoke to emphasized the importance of “people skills,” oral and written communication skills, responsiveness to clients, the ability to multi-task, a willingness to learn, and initiative. Some employers also place a high value on passion, vision and leadership.

All employers noted the increasing use of computers and the importance of familiarity with them. Some employers require only an ability to learn; others expect proficiency as a starting point.

It is also important to note that a degree or certification is often needed to enter a profession in this sector. Since employers of lawyers, accountants, and other professionals consider this base training a given, they differentiate between candidates based on their soft skills when making recruitment and retention decisions. Above all, employers find that candidates have often had inadequate training in oral and written communications and in “the finer art of dealing with people.” Employers noted that educational institutions teach students technical skills but fall short on the development of soft or employability skills such as the ability to communicate effectively with co-workers.

## Gap Analysis

Some employers, particularly in retail and in call centres, are disappointed with the way occupations in their industry are perceived. They spoke of the need to educate young people in the value and potential of careers in their sector. One employer noted that people “underestimate the value of a good retail employee.” Some employers in the services and hospitality sectors noted that service-oriented careers are better respected in Europe than they are in

North America. These same employers believe North America will move towards “professionalization” of the retail and hospitality sectors, and that salaries will increase to recognize the importance and quality of talent in those areas. It was suggested that programs like an MBA in Retail, which are available in the United States, should also be made available in Canada (at least by correspondence or on-line).

## Challenges and Opportunities for a Workforce Strategy

The ubiquity of service-oriented occupations among all industries and the easy transferability of skill sets is felt especially during fluctuations in Ottawa's advanced technology sector. A boom in advanced technology creates increased demand for services, but it also increases competition for employees in all occupations. The services sector often finds it difficult to compete with the salaries offered by the advanced technology sector. Many employers are beginning to worry about how the next upturn in the technology sector will affect their ability to attract and retain qualified personnel.

As mentioned earlier, professions like law and accounting require formal training and certification. Employers indicate that many newcomers to Canada are finding it difficult to have their credentials, which were granted abroad, recognized. It can even be difficult for Canadians to have their credentials recognized in different provinces within Canada.

## Best Practices

None identified for this report.

## Transportation

Our team used a broad definition of the role of transportation sector: the transportation of people and goods. This includes public transportation; delivery services; air, train, road and personal vehicles; and vehicle maintenance. Occupations in this industry include heavy equipment operators, skilled trades (such as plumbers and electricians), office staff, technicians (with a range of licences), apprentices, movers, drivers/operators (including owner-operators), packers, bus operators, and others in the airline, taxi and rail sectors.



## Transportation – Employment Profile

	Key Industry Segments	Employed	Truck Drivers	Taxi driver & chauffeur	Bus Driver	Sales & Service
<b>NCR</b>		<b>576,100</b>	<b>5,000</b>	<b>1,500</b>	<b>3,300</b>	<b>134,800</b>
<b>Transportation</b>		21,900	2,400	-	3,300	1,500
	Air Transport	2,400	-	-	-	-
	Truck Transport	3,500	2,400	-	-	-
	Transit & Ground	6,500	-	-	3,300	-
	Urban transit	3,100	-	-	1,700	-
	Rail Transport Support	2,400	-	-	-	-
	Postal Service	5,000	-	-	-	-
	Couriers	2,100	-	-	-	-

### Statistics and Overview

The National Capital Region employs 21,900 people in the transportation sector. The segments of transit and ground travel, and postal service and couriers, each represent approximately one-third of employment in this sector.

Many of the employers we spoke with are large employers in the Ottawa area. While they represented a significant number of workers, many had not faced the labour shortages that smaller employers have had in recent years. These larger companies experience low turnover and are able to compete successfully for talent by offering higher salaries, attractive benefit packages, internal training and opportunities for career advancement. Because many of their organizations are unionized, they do not experience a large loss of employees to other sectors. They also receive a high response rate to employment advertisements as well as many unsolicited applications every month. Many of their applicants have skills and education beyond the minimum requirements for the job; for example, some may hold a university degree when only a high school diploma is required.

### Labour Supply

The general consensus in the Ottawa area is that a shortage exists in many of the skilled trades. One representative in the automotive sector commented on the shortage of technicians. “Our problem in this industry,” he said, “is we just don’t have enough people. We don’t have enough young people going into the trade.” Similarly, there is a shortage of supervisors for technical workers. Supervisory positions require extensive technical experience as well as interpersonal and management skills. One employer noted that the shortage of supervisors indicates a gap in the intersection of technical skills and soft or management skills. Transportation industry employers compete with manufacturers in other sectors for these supervisors. Employers anticipate an even greater shortage of workers as many of their current employees are expected to retire in the next 5 to 10 years. This will affect both administrative and technical positions.

Employers in this sector tend to hire locally, but larger organizations sometimes search nationally or internationally for senior managers. The only anomaly is the trucking



industry, where employers may be outside the NCR but their operators live in the area (and truck outside it). Employers use a variety of recruitment channels including local newspapers, unsolicited applications, word of mouth, competitors, Employment Insurance recipients, universities, colleges, high schools, and training institutions. Applicants come from a variety of backgrounds; some are young, others are older and seeking a career change.

## Skills

Many of the occupations in this sector and in skilled trades in particular require some form of occupation-specific certification or training. In addition, employers look for interpersonal skills, the ability to work in a team, technical-mindedness, conscientiousness, and problem-solving skills. Many occupations require the ability to multi-task and prioritize. Literacy skills are needed to understand technical manuals and instructions.

Many occupations in this sector involve shift work or extensive travel, so the ability to balance work and family life can be very important. Many employers feel they can train new employees on the technical aspects of the job, but that soft skills are more difficult to teach. These, however, are the skills that provide employees with opportunities for advancement and greater mobility. Consequently, a lack of soft or “people” skills could result in job losses. As one employer noted, “the workforce is there, but they may not be as skilled as they could be,” and it is difficult to retain the “really good” employees because of competition with other employers. Employers look primarily for skill sets that are also found in other industries.

While some employers are happy with the education provided by local high schools, many employers are disappointed with the education system's ability to prepare students for technical occupations. For example, employers feel that the kind of literacy taught in secondary schools may not necessarily prepare students for the “technical reading” required in the trades and for operations management.

Due largely to the technical nature of the industry, many employers anticipate a need for greater computer proficiency. Equipment, automobiles and diagnostic tools are becoming more computerized. Some employers have noted that many technicians show an aptitude for computers, and many are self-taught; these individuals often

move into computer repair. However, employers expect that all technicians in this sector will keep up with relevant technological changes and, through continuous training, upgrade their computer skills as needed. Technological advances also affect machine, truck and bus operators. As one employer noted, “it's no longer enough just to be able to drive the truck.” Operators use GPS and computer-generated reports, and they are often expected to perform road-side maintenance on increasingly technical vehicles.

## Gap Analysis

Many employers feel frustrated about the education system. “Schools are run by academics, and as long as that is true there will always be that bias. Students who are hands-on oriented will be turned off and leave school as soon as possible. Schools have been continually eliminating mechanics, woodworking, etc. and have thus created a gap.” At the college level, many employers would like to see more work experience and co-op opportunities integrated into the curricula.

Employers feel it is important to challenge the (often) negative perceptions that people have of the industry. For skilled trades in particular, employers feel that “We have to try to get it known that this is a viable trade. There's good money in it, people make a good living — probably an above-average living.” Many people in the transportation sector (and those affiliated with the skilled trades) want to reach out to guidance counsellors, teachers, students and parents to encourage technically-minded students to pursue further education, training and careers in this sector. Industry leaders hope supply and demand will help the situation, and that “we will start to respect tradespeople when there is a shortage.”

At the same time, employers feel it is important to create realistic expectations of the industry. As noted above, many jobs require shift work and travel. Many employees are also unionized, and new workers may have to work less attractive shifts for a few years before enjoying a more flexible work schedule.

Employers also commented on the need to change the perception that women are not interested in a career in the trades. Many employers said they employ women in management, sales and as administrative support, but not

many in the trades. Many employers believe women can be very successful in the industry but commented that there are few women graduates to recruit into their organizations.

As we saw in other sectors, newcomers to Canada find it difficult to work as skilled tradespeople because they must be certified in Ontario or Canada (with an inter-provincial licence). Language can also be a barrier. Given the shortage of technicians, employers would like help in recognizing certification from other provinces and countries.

## Challenges and Opportunities for a Workforce Strategy

Some key challenges for the transportation industry are the following:

- Through apprenticeship boards and government ministries, promote this industry, and the trades in general, in schools. This type of program should also involve industry associations, provincial advisory committees and school boards.
- Bring back “shop” programs in high schools.
- Specific forecasts are needed to help employers anticipate labour shortages and other fluctuations.
- Anticipate needs: schools and employers need to cooperate in upgrading curricula as new regulations are written.

## Best Practices

None identified for this report.

# Individual and Focus Group Interviews with Job Seekers and Advocacy Groups

## Job Seeker Focus Groups

To ensure a comprehensive study of Ottawa's labour market, we interviewed individuals who are seeking employment. We chose to hold two focus groups — one with Ontario Works clients and the other made up of people receiving Employment Insurance. Our team worked with managers from HRDC and the Ministry of Community, Family and Children's Services to make sure we spoke to job seekers from diverse backgrounds and with a variety of demographic characteristics.

In 1999, 9.4 percent of families in the city of Ottawa were receiving Employment Insurance benefits, while 12.7 percent were receiving Social Assistance. Given the recent downturn in the economy, these figures have undoubtedly changed, since the average unemployment rate has increased from 6.3 percent in 1999 to 7.4 percent in the first quarter of 2002.

## Profile of Ontario Works Clients

The following profile is a summary of the “Profile of Applicants to Ontario Works,” published in December 2001. The sample is based on a survey of 3,718 eligible Ontario Works applications made from January to April of 2001. The gender breakdown is 57 percent males and 43 percent females. In all but one category (those aged 16 to 24 years), there were more males than females. The number of female applicants has been increasing, and was at a seven-year high at the time of the survey.<sup>11</sup> In contrast, the number of male applicants was at a 10-year low. One reason for these demographic changes is “the transfer of sole support parents from the Province to Ontario Works in February, 1999.”<sup>12</sup> Women are more likely to be sole support parents.

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11. City of Ottawa, People Services Branch. *Profile of Applicants to Ontario Works*. Ottawa, ON. December 2001, p.5 .

12. City of Ottawa, People Services Branch. *Profile of Applicants to Ontario Works*. Ottawa, ON. December 2001. p. iii.

The age distribution of eligible Ontario Works applicants. The proportion of those aged 25 to 35 years, as well as those aged 51 and older, has been increasing, while the proportion of the youngest group (ages 16 to 24) has been decreasing. These changes may be due to the aging population or to the recent changes in Ontario Works eligibility criteria, which had a greater impact on younger people.

Age (yrs.)	Percentage (%)
16-24	23
25-35	37
36-50	32
≥ 51	8

Age (yrs.)	Gender (%)	
	Male	Female
16-24	11	12
25-35	20	16
36-50	20	12
≥ 51	5	4

Sixty-nine percent of applicants were single; 21 percent were in one-parent families. Of the one-third of eligible Ontario Works applicants who had children, 43 percent had children under the age of six.

Family Type	Percentage
Single	69
One Parent	21
Spousal	3
Spousal with Dependents	7

Age of Children	Percentage
<6	43
6-11	30
12-17	20
>17	7

Number of Children	Percentage
None	71
One	12
Two	9
Three	8

Thirty-six percent of people had completed grade 12 and 25 percent had post-secondary education. The number of applicants with post-secondary education had declined significantly since 1998.

Education Level	Percentage
≤10	28
11 or 12	36
13	2
Post-Secondary (present or past)	25
Attending School	9

Reasons for assistance varied across demographic groups. Those aged 51 and older were more likely than other age groups to give "ill health" as their reason. Women were more likely than men to give "sole support" as their reason. Those with post-secondary education were more likely than the other educational groups to state "employment-related reasons." Employment-related reasons were

the ones given most often across all family types, even sole support parents. "A possible reason for this is legislative changes that now require one-parent families with children over the age of six to participate in Ontario Works programs."<sup>13</sup>

Three-quarters of eligible Ontario Works applicants were deemed required to participate in Ontario Works programs. Most of those whose participation was deferred were women. "This is explained by the fact that women are more likely to be one-parent families."

### Issues and Concerns Among Job Seekers

One of the first questions explored the search methods that our participants use when seeking work. Networking, visiting online job sites, visiting company web sites, checking the newspaper, and going to employment agencies were listed as preferred job seeking methods. It was stated that "who you know" is the single most important factor in gaining employment. Not only did participants feel there are currently not enough networking opportunities, but they also stated that there is a lack of information about events that take place.

### Reasons for Assistance

Demographic Group	Reasons for Assistance (%)				
	Employment Related	Ill Health	Sole Support	Student	Other
<b>Overall</b>	75	14	8	2	1
<b>Gender</b>					
Male	82	15	1	2	2
Female	65	13	18	2	2
<b>Age</b>					
16-24	75	9	8	8	-
25-35	79	9	11	1	-
36-50	73	18	7	1	1
≥ 51	60	33	2	-	5
<b>Family Type</b>					
Single	79	17	-	3	1
One Parent	55	6	37	1	1
Spousal	79	19	-	-	2
Spousal with Dependants	89	10	-	1	-
<b>Education</b>					
≤10	57	24	13	5	1
11-13	64	21	13	2	-
Post Secondary	70	12	17	1	-
Attending School	45	6	10	39	-

13. City of Ottawa, People Services Branch. *Profile of Applicants to Ontario Works*. Ottawa, ON. December 2001, p. iv.

Participants identified several barriers to employment. One in particular was the lack of transitional support they receive. This should include financial help, career and education counselling, and child care. Of the child care that is available in the region, most of it runs from 9 to 5, which does not take into account people who work shift work. Participants stated that there is a need for career and education counselling. This would help them identify the skills they already have, determine which careers are in demand, and select the appropriate education/training course.

Another barrier to employment is computer skills, both basic and advanced. Basic computer skills have become employability skills in today's workplaces, so efforts must be made to ensure everyone has these basic computer skills. Any strategy must take into account computer accessibility and an individual's abilities. This may involve having attendants in the labs to help people navigate through career web sites. When talking about advanced computer skills, participants emphasized the need for quick action when advanced technology employees find themselves out of the labour market. The advanced technology sector is constantly evolving, and with it, the skill sets employers require. Therefore, these individuals must act quickly to take advantage of new-found shortages and re-skill accordingly (e.g., by learning new software or new computer languages).

The need to function in both French and English is another a barrier to employment. Many positions, especially those involving services, require bilingual personnel. The training currently provided under EI and OW does not include adequate language training. Moreover, a lack of English proficiency is a barrier for many newcomers to Canada. People may be able to pass standardized tests and read and converse without problems, but they may not be fluent in the language of the job (i.e., legal or technical terminology).

Key challenges:

- Foreign professional qualifications and certifications should be recognized.
- More linkages among education/training providers, the public sector, the private sector, EI and OW are needed. These would help to provide networks for the clients.
- There is a need for career and employment counselling.
- There is a need for language training, both in basic language skills and in bilingualism (French).
- A central site that lists all the education/training courses available is needed.
- There is a problem with the current setup for education/training funding. The approval process is lengthy and in some cases an individual's assistance runs out before they have completed a course.
- Caseworkers are overworked.
- Child care is inadequate.

## Perspectives from Advocacy Groups

We spoke to several representatives of advocacy groups to explore some of the issues confronted by their clients. Representatives from Line 1000, Disabled Persons Community Resources, Local Agencies Serving Immigrants (LASI)/World Skills, the Community Economic Development Network of Ottawa, Youth Services Bureau, Odawa Centre, the Ottawa Women's Training and Employment Network (OWTEN), and agencies helping with career transitions such as Adecco International and Andre Filion & Associates were either interviewed or participated in a focus group.

The advocacy group representatives echoed observations we gathered from the consultations with job seekers. These included the following:

- Many foreign-trained professionals are underutilized and not recognized for their potential contribution to the Ottawa economy.
- Unemployed job seekers may lack skill sets, but this gap is primarily in the ability to package the skills they have in a way employers will recognize (e.g., packaging homemaking skills gained over 15 years to apply to a position as an operations manager).
- Job seekers need help in assessing their strengths, learning pre-employment skills, getting information about how and where to look for jobs, and getting the proper training so they can be employed.

- There needs to be a reassessment and revamping of the eligibility and accessibility requirements for training resources for the unemployed.
- There needs to be major consideration and action on providing affordable and accessible child care in order to help those who are marginalized.
- There is a need for an inclusive Workforce Development Strategy, i.e., that the special needs of groups such as those for people with disabilities, or immigrants and newcomers, are an integral part of the strategy and its formulation.

## Perspectives from Persons with Disabilities

There are about 77,000 people with disabilities who are of working age in the Ottawa area (a survey in 2001 found 74,350 lived in the Ottawa region in 1997–1998). Individuals in this population include those with learning disabilities, cognitive disabilities, mental disabilities, sensory disabilities, and physical disabilities. This population also includes people with invisible disabilities such as HIV or AIDS. Some have retired, some are in school, others are at home with children, in small businesses, or doing volunteer work. The study by Line 1000<sup>14</sup> found that a disproportionate number of people with disabilities (66 percent) were not considered to be part of the labour force (this figure is double that of the general population). Three percent were counted as unemployed, 22 percent employed, and 9 percent employed part time.

It is very difficult to find accurate and up-to-date employment information about people with disabilities; the method used to count which disabled individuals are “in the labour force” is problematic and may produce an invalid or distorted picture. For example, only 34 percent of people with disabilities in Ottawa are considered active in the labour force, compared to 75 percent of non-disabled people. Therefore, a significant proportion of unemployed people with disabilities are not counted as being in the labour force due to the method of counting. The validity of 3 percent unemployment rate, calculated using the same counting process, is also suspect. Line 1000 reports that over half of their clients (all unemployed) want full-time jobs. There is a great deal of untapped potential in this population.

In addition, educational institutions and service providers that offer employment-related support to people with disabilities need to develop common terminology in order to maintain comparable statistical information about people with disabilities enrolled in their programs.

There is a general lack of understanding that the profile of people with disabilities is very similar to the general profile in Ottawa. Both groups have a full range of people, from those who want to work in low or less skilled positions (manufacturing, labour, janitorial, security) to lawyers, social workers, counsellors, public health professionals, and those who have Ph.D.s in hydrology. There is also a lack of understanding that not all people with disabilities have the same barriers.

Employer awareness is a huge factor that affects accessibility to organizations, industries and sectors. The hotel industry, for example, is a great place for people with disabilities, or for anyone who has not acquired a large number of credentials; it has entry-level positions with opportunities to move up. The retail industry is another, because it tends to be more amenable to people coming and going. In both these industries, as in others, there is room for more accessibility. The pay is generally quite low, however, and “that can be a barrier for anyone.”

There is lack of awareness of and commitment to universal design principles and universal accessibility. Some examples of these are accessible buildings, doors wide enough for wheelchairs and scooters, turning radiuses generous enough for two people in wheelchairs to pass each other in a hallway, colours on walls and floors that help the visually impaired, availability of sign language interpreters for functions, and so on. This lack of awareness inadvertently sets up barriers to the full participation of people with disabilities.

Major barriers to employment include accessibility, training and educational qualifications, language skills, job accommodations, and the availability of accessible transportation. Other barriers to working full time may involve fatigue issues and the costs of maintaining medication and benefits (which may be too costly if individuals find employment and lose these benefits). New immigrants who have disabilities also face multiple barriers.

14. Line 1000 is a community-based non-profit agency providing individualized assistance since 1979 to people with disabilities in the Ottawa area. Its services include employment planning and placement, employer networking, career counselling, labour market information, workshops and Internet and Resource Centre access.



Most people with disabilities are employed in the retail trade (13.4 percent), manufacturing industries (12.7 percent), accommodation, food and beverage (9.7 percent), and other service industries (9.7 percent). For the most part, people with disabilities are not sharing in the new economy nor moving into new industries such as hospitality, high-tech and biotechnology. Neither are they represented in apprenticeships in the skilled trades, where labour shortages are well known.

High-tech companies have been known to accommodate employees with disabilities. However, given fatigue and transportation constraints, long working hours are not conducive to the employment of people with disabilities. During the high-tech boom, when there was an explosion of the labour force in that sector, there was no proportionate increase in the number of people with disabilities hired; in fact, the percentage of people with disabilities employed was reduced. The lack of education and training in engineering and computer science demanded by the high-tech sector is also a major barrier. Those who have found administrative or clerical employment in the industry have been victims of the recent rounds of layoffs.

Students with disabilities are not pursuing programs in science and technology. The majority of college students with disabilities are in applied arts and business programs; the majority of university students with disabilities are enrolled in arts and social sciences.

Access to financial support is an issue. Degree programs mean larger debts, which many can ill afford. People with disabilities do not have the same opportunities for summer employment, and they often take longer to finish their programs of study. In addition, the financial support programs such as Ontario Works, the Ontario Disability Support Program, and other federal programs do not necessarily foster training in programs that will lead to employment. The mechanisms that support people with disabilities are not paying for the things employers are really looking for.

Bilingualism is also a major issue. The federal government can provide an accessible and accommodating workplace, but many of its jobs require bilingualism. Only 2 percent of people with disabilities in Ottawa are bilingual — the rest are unilingual French, English, or another language (including sign language). This means many opportunities are closed. In addition, “language training is not available in any kind of way that makes it accessible. . . . It is also costly.”

Currently, there is an over-supply of skills in computer programming, WAN, and LAN among the clients of Line 1000 because of the high-tech fallout. There is also an over-supply of traditional clerical skills. People in administrative support with traditional skills are less likely to be employed.

The shortage of language skills in this population is critical. There are also many who lack basic computer skills. For some, soft skills such as communication skills, the ability to deal with difficult people, and assertiveness can be an issue, and training is required. “People with disabilities may be more vulnerable to having limited skills that are less transferable.”

Key challenges:

- Organizations, such as Line 1000, need labour market information so they can plan for their clients. This includes information on jobs, wages, trends, training and other employment opportunities.
- We need new ways of collecting information about the disabled to ensure data accurately reflect the population.
- Increased awareness of what being disabled means, the importance of universal design, and the adoption of accessibility principles is needed to enable the full participation of people with disabilities.
- Education should be aimed at increasing the workforce participation of people with disabilities in a wider variety of sectors and at broadening the skills of individuals.
- There is a need for language training to help people become bilingual.
- Obstacles to training include accessibility (e.g., it is hard to find a trainer to pay for sign language interpretation for a deaf person) and costs. There is a need for increased financial support.
- Women with disabilities are twice as likely to be unemployed as men with disabilities, who are more likely to be unemployed than the general population.



## Perspectives of Immigrants and Newcomers

According to the 1996 census data there are 161,885 immigrants living in the National Capital Region. This includes new immigrants and people who have been here for a number of years. In 2001, Canada received 250,386 new immigrants, 59 percent of whom came to Ontario.<sup>15</sup> Of these newcomers to Ontario, 61 percent were economic immigrants, 27 percent were family class, 11 percent were refugees and 1 percent were from other categories.<sup>16</sup> According to Local Agencies Serving Immigrants (LASI)<sup>17</sup>/World Skills,<sup>18</sup> roughly 8,000 to 10,000 immigrants move to Ottawa each year.

The skill levels of the immigrants in Ottawa are varied, but for the most part there is major underutilization of skills. The skill levels of immigrants usually reflect the needs of the marketplace, as immigration selection criteria usually follow labour market demand.<sup>19</sup> For example, between 1998 and 2000, many of those who came had high-technology expertise. When there is a shortage in the health service sector, those who are eligible to immigrate to Canada are those with health sciences backgrounds, such as doctors, nurses, pharmacists and dentists. Unfortunately, many of these new arrivals do not obtain work in their field, and enter occupations in which their expertise is not used to its fullest, if at all. The same is often true of electrical engineers, chemists, mechanics, electricians, plumbers, and a host of other occupations. Most are seeking full-time employment, but many settle for part-time employment.

Licensing and certification is a major barrier for foreign-trained professionals. Provincial and professional certification requirements often erect insurmountable barriers for foreign-trained professionals. A variety of personal and "reality" circumstances make these barriers hard to overcome. In essence, these professionals are brought in to contribute to Canada, and yet they are not allowed to contribute; they are admitted apparently for their skills,

but when they arrive they are not allowed to practise. For newcomers, access to their profession and trade is not a matter of supply and demand. It is a different reality, especially for regulated and licensed professions.<sup>20</sup> What is ironic is that many of these foreign-trained individuals are actually educated in Western universities despite their country of origin, and are graduates of well-known, respected and well-recognized universities. "There are people who have their first degree in their country of origin and they've gone for specialization in England (for example). So you're not talking about people whose education is not compatible." This is a major waste of resources, knowledge and skills. Those who have the opportunity leave for the United States. Those who stay are grossly underutilized and not recognized for their potential contribution to the Ottawa economy.<sup>21</sup>

A major contributing factor to the plight of foreign-trained professionals is the disconnect or lack of coherence among immigration policy, provincial regulations and professional associations on assessments and certification requirements. (This has led to situations encountered by World Skills, where over 600 foreign-certified teachers have registered with the organization in the last two years to ask for help in becoming certified. When World Skills offered an information session in Ottawa for foreign-trained physicians, 120 of them showed up. And this does not include the many who have already given up.) There is also a lack of investment in the screening process in the countries of origin.

The major barriers to training and upgrading are money and eligibility. To access these services, individuals must be on EI or Ontario Works, where they get a financial allowance to cover living expenses and tuition. The many immigrants who are not on EI or Ontario Works because they have never had a job in Canada have no access to the training opportunities. It becomes a chicken-and-egg dilemma. Currently, there are restrictions and no universal access.

15. Citizenship and Immigration Canada, News Release, Ottawa, April 17/02.

16. Ibid.

17. LASI is made up of six settlement agencies - the Ottawa Carleton Immigrant Services Organization, Jewish Family Services, the Catholic Immigration Centre, the Lebanese and Arab Social Services, and the Chinese Community Services Centre.

18. World Skills is an umbrella organization created by the six settlement agencies. It is responsible for all employment-related initiatives and activities conducted on behalf of all the immigrant services organizations in Ottawa-Carleton. It provides initial employment support or job readiness services and training (résumés, interviews, workshops), placement services, and develops partnerships and alliances with specific sectors to identify problems and solutions.

19. According to World Skills, over 60% of immigrants come in through the point system, which allocates points according to skills that fill areas of shortages.

20. Advanced technology was a breakthrough for immigrants because it is not a regulated profession.

21. Where there are no licensing or certification requirements, underutilization is less likely to occur. Teachers, for example, do not have to be licensed to teach at private schools. Recognizing that World Skills have over 600 certified teachers, many local private schools have approached World Skills for French-speaking teachers, teachers in science, etc.

Other barriers for newcomers include the following:

- language
- the lack of Canadian experience, which employers demand but newcomers are unable to get if they are not employed
- gaps in employment — the time that immigrants are detached from the labour market because of their move to a new country can become a barrier in itself
- the reality that newcomers must live, pay bills and care for families: for many, this means accepting a survival job that further removes them from their own field of expertise; widens the perceived gap in meaningful employment, training and upgrading; and further reduces their chances of obtaining the Canadian experience they need to bring them out of the vicious cycle.

The advanced technology sector provided a breakthrough for immigrants — it was the first industry that did not require licensing or Canadian certification of its employees. This made it possible for immigrants to practise in their area of expertise in Canada. However, given the recent high-tech downturn, many of these people are now unemployed. LASI/World Skills estimates that approximately 80 percent of the people affected by layoffs were immigrants.

Immigrants and newcomers vary in their awareness of the transferability of their skills. Some are very astute in recognizing what needs to be done to switch into another area without extensive time and resource commitment (e.g., a civil engineer who quickly switched into computers). For some, however, this is very difficult. These individuals would benefit from one-to-one guidance and counselling. Information is needed to help individuals in both these situations. "To know about your transferable skills, you have to understand what's available, what's in the market."

In addition, information for professionals and tradespeople about licensing bodies, regulatory bodies, related unions and membership requirements is very helpful and should be accessible. A web site is a preferred option, although a simple brochure may be adequate since not everyone has access to a computer.

There have been some breakthroughs with respect to foreign-trained professionals gaining Canadian certification. LASI/World Skills has established partnerships with Queen's University and the Ottawa-Carleton District School Board. Together they have developed a one-year training program, to begin in the fall of 2002, that gives foreign-trained teachers practical experience in Canada, grants them Canadian certification, and ultimately results in a teaching job in the Ottawa-Carleton School District.

Since many immigrants are well educated and highly skilled, they do not need to return to school for an extended period. They may simply need a small amount of upgrading to their technical, language or soft skills. Soft skills, particularly cross-cultural skills, are very important for this population. It is essential to provide support for newcomers so they can adapt to North American cultural norms and know what to expect during their job search. As with all other groups, networking is critical to finding a job. Therefore, it is important that this job readiness training provide networking opportunities.

Immigrants are often very resourceful in their job search, using a variety of methods (newspaper, Internet, yellow pages, going to companies directly). What they lack are networks, which are the primary means for landing jobs.

Support agencies need up-to-date labour market information to adequately support their clients. This will help them to direct people to appropriate education/training programs and careers.

In order to strategize, build proper relationships with employers, and educate and counsel their clients, organizations such as World Skills need up-to-date, local information on:

- labour market trends
- supply and demand
- shortages and surpluses
- growing industries
- declining occupations

Key challenges:

- Increased cooperation and partnerships among the three levels of government, professional associations and local agencies are needed to support immigrants and help reduce the barriers to their employment.

- There is a need to examine what can be done about facilitating the recognition of the skills of foreign-trained professionals so that they can be a vital part of the Ottawa workforce. Various levels of government, professional organizations and education/training institutions should plan ways to facilitate the accreditation and certification of qualified landed immigrants and incoming foreign professionals while maintaining integrity in the practice of the professions.
- The most needed training is in the area of soft skills — particularly in the areas of norms, cross-cultural communication, interpersonal skills, workplace culture, the concept of time, and soft skills interviews.
- There should be a mapping of skills existing within the community.
- There is a need for up-to-date labour market information. This will help people identify the areas in which they need to re-skill.
- Funding for education programs is needed.
- A steering committee, including a representative from a foreign-trained professionals' association, should be formed.
- Language training should be geared towards getting a job.
- Provision should be made for networking opportunities.

## Perspectives from Unions

During the consultation process, we spoke with a representative of a local public service union. From the union's perspective there is a huge demand for workers, but we have an employer-induced shortage as a result of limited efforts on the part of the employer. One example is that caseloads for various social service and probation officers have increased. This is an example of short staffing, which has come to affect workplace health and safety.

Unions would like to take on a more active role in the community. For many years their role has been mostly reactionary (i.e., based on complaints, or active only at collective bargaining time). For example, unions believe there is inadequate transitional job support for people

who get laid off. They see a role for a body that would conduct "prior learning assessments," in order to help people determine what skills they have and how these skills can be applied.

Another area of concern is successor rates. Given that the population is aging and that layoffs often affect younger workers disproportionately (due to the union's seniority system), there will be a real problem filling top positions in the future. To address this in its own structure, the union has initiated a program called "Management Doing Training." Employees of the union go on short-term assignments to other parts of the organization to help retain corporate memory.

The role of unions is changing with the times. They must learn to adapt and find their place in the new economy, which for the most part is non-unionized. This could involve unions as providers of education/training. Often we allow training to become the responsibility of management, but perhaps employees would be better served if unions took on this task.

The union would like to form collaboration committees that would involve unions, businesses and the public sector. These committees would help foster a sense of cooperation and reduce the confrontational nature of the relationships. It would help to counter the public's perception of unions, and would help unions themselves to see their place in the new economy.

## Best Practices Among Local Partnerships and Initiatives for Job Seekers

There are already some good examples of partnerships and alliances in Ottawa, although there are not enough of them. These partnerships benefit the employers involved and job seekers who would otherwise remain unemployed.

### *World Skills*

World Skills (the employment unit of LASI that is responsible for all the employment-related initiatives on behalf of all the immigrant services organizations in Ottawa area) has developed a partnership with the Ottawa-Carleton District School Board and Queen's University to help foreign-trained teachers get the certification they need to teach in Ottawa. This three-year pilot project was

to began in July 2002. Qualified foreign-trained teachers (with a degree and experience, but lacking the one-year certificate beyond the degree) will be in a one-year training program. The program includes seven weeks at Queen's University, seven weeks in Ottawa, and about twenty weeks of practical teaching under a mentor in an Ottawa-Carleton District School Board school.

Ninety foreign-trained teachers are expected to go through the program over a three-year period. The tuition fee is \$5,000. Most of the program candidates (chosen out of 600) are on EI or Ontario Works (they receive financial support and their tuition is covered). There are also a few who are willing to take up a loan (with World Skills as guarantor). The program is set up so that employment after the training is almost guaranteed. Candidates are chosen based on the subject areas where there are shortages. For their practicum, they will be placed at schools (eight of these have been selected) that have the highest immigrant population and where their services will be most needed.

#### *GEM Home Care Services*

Since 1999, GEM Home Care Services has partnered with a local vocational school called MYCAN to train people who are on social assistance to move into entry-level personal support worker (PSW) jobs in the health field, where there is a severe shortage of personnel. In this innovative program, GEM works with People Services to identify people on social assistance who may be interested in a career in the health field. GEM screens the individuals, hires the most appropriate ones and puts them through a five-month training program. The training includes classroom training by MYCAN teachers and GEM nurses, as well as extensive clinical practice in local long-term care facilities and hospitals. It also includes 30 hours of community experience by shadowing GEM staff as they work in home care. To be eligible for hire, individuals must really want to be in the health field, have the right aptitude and attitude, have a realistic view of what the job of PSW entails, and have at least grade 10 English. At the end of the five-month training program, they must pass a standard provincial exam. Once they graduate from the program, they are guaranteed work with GEM. In the two years since its

inception, the program has had over 100 graduates, which translates to over 100 previously unemployed individuals who are now gainfully employed, meeting the needs of an employer, and helping to fill a great demand from the health sector.

GEM has another training program. This two-week program trains patient/client sitters, a position which can, with the necessary training, be a stepping-stone to a PSW position.

#### *The Community Economic Development Network of Ottawa*

The Community Economic Development Network of Ottawa<sup>22</sup> is another example of a local effort to try to build relationships between organizations doing community economic development in Ottawa. A relatively new network, it tries to bring these organizations together to (a) network better; (b) provide support to existing businesses so they become or continue to be successful; (c) develop the capacity of those businesses that are trying to become viable businesses;<sup>23</sup> and (d) increase the number of these organizations.

A number of community-based businesses are good examples of efforts to develop the community economically and to provide real employment opportunities to those who would otherwise be unemployed. For example:

1. *Causeway* is an organization for psychiatric survivors. It has developed a catering business called Crackers Catering, using its participants as employees.
2. *The Laundry Co-Op* is based at the Bronson Centre. It started because a group of churches and the Centretown Community Health and Resource Centre recognized that one of the biggest problems faced by the homeless and those living in poverty is getting their clothes washed. Having on hand some industrial-sized washers and dryers, the Co-Op realized they had some assets they could capitalize on. They expanded these into a laundry business by approaching gymnasiums, offering to wash their towels. They have also approached CHEO. Although not entirely self-financing, the Co-Op is giving several previously unemployed people much-needed work experience.

22. Currently it has a mailing list of 60 organizations that are community-based businesses.

23. For example, many Somali women work in the cleaning business. A group of them are considering developing a co-op. What they need is assistance to get started (especially from someone who has a "business sense"), and to be assisted in understanding the subtleties of Canadian laws and Canadian business. "Once they get that, they can compete with anybody else . . . ."

Following many successful examples in other parts of the country, including Atlantic Canada, Quebec and British Columbia, the Network wants to examine and evaluate the structure of the economy and the possibilities for community economic development. For example, many of these businesses tend towards the same nature and type (such as cleaning, sewing and catering ventures) because of the skill sets their clients have. But there is a limit to the need for these kinds of businesses in the city. Great potential for collaboration exists within the Network to look at the community as a whole and consider what would be most beneficial for community development, the social sector, and a large segment of the unemployed population.

In addition to promoting collaboration among its members, the Network is primed to build relationships with the private sector. Their goal is to "to learn, to understand, to get the input" from businesses to ensure successful community economic development, business ventures and cooperatives. "One of the basic problems is that you have social workers trying to be business people. There is a fundamental flaw in this concept.... There is a need to develop this expertise...." To be successful, these projects must be viewed and run from both a social and business perspective.<sup>24</sup> Partnerships and collaboration with the private sector will be advantageous and necessary, and should be encouraged and facilitated.

In our consultations, we came across at least three other initiatives that provide training for EI and Social Assistance recipients to enhance their socio-economic well-being.

### *1. Rainbow Skills Development Centre*

Rainbow Skills Development Centre is a non-profit/charity educational institution established in 1994. Its mission is to promote and enhance the socio-economic well-being of low-income residents of the National Capital Region through business skills training. The goal of its programs is to help clients develop marketable employment skills and good work attitudes that will enable them to get and keep a job.

The Centre provides training for EI and Social Assistance recipients and for private individuals who cannot afford to pay tuition to a private college. Rainbow students come from many different social, cultural and educational backgrounds, and they represent all age groups. An increasing number are young and seeking the training and occupational skills they need to get started in a career in hi-tech. Some are relatively recent immigrants or refugees who have training or experience but are not able to find employment in their field in Canada. Others have lost jobs because of downsizing or company closures and do not have skills in an area with future prospects. Still others have been out of the workforce for a long time for reasons including illness, disability or family circumstances. All are ready and keen to get back into the job market.

In 1998 the Centre became the first non-profit charity organization to be certified as an educational institution. The Centre offers selected courses<sup>25</sup> in information technology (IT) which have been developed to help students attain the high levels of competency required for success in today's marketplace. In addition to technical skills training, Rainbow provides employment support, career/job search skills training, IT pre-employment for women, and referrals. They also have a placement service for individuals re-entering the workforce after unemployment, disability, recent immigration, and so on.

The Centre has a record of placing 98 percent of its students with different companies for co-operative job placement (100 percent in some programs), 87 percent of whom obtained paid employment after their job placement. The Centre currently partners with more than 100 private — and public-sector organizations that place and employ its students.

### *2. The Aboriginal Intelligent Technology Worx*

The Aboriginal Intelligent Technology Worx (A.I.T. Worx), housed in the Odawa Native Friendship Centre, is an innovative, 24-week computer, communications and office training program designed to help Aboriginal

24. This is similar to funding issues connected to community economic development projects. If funders look at them with social glasses, they will be inclined to consider them as businesses and decide they should not be funded. If they look at them with economic or business glasses, it will be determined that they make no business sense because of the social component. But if both social and economic lenses are used, then it will make perfect sense.

25. The programs offered include Computer Hardware Technician A+ Certification & Network+, Microcomputer Office Applications, Web Enterprise Developer and Database/Network Administration (Information Technology Training for Women), Bilingual Office Professional Training Program in partnership with the Public Service Commission, and Women's IT pre-employment program. The programs run ten to sixteen months in length and are varied in structure to include classroom instruction followed by a work placement program. In addition to training, the Centre also sponsors a Sewing Co-operative funded by the Trillium Foundation.



Canadians successfully re-enter the workforce. Its main objective is to offer people (primarily on EI or Ontario Works) with limited skills the opportunity to be more productive, build new careers and find meaningful employment. The program uses a combination of classroom studies, hands-on training and work placements, and students are given information on career options and opportunities as well as ongoing career counselling. They are trained in professionalism on the job while maintaining their Aboriginal identity and integrity.<sup>26</sup> The program stresses self-reliance, self-esteem, networking and team skills.

### *3. The "Job Connect" Program*

This program<sup>27</sup> is for youths aged 16 to 24. In Ottawa, the program runs in partnership with La Cité Collégiale and St. Lawrence College. It trains youths in important skills to give them access to employment and provides summer jobs to enhance their employability. The program also provides a range of information services to youths, as well as counselling, links with employers, and similar services. In 2001, the program served 9,324 youths in the city. Sixty-seven percent of those assisted continue on to full-time employment, mostly in the National Capital Region.

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26. Part of the program focuses on Aboriginal art, culture, traditions, history and life skills.

27. It is a provincially funded program in existence since 1977.



*While interesting, the mass of data that was collected from the survey, interviews, focus groups and various industry reports is of only limited use (and potentially frustrating) for the average reader — even in the summarized form presented above. Therefore, the research team has prepared a synthesis of the input, identifying the most frequently heard remarks or those that struck us as central to a given industry. From this, we distilled the following list of 34 basic issues.*

# IDENTIFYING KEY WORKFORCE CHALLENGES

## 34 Basic Issues

### 1. Insufficient Linkages and Partnerships

**T**he inadequacy of cross-sector linkages among businesses, government, the community, institutions of higher education, and schools was a recurrent theme during this consultation. In particular, industry participation in shaping curricula and guiding career trajectories was deemed inadequate.

The disconnect between the available education and training programs and the needs of Ottawa employers was often described in terms of networking failures — the failure to exchange personnel between industry and education; the inability to use industry input in the formulation of curricula; the failure to develop effective internships and co-op placement systems beneficial to both students and employers; and an absence of a widespread system for mentoring or “training the trainer” initiatives.

Respondents also felt that better links between businesses and educational institutions would make more cost-efficient use of local resources. The Master's of Aerospace Engineering program in Montreal and the business-education partnerships forged by the Canadian Microelectronics

Corporation (based in Kingston) were both cited as best practices in this regard. In Ottawa, while this sharing of industry and academic resources is being done through the National Capital Institute of Telecommunications and through Algonquin's Bachelor of Information Technology program, it was felt that this type of partnership needs to be expanded.

### 2. Insufficient Career Counselling

There is a clear need for significant reinvestment of time, money and people in career counselling across the region at the secondary, post-secondary and adult levels. This message comes across the board from industry, job seekers, placement organizations, and education and training organizations. The standard message from existing career services is to get a university education to get a job in the advanced technology sector. Obviously, any community is built on more than one sector and Ottawa is no exception. Career counsellors need to familiarize themselves with a wider range of career options, and they need more up-to-date information on where the job market is heading, what skills (both technical and employability) are required, and what education and training options will deliver those skills effectively. The need for more effective career counselling applies not only to youth but also to all employed and unemployed people.

### 3. Need for Renewal of the Apprenticeship System

A fundamental reform and realignment of the apprenticeship system for trades training seems essential because no one appears happy with the current structure. There are numerous problems. While a tradesperson requires certification, a contractor requires none. Contractors don't want to hire journeymen because they are too expensive. They want skilled apprentices but in the carpentry trade, for example, provincial regulations mandate that each carpenter apprentice requires four journeymen on site. This places a large competitive burden on any contractors who may want to participate in an apprentice program. So contractors tend to hire task specialists, such as framers or interior finishers, who are paid less and don't require certification. For would-be apprentices, why should they bother to pay the higher wages of a journeyman? Framers don't need schooling or certification. In fact, they are more assured of work without it, as evidenced by the low completion rates among apprentices. The number of people completing their apprenticeship program across all trades in 2001 (355) is far less than the number who registered in 1997. Competition between unions and trades on training reduces their willingness to cooperate. In essence, we have a system that was developed over 100 years ago that is no longer effective. The incentives that should give us workers with expert skills, who can efficiently add value for employers and quality for consumers, are misaligned. The common feedback was "scrap it and start again."

### 4. Inadequate Trades Education

There is insufficient coverage of the seven broad-based Technological Studies programs at area high schools. There is an over-concentration on ICT studies at the expense of the other broad-based technologies. Therefore, students generally are not being introduced to the full range of trades. When compared with schools in other school districts, the number of Ottawa students enrolled in the broad-based Technologies Studies program is low. When combined with the inadequate levels of career counselling available to students, this almost excludes students from developing career paths in the professional trades.

There are seven Technological Studies programs offered by the various local boards of education in Ottawa's secondary school system. These programs are broad-based and not trade- or vocation-specific. The purpose of the broad-based approach is to provide graduating students with transferable skills that will allow them to seek employment, further education or training in a number of trade — and vocation-specific areas. The seven programs are:

- Communications Technology
- Construction Technology
- Hospitality Services
- Manufacturing Technology
- Personal Services
- Technological Design
- Transportation Technology

### 5. Inconsistent Educational/ Training Information

Information about area educational/training programs that is presented by various institutions is inconsistent, making it difficult for individuals to choose among training options and career opportunities. At the same time, employers have difficulty gauging what the future of the workforce will look like. These inconsistencies also limit the effectiveness of existing career counselling services.

### 6. Undervaluation of the Serving Professions

The serving professions, such as teaching, military service, social service, public service, and nursing, have been progressively undervalued by the community. This has damaged their ability to attract and retain qualified professionals. In the past, relatively low compensation was offset by high social regard for the profession. As that regard has declined, or as other intangible incentives and rewards have been diminished, these professionals have turned to asking for pay parity with similarly qualified professionals in other industries, even as the budgets in the service sectors have

declined. The perception that money was not the primary motivator among serving professionals is being proven false as the alternative, intangible motivators are being removed.

## 7. Underutilization of Immigrant Professionals

Due to artificial barriers created by immigration policies, provincial regulations, and the regulations and standards of certain professional associations, foreign-trained or immigrant professionals are underutilized in Ottawa. Further, the lack of policy coherence among the federal government, provincial government and the professional associations creates an odd situation: individuals are encouraged to come to Ottawa because of a talent they may never be able to use in Ottawa. This lack of coherence relates to the lack of investment in screening processes in countries of origin, the recognition of immigrant qualifications, and funding for immigrant skill upgrading.

## 8. Under-Investment in Training

Most area employers tend to under-invest in training by not allowing sufficient time for training, not providing money for training, or not providing the right expertise for training. While this may often be related to the short-term goals of the organization (such as the need to trim costs or to respond to spikes in demand), the long-term effectiveness of companies and the workforce as a whole are diminished by this approach. The commonly heard scenario is that when money is available (during growth periods), time is not, and when time is available (during recession periods) money is not. Given the reality of workforce mobility, training is increasingly being viewed as a public rather than a private good, or at least as producing significant spill-overs beyond an individual company. However, this view ignores the growing importance of education and training as key factors in attracting and retaining employees. As the last remaining vestige of security for employees, skill development will become

the competitive ground on which firms will vie for talent. Training and education needs run counter-cyclical to demands in the economy. Therefore, the inability of individuals to take advantage of training programs during slow times reduces the overall capacity of the education/training sector to provide needed expertise at the right time.

## 9. Lack of Commitment to Employability Skills

There is an overriding recognition of the importance of soft skills, or employability skills, but there is no long-term vision and commitment to the systematic development of these skills, backed by appropriate incentives. In today's job market, firms are selecting candidates on the basis of employability skills. However, if, as we've heard, technical skills are "what you train for" and employability skills are "what you hire for," then education/training develops a skew towards technical skills and treats employability skills as given. Such a bias can eliminate good candidates without consideration of employability upgrading.

## 10. Failure of Educators/Trainers to Integrate Technical, Business and Interpersonal Skills

Education and training providers (private and public) are not integrating technical skills, business skills and interpersonal skills effectively. As a result employees are frequently underutilized, because it takes time for them to acquire these integrated skill sets (which will benefit their employers). The often expressed need for several years of experience (which is seen by many as a barrier to employment) is based on the assumption that, given sufficient experience, employees develop business and personal skills and integrate these with their technical skills. Since educators and trainers have failed to bring about this skills integration process, employers must rely on employees going through "the school of hard knocks."

## 11. Unavailability of Current and Comprehensive Information on Ottawa's Workforce

There is a lack of clear, timely and comprehensive information on Ottawa's current and future workforce demands, and on the available training programs that might address these demands. Such information should be easily accessible to employers, employees, the unemployed, and potential immigrants. There is a need for a "one-stop shop" of reliable information rather than a multitude of sources. An online solution should be included.

## 12. Inadequate Health Care Funding

The declining levels of funding for health care have negatively affected the training, placement and retention of graduates and the professional development of existing health care professionals. Resources that might have been directed towards training are being directed towards primary care. Fewer graduates are being created, less compensation is being offered and there are fewer opportunities for advancing one's career. As a result the attractiveness of the health care profession has declined even as the demand for its services is beginning to soar.

## 13. Insufficient Mapping of Industry Skills and Training Requirements

Few industry sectors have developed a detailed map of the skills and training requirements of their sector (an exception is the mapping conducted by the Software Human Resource Council). This limits skill transferability within a sector and limits the ability of job seekers and employers to assess skill transferability across sectors. This lack of knowledge reduces the flexibility of the workforce to adapt to the fluctuations in any given industry.

## 14. Lack of Personal Skill Awareness

Whether employed or unemployed, workforce participants seem to have a general lack of awareness of the kinds of skills they possess. There is even less awareness of the transferability of their skills, of skill breakdowns in other

vocations, or of the skill sets that are in demand. For those lucky enough to get out-placement services when they are laid off, this shortcoming is quickly addressed, but most job seekers lack this basic requirement of job searching.

## 15. Insufficient Job Training Programs

Many job seekers whose job category has disappeared and who lack the education (or the capacity to get the education) to move into a more knowledge-based job may want to move into a more service-oriented position. An increasing number of service occupations such as personal support workers (PSWs), patient/client sitters, child care workers, and hospitality workers are needed, but there are not enough programs to help unemployed people make the transition into this type of employment. Some pilot programs exist (for example, with the Community Economic Development Network of Ottawa); these should be expanded.

## 16. Insufficient Re-Skilling Programs

Fast-track re-skilling programs (such as Vitesse) that facilitate skill transfers from one industry to another were frequently cited as models for achieving more workforce flexibility. However, their high initial skill requirements have proved to be barriers to entry, and the limited support these programs have received from the business community has declined even further in recent years. Some assessment of these programs would be valuable in helping to promote cross-sector transfers of skills and knowledge and a better utilization of local talent.

## 17. Insufficient Coordination between Placement and Training Organizations

While placement organizations and training organizations share the goals of helping job seekers get back to work and helping employed people advance their careers, their clients perceive little or no connection between their activities. Thus, clients may be refused jobs when a bit of additional training might have made the difference, or they may be trained for a job that isn't there. There is a need for better coordination between placement and training organizations.

## 18. Impact of Unchecked Growth on Ottawa's Quality of Life

We heard repeatedly that Ottawa's quality of life (in all its diverse aspects) was a key attractor for the knowledge workers who are and will be the City's engines of economic and social development. We also heard the cautionary refrain that the City must not sacrifice Ottawa's balanced lifestyle in favour of unbridled growth.

## 19. Insufficient Consultation on Ottawa's Economic Development Plan

Respondents were concerned that community stakeholders would not be consulted enough on the formulation of Ottawa's economic development plan. The current economic development plan includes consultation on talent and broadband, but not on the focus of economic development as a whole. Respondents were also concerned that ICT might be viewed as the only important sector in Ottawa's economy — they felt this would be a mistake, especially given the likelihood of continued weakness in that sector for several years to come. Other sectors such as services, health and education need to be sustained and encouraged, and support for emerging sectors needs to be broad-based. This has proven especially difficult for Ottawa in the past. First, when ICT was doing well, the City left other sectors scrambling for talent. Then, when ICT outside the government quickly declined, other sectors were not well positioned to absorb the worker outflow from ICT. More consultation was requested to help develop a more diversified economy.

## 20. Insufficient Use of Cross-Training within Organizations

Area employers are not using cross-training to the extent they might as an employee development tool. As a result, companies have less potential for adaptation, less potential for innovation, increased costs, and decreased flexibility. Cross-training within organizations increases dignity on the job and encourages more professionalism. When employees are cross-trained across industry sectors and have a broader range of skills, they bring a broader

perspective to innovative solutions and experience more employment security. Cross-training adds to the flexibility of the community workforce as a whole, but incentives may be needed to encourage cross-training by employers.

## 21. Insufficient Access to Language Training

There are not enough bilingual people to fill local jobs that provide services to the public, such as front-line service, management consulting, administration, government services, and so on. But job seekers report there is insufficient support for language training. Language is not an issue among Francophones, who enjoy very high levels of employment in the NCR, but unemployed Anglophones feel embittered because they can't afford the training. Without the bilingual qualification they are automatically excluded from a large number of service jobs, even when those jobs don't explicitly require bilingualism. This language problem is particularly acute among persons with disabilities.

## 22. Insufficient Responsiveness by Educational and Government Institutions

Educational institutions and government do not respond adequately to changes in sets of skills required for many jobs. There is a significant lag time between when an industry recognizes a need for a particular skill and when the educational organizations respond to that need. In the case of colleges and private sector trainers, this delay may be from nine to twelve months; at the university level the delay may be as much as three to five years. Closer ties between industry and the education/training sector are needed. In addition, given the increasingly technical emphasis of education, and therefore the short life span of the skill sets taught, educational institutions seem to be consistently preparing for the past. For example, we have successfully doubled the pipeline for ICT education just at the time when the demand for ICT graduates has been cut in half. At the same time minimal attention is paid to the more universally required employability skills that have long life spans in a worker's career.



## 23. Lack of Vision

There is a lack of vision regarding the kind of workforce we want to have in Ottawa and how that workforce should fit into complementary economic and social visions of the City. We need a visioning exercise to determine where we as a community want to take our workforce and the kind of workforce we would like to have. For example, what do we want the local workforce to look like five years from now?

## 24. Need for Ongoing Data on Ottawa for Multiple Audiences

A number of people spoke about the ongoing need for the type of broad contextual data on Ottawa that was presented in the first report of the *Ottawa Works* series. The City has its own needs for information, and employers, workers, educators/trainers and prospective workers have different information needs. All tend to agree that a single window approach is desirable and has considerable value. This raises a series of questions. What organization(s) should do it? What resources are required, and where will they be found? Where should it be housed? In what form? How should it be governed for maximum credibility?

## 25. Need to Institutionalize Workforce Learning

The workforce difficulties associated with the economic boom of 1998–2000 are likely to recur within the next two years, with the next economic growth phase. We know what the challenges are likely to be because we have just experienced them. But because of the current downturn, there has been no corrective action taken to address the systemic problems that became apparent during the boom. These same problems, such as the stealing/poaching of employees, shortages of engineers, shortages of professors and trainers, shortages of tradespeople, over-extended infrastructures, etc., will likely reappear. In addition, nothing has been done to avoid the type of layoff difficulties Ottawa experienced post-2000. We heard a clear call to learn from past experience and be proactive in anticipating similar issues and difficulties in the future.

## 26. Threat of a Triple Crunch

The need to establish a new and more effective system of workforce governance is strongly underscored by the confluence of three unfolding challenges. First is the demographic challenge of 30 percent of the senior professors, trainers, and teachers in the workforce retiring. Given that Ontario is also creating fewer Ph.D.s today than in 1990, we know there will be fewer people, particularly at the post-secondary level, to provide the training that is currently needed. Secondly, the next big wave of students, the children of the baby boomers, is currently moving through the post-secondary school system. This, combined with the impact of the double cohort in 2003 (the elimination of grade 13 causing two graduating classes to finish high school at the same time), will add significant demand to the already stretched resources of the post-secondary system. This spike in demand will last for five to eight years. Lastly, the talent demands of the next wave of advanced technology growth will probably begin in the next two to three years. These demands will likely siphon off specialists from the education system, as happened from 1997 to 2001. The net result of this “triple crunch” is that just as the demand for talent reaches its highest point, our capacity to meet that demand will be significantly diminished.

## 27. Insufficient Transitional Job Support

Despite the large capacity in Ottawa to absorb the layoffs of the previous year, job seekers need more support than is currently available to them. Access to affordable child care, career and education counselling, networks to connect people to job opportunities, language training, and computer literacy training are all needed to help job seekers find vacancies and secure employment.

## 28. Lack of Flexible Child Care for Unemployed

Expanding on the issue of child care, there is a lack of appropriate, flexible child care options in the city. Job seekers are limited to job opportunities that don't conflict with the daytime-only operating hours of child care services. This is a major stumbling block for getting people employed and closing the gap between low-income and high-income families.



## 29. Inefficient Approval Process for Training Support

The approval process that job seekers must navigate is too long and unpredictable. Unless someone makes the decision immediately upon layoff to apply for training, they may find that their income support period ends before they complete their training. There is therefore a need to expedite the approval process for training support. If a loan can be approved in a day, why can't an application for training? In addition, supporting agencies often do not synchronize with each other in their provision of training. For example, an individual on social assistance or EI can have their income support cut off once they have been approved for a student loan, even though they may not receive access to their loan funds for weeks or months.

## 30. High Caseworker Loads

High case loads mean that caseworkers can only provide minimal assistance to job seekers with respect to career or education counselling, providing connections to community resources, and supporting the job seeker's job search. The system assumes that job seekers are self-sufficient, that they understand where to find and how to use labour information, and that they have or can develop the contacts necessary to find employment. However, a job seeker's unemployment undercuts that assumption. Caseworkers are the natural contact points for the assistance job seekers want, but their caseloads prevent them from providing any significant assistance. The system is not designed to create networks of personal contacts, either for caseworkers or for job seekers. This has significant effects on the assistance caseworkers can provide to unemployed clients, especially given the importance of networking and the fact that most job openings are not advertised.

## 31. Lack of Client-Centred Service for EI and Ontario Works Programs

While most public service jurisdictions in Canada have embraced the concept of client-centred service, the support system for EI and Ontario Works has not. It still demands

that job seekers integrate by themselves what they learn from all the transitional job support programs — from career counselling to education and training to job search to income support. The programs generally are organized for the convenience of the program deliverer, not the job seeker.

## 32. Lack of Awareness of Workforce Issues Related to Persons with Disabilities

There is a lack of recognition of the size of the disabled community and the issues and concerns faced by members of the workforce who have disabilities (who account for as much as 15 percent of Ottawa's workforce). These issues include accessibility, training, educational qualifications, language training, job accommodation, and the availability of accessible transportation.

## 33. Low Representation of Persons with Disabilities in Advanced Technology

Despite the high demand for qualified workers in advanced technology during the boom period from 1998 to 2000, the employment of persons with disabilities in this sector actually declined. While employers said their policy was to hire whoever could do the job regardless of background, language, race or disability, more anecdotal evidence reported suggests that the proportion of persons with disabilities in the sector actually declined in recent years. Understanding why this happened in the past will be important to ensuring the fullest participation of persons with disabilities in the next round of economic growth.

## 34. Gender Awareness

We found that there are limited workforce data available to provide guidance on gender-related issues. While some issues, such as child care and the high proportion of lone-parent families living below the Low-Income Cut-Off (LICO) relate predominantly to women, there is a shortage of research to determine just how well women are faring in Ottawa's economy. Sensitivity to gender perspectives should be incorporated in any workforce development strategy; to achieve that, more information is needed.

## Prioritizing the Issues

The above list of 34 basic issues was still too unwieldy to be useful for practical strategic planning or to provide a basis for developing an actionable strategy. The Centre on Governance therefore further consolidated the list of basic issues by grouping related issues. The resulting list of 20 important workforce issues follows

- A. Inadequate linkages among the public sector, private sector, business community, and training organizations (from Issues 1 and 17 above).
- B. A need for significant reinvestment in career counselling at secondary, post-secondary and adult levels, with particular emphasis on adjusting the communities' valuation of the trades and serving professions (from Issues 2, 4 and 6 above).
- C. Inconsistent and incomplete information on educational/training programs and enrolments (from Issue 5 above).
- D. Lack of responsiveness by educational institutions and government to changes in skill sets and skill demands identified by industry (from Issue 22 above).
- E. The need for an overhaul of the trades apprenticeship system, with 21st-century realities in mind (from Issues 3 and 4 above).
- F. Underutilization of foreign-trained professionals due to lack of coherence among immigration policy, provincial regulations and professional associations regarding assessments and certification requirements, and a lack of investment in the screening processes in countries of origin (from Issue 7 above).
- G. Organizations' under-investment in training (from Issue 8 above).
- H. Employers' lack of long-term commitment to systematic development of employability skills, and failure to integrate technical, business and interpersonal skills by education/training providers (from Issues 9 and 10 above).
- I. Absence of a system to identify skill commonality/transferability from sector to sector, which would benefit employers, trainers and job seekers (from Issue 13 above).
- J. Insufficient use by employers of cross-training as an employee development tool, resulting in reduced potential for adaptation and innovation, increased cost and decreased flexibility (from Issues 16 and 20 above).
- K. Lack of programs to help the unemployed make the transition into labour-intensive service occupations such as personal support workers, patient/client sitters, child care workers, and hospitality workers (from Issue 15 above).
- L. Not enough bilingual workers, lack of support for language training, lack of coordination between different levels of government, and insufficient local language training facilities (from Issue 21 above).
- M. Insufficient transitional job support for job seekers in the areas of flexible child care; career and education counselling; networking; language training; computer literacy; and coordinating support from federal, provincial and local agencies to streamline funding and approval processes (from Issues 27, 28 and 29 above).
- N. The need for a more client-centred service by reducing caseloads for EI and Ontario Works caseworkers and training them to provide educational, career, networking, and job search support to job seekers (from Issues 30 and 31 above).
- O. Lack of recognition of the size of the disabled population and the issues faced by people with disabilities in the workforce (from Issues 32 and 33 above).
- P. The need to incorporate a gender perspective into any workforce development strategy (from Issue 34 above).
- Q. The urgent need to plan for the upcoming triple crunch, which will result from:
  - the reduced capacity in education and training sectors due to baby boomer retirements.

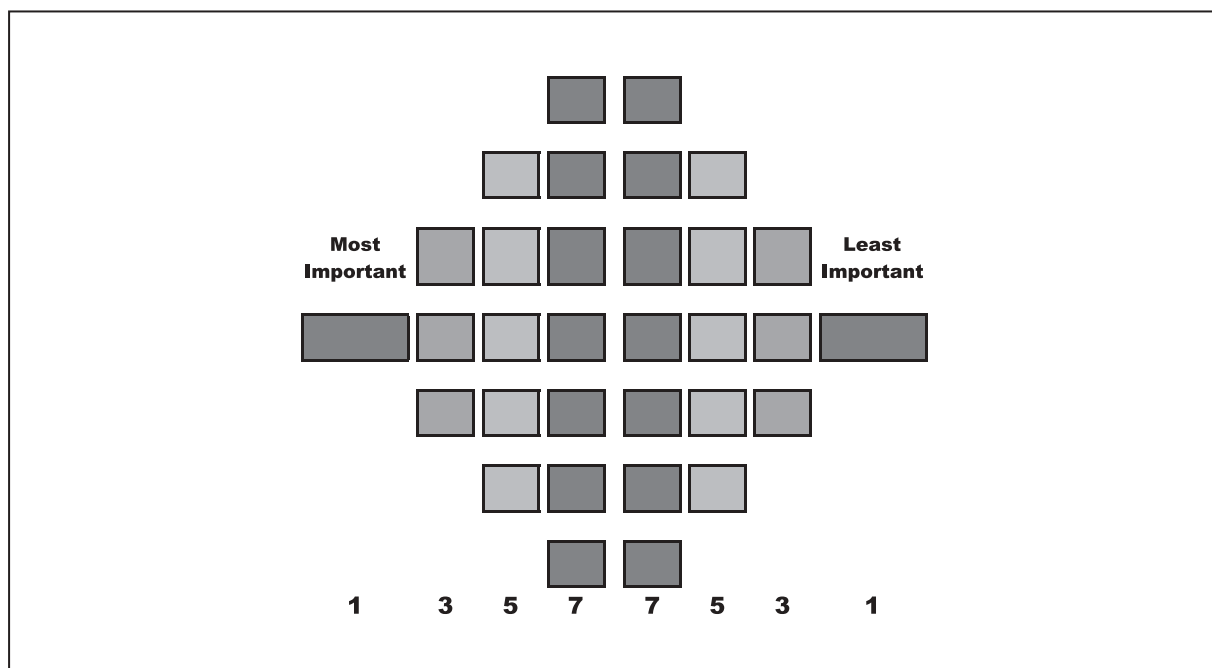
- the increased demand in education and training due to the next wave of students moving through the post-secondary system and the double cohort challenge.
  - the increased demand for talent from the next growth phase in the advanced technology sector (from Issue 26 above).
- R. A need for timely, clear, user-friendly, comprehensive information on Ottawa and its workforce that is consistently collected, credibly presented, and easily accessible (from Issues 5, 11, 13, 24 and 34 above).
- S. A need for more consultation with community stakeholders on Ottawa's economic plan, to ensure that workforce lessons learned from the previous tech boom are applied to future planning, and that previous problems do not recur (from Issues 18, 19 and 25 above).
- T. A visioning exercise is needed to determine where we as a community want to take our workforce, and the kind of workforce we would like to have 5 to 10 years from now (from Issues 18 and 23 above).

## Ottawa's Top 10 Workforce Issues

With this list of 20 issues in hand, the Centre on Governance met with the *TalentWorks* Steering Committee on June 26, 2002, to assess the relative priorities of these issues in the community. Together we applied a sorting methodology called Q-sort.<sup>28</sup> In the Q-sort method participants rank options, and then the frequency and placement of each ranking is used to determine an overall pattern of prioritization.

Steering Committee members were each given a deck of 34 cards, with each card representing one issue from the list of 34 basic issues listed above. Each member of the Steering Committee organized these cards according to the Q-sort method: place one card in column 1 for the highest priority, three cards in column 2 to indicate second highest priority, five cards in column 3 for third highest priority, seven cards in column 4 for the fourth highest priority, and then repeat in descending order with the remaining cards (i.e., seven, five, three, one) for columns 5 through 8.

**Table 1: The Q-Sort Process**



28. [http://www.cs.uwindsor.ca/meta-index/courses/95F/60212/97t/course\\_material/lecture\\_notes97/lec3\\_97/lecture4\\_5.html](http://www.cs.uwindsor.ca/meta-index/courses/95F/60212/97t/course_material/lecture_notes97/lec3_97/lecture4_5.html)

Issues placed in columns 1 through 4 are considered high priority, and the issues with the highest frequency of appearance in these columns have the highest priority. Therefore, the Centre on Governance team will work with the issues that appear at least six times in columns 1 through 4.

When the results of the Steering Committee's Q-sort ranking exercise were compiled, some patterns and high priorities stood out immediately. Table 2 shows the issues organized according to the priority assigned by the Steering Committee.

**Table 2: Issue Rankings**

Order of Priority	Top 20 Issues (issue number and description)	Locus of Change
1	1. Partnerships	Each sector
2	11. Single site or publication about employment and training in Ottawa	TalentWorks
	26. Triple crunch (growing economy, retirements, double cohort)	City
3	2. Career counselling (more counsellors and broader perspective)	Policy/TalentWorks
	7. Facilitate recognition of foreign-trained professionals	TalentWorks
	9. Embed employability skills in curricula at all levels	Education
	13. Transferability: identify technical and soft skills that are common to many sectors	TalentWorks
	22. Reduce lag time between need identification by employers and educational/training response	Each sector/education
	24. Regular collection and publication of data found in <i>Ottawa Works</i>	TalentWorks
4	4. Revitalize trades education in secondary schools	Education
	5. Present information about training and enrolments (for students and employers)	TalentWorks
	10. Businesses should include managerial skills in their in-house training programs	Each sector
	14. Assist job seekers to identify the employability skills they have.	City
	15. Government support for job seekers to move into growing areas (particularly for low-skilled workers)	Policy
	17. Training program information should be made available to job placement organizations	Education
	30. Need for more caseworkers with improved career counselling skills and information	Policy
5	3. Revamp apprenticeship programs	Policy
	8. Industry collaboration to provide input into training programs	Each sector
	23. Visioning exercise for future workforce, workplace and living place needs	City
	27. Identify barriers for job seekers and recommend strategies to address them	TalentWorks

## Top 10 Key Workforce Challenges

The Top 10 priorities determined by this method are the following:

1. Insufficient Linkages and Partnerships
2. Lack of a Single Window for Information on Ottawa's Workforce Demands and Training Resources
3. The Threat of a Triple Crunch (Growing Economy, Retirements, Double Cohort)
4. Insufficient Career Counselling
5. Underutilization of Foreign-Trained Professionals
6. Insufficient Employer Commitment to Employability Skills and Failure of Educators/Trainers to Integrate Employability Skills in Curricula
7. Insufficient Mapping of Industry Skills and Training Requirements to Aid Transferability
8. Need to Reduce the Lag Time Between Skill Identification by Employers and the Educational/ Training Response
9. Regular Collection and Publication of Data Found in *Ottawa Works*
10. Need to Revitalize Trades Education in Secondary Schools

The "Locus of Change" column in Table 2 indicates where ownership of the change process is likely to rest; i.e., with an industry sector(s), the City of Ottawa, *TalentWorks*, or through some policy modification.

## CONCLUSION AND NEXT STEPS

**A** research team from the Centre on Governance at the University of Ottawa conducted a comparative analysis of anecdotal data gathered on nine sectors making up the Ottawa economy, along with anecdotal data gathered from unemployed persons and advocacy groups. The data presented a picture of both employee and employer needs in each of the sectors, as well as the particular needs identified by the unemployed, immigrants and disabled persons.

From this data, the research team has identified 34 basic issues, 20 important issues and 10 Key Workforce Challenges. In Report III of the *Ottawa Works* series, the research focus will be on finding ways to address the Key Workforce Challenges and thereby enhance the workforce potential of Ottawa through a series of practical initiatives.

The next steps in developing a workforce strategy for Ottawa have already been initiated by the *TalentWorks* Steering Committee. The Committee has suggested a framework around which to build a strategy — one that is based on a regional Human Resources development model (i.e., an organizational HR model taken to a regional level). An examination of HR models and best practices related to workforce development in other communities will assist in building elements of the strategy. As well, the

researchers will periodically call on the expertise of other key resource people in the community as the policies, practices and products that make up the strategy take shape.

In the next phase of the *Ottawa Works* project, the research team will draw on local input and international best practices to recommend initiatives to address the 34 basic issues outlined in this report. The focus will be on this report's Top 10 Issues. The recommendations associated with the Top 10 Issues will include detailed proposals for implementation.



# Appendix A

## Employment and Skills Telephone Survey

### Questions for the TalentWorks and Centre on Governance Employment and Skills Survey<sup>29</sup>

Survey Population: National Capital Region (n = 500)

**1. Which one of the following best describes your employment situation?**

- Employed, part-time for pay
- Employed, full-time for pay
- Self-employed
- Currently seeking work
- Homemaker
- Student
- Disabled
- Retired
- Other
- Don't know/No answer

**2a. (If employed part-time at Q1) Are you currently working part-time because that is your preference, or because you have not been able to find full-time work?**

- Have not found full-time work
- Preference
- Don't know/No answer

**2b. Is your current job one in which you feel you are able to make use of your current level of education and training? (Yes/No/Don't know/No answer)**

**3a. (If respondent is currently seeking work at Q1)**

**Are there any obstacles keeping you from obtaining the type of position you are looking for?**

**3b. (If not at Q2b) Are there any obstacles keeping you from obtaining full-time employment?**

**3c. Are there any obstacles that keep you from getting a job that makes use of your current level of education and training?**

**4. (If currently employed for pay - others go to Q5) Now, thinking specifically about your current position, do you think there is a need for you to upgrade your skills? (Yes/No/Don't know/No answer)**

**5. Now thinking more generally about enhancing your employment opportunities, in which time frame would you be most likely to pursue additional training or education, if at all? Would it be in the next six months, in the next year, in the next two years, or do you not expect to take training?**

- Six months
- One year
- Two years
- No training needs

**6. What kind of training or education would you be most likely to take?**

**7a. How concerned are you about losing your current job in the next six months; are you very concerned, somewhat concerned, not very concerned, or not at all concerned?**

- Very concerned
- Somewhat concerned
- Not very concerned
- Not at all concerned

29. Included in the *Ottawa Market Pulse Survey*, conducted by Decima Research Inc. February 14, 2002.

**7b. And how concerned are you about losing your current job in the next year; are you very concerned, somewhat concerned, not very concerned, or not at all concerned?**

- Very concerned
- Somewhat concerned
- Not very concerned
- Not at all concerned

**7c. How concerned are you about losing your current job in the next two years; are you very concerned, somewhat concerned, not very concerned, or not at all concerned?**

- Very concerned
- Somewhat concerned
- Not very concerned
- Not at all concerned

**8. What if your job disappeared today; how confident are you that you would be able to get another job within six months? Would you say that you are very confident, somewhat confident, not very confident, or not at all confident?**

- Very confident
- Somewhat confident
- Not very confident
- Not at all confident
- Don't know/No answer

**9. If your job disappeared today, do you think you have skills that are transferable to (\_\_\_\_\_)?**

- Another occupation within your industry?
- Another industry?
- Self-employment?

**10. If you were in a situation where you needed to switch to another occupation or industry, which of the following forms of assistance would you consider most important?**

*Now I would like to ask you about the National Capital Region as a place to live...*

**11. Given the opportunity, how likely would you be to move from Ottawa; would you be?**

- Very likely
- Somewhat likely
- Not very likely
- Not at all likely
- Don't know/No answer

**12. Why would you move? Why not?**

# Appendix B

## Ottawa Workforce Profile Consultation Participants

Sector	No. of People Consulted
Agri-food	17
ICT (Information, Computing and Telecommunications)	16
Construction *	3
Education	11
Public Administration	16
Health & Life Sciences	9
Services	12
Tourism/Hospitality	8
Transportation	8
Advocacy Groups	28
Ontario Works Clients	8
Employment Insurance Recipients	9

\* Due to another study being conducted during the same timeframe as the Ottawa Workforce Profile, there was a sense of consultation “saturation” in this sector. The comments presented in the Construction “Industry Summary” section reflect in large measure a wealth of information and insight gathered by Kie Delgaty, a researcher contracted by Algonquin College to make recommendations regarding the College’s apprenticeship-related programs. The report, entitled *Market Analysis of the Short Term Demand for Apprenticeship Training at Algonquin College*, was prepared for John Paul Tapp at Algonquin College after conducting approximately 50 interviews with employers, unions, industry associations and training institutions in the area of skilled trades.

### Interviews at Partnering Organizations

Cheri Crosby, Director, Ottawa Human Resources Centre, HRDC

Leslie Sheedy, Ottawa Human Resources Centre, HRDC

Blaine Kiley, Ottawa Human Resources Centre, HRDC

Dick Stewart, General Manager, People Services, City of Ottawa

Colleen Hendrick, Director, Innovation, Development and Partnerships, People Services, City of Ottawa

Robert Dupuis, District Manager, Eastern Ontario, MTCU

Alf Chaiton, Senior Advisor to the Mayor, City of Ottawa

# Appendix C

## Interview Questions for Employers

### Current Employment and Skills

- 1) How big is your sector? Can you give an estimate of the number of people employed in your sector?
  - 2) What are the primary/largest job categories in your sector?  
How many of these are critical to your sector? Which ones?  
Can you give an estimate of the number of people currently employed in each of the critical job categories that you identified earlier?  
Is there a shortage? Which ones? Why?  
Is there an over-supply? Which ones? Why?
  - 3) In these critical job categories, what are the most important skills required?  
Do you feel these skills are something that anyone can learn?  
Could you rate the relative importance of technical and employability skills?  
What do you do to emphasize and demonstrate the importance of these skills in your organization?
  - 4) Where, in your opinion, are the required skills for the primary job categories (identified in question #2) currently being developed in the local workforce?  
Are the organizations doing this training and skills development doing a good job?
  - 5) How long would you say it normally takes for someone to develop these important skills?
  - 6) Do you see a gap between actual skills workers possess and the qualifications demanded by your sector?  
In what ways?
- What are the primary obstacles in obtaining the training that people require?
- Is there a lag between the (evolving) demand for skills in your sector and the response of educational programs, public and private training efforts, etc.?  
If so, how long?
- What do you see as the costs of the present gap between the supply of skills and the skill needs of your sector in economic and human terms?
- 7) To what extent are the skills required for the primary job categories in your sector transferable from totally different jobs? From other sectors?
  - 8) Where, geographically, do you look to find workers with the skills you require?  
What recruitment sources do you look to when seeking talent for your primary job categories?  
Can you identify common characteristics among the people who apply for these important job categories? Do these candidates meet your skill requirements?  
If your organization/sector has had to lay employees off in the last few years, what was the skill profile of these laid-off employees?
  - 9) Do you feel that people's skills are often underutilized in your sector? In what ways?
  - 10) Who do you think would be the first group to be laid off during the next economic downturn?  
Can you identify some leading or lagging predictors of economic downturn?

## Forecasted Employment and Skills (for existing occupations)

- 11) Do you anticipate that the skill requirements will change in the existing critical job categories you have identified in the next 2 to 5 years? Which skills? In what ways?

Which skills will be critical?

Which skills will be less important or no longer required?

- 12) Can you give an estimate of the number of people (anticipated job openings) that will be required in each of the existing critical job categories in the next 2 to 5 years?

Are there job categories that will no longer be required? Which ones? Why?

- 13) What do you think the sector should do to anticipate such changes?

What other parties should also be playing an active role in anticipating and preparing for these changes? What should they be doing?

Where do you think you should be looking for people with these new critical skills?

- 14) Do you believe there is a gap between the current supply of workers and skills and the future needs of your sector?

Why do you think there is such a gap?

- 15) If applicable, what do you foresee as the costs of the anticipated gap between the future supply of skills and the skill needs of your sector in economic and human terms?

## Forecasted Employment and Skills (for new occupations)

- 16) Do you anticipate new job categories in your sector in the next 2 to 5 years?
- 17) How many people do you anticipate will be required in these new job categories in the next 2 to 5 years?

- 18) What skill sets do you foresee will be required in these new job categories?

What do you think your organization/sector should do to anticipate such changes? What should other parties be doing?

Will there be gaps between the skills that will be needed and the education/training that you perceive will be required?

Why do you think such gaps will exist?

Where will you look for employees who have the new skills you will require for these new job categories?

## Demographic Information

*Now, back to present employment issues, we would like to get a sense of demographics within your sector..*

- 19) To what extent does your sector accommodate or actively seek out:

- women?
- youth?
- mature workers?
- the unemployed?
- persons with disabilities?
- immigrants/newcomers to Canada?

- 20) In your opinion, are people from the groups listed above well represented in the critical job categories in your sector?

- 21) How do you think each of these groups can be more effectively utilized by your sector?

## Workforce Development Strategy

- 22) To benefit your sector, what do you think a workforce development strategy for your sector should focus on?

# Appendix D

## Interview Questions For Advocacy and Community Groups

1. Who are your constituents?
2. How big is this group?
3. Can you give a demographic breakdown of this group?
4. What percentage of this group is employed?  
What is the unemployment rate? (also for different subgroups, if pertinent)  
Do you have information on the breakdown between full-time employed and part-time employed?
5. How would you describe the skill level of your constituency?  
Is there an over-supply or shortage of certain skills?  
Is there a particular industry in which your constituents are employed?  
Is there a particular occupation in which your constituents are employed?  
Are their skills being underutilized? Are they over-qualified?  
Are they lacking in necessary skills? What might these be?
6. What are the barriers to full employment faced by your constituency, or different subgroups within it?
7. What are the barriers for the unemployed within this group? Are they different from those faced by the group as a whole?
8. How can the barriers be overcome?
9. Where do you think the primary responsibility lies in removing these barriers?  
Who should play a critical role in eliminating/removing these barriers?  
What should or can be done?
10. Is information on the required skills for jobs readily available or accessible to members of your constituency? (If not, why not?).  
Is information on changing skill requirements available to your constituency? How up-to-date or current is this information?
11. How do members of your constituency look for a job? What avenues do they explore? Are these avenues effective?
12. Where, geographically, do members of your constituency look for jobs? (Do they primarily look within the region? Are they tied to this region; or are they quite mobile?)
13. Is there a gap between the actual skills possessed by the members of the group and the qualifications demanded by employers in Ottawa?
14. To what extent are the skills possessed by your constituents transferable to other occupations/jobs in the same sector or industry in which they have been employed? Are the skills transferable to other sectors? Which skills?  
Do you think people are aware that their skills are transferable?  
What has been done, and what can be done to make people aware that they may have transferable skills?



15. What do you think is required in order for people in your constituency to make the transition to another occupation or industry?

What would they need to know in order to make that adjustment?

16. Do you think there is a need for upgrading of skills for members of your constituency? Which skills?
17. What are the primary obstacles in obtaining the training people require?
18. Do members of your constituency know where and how to get information about job openings? About training programs and opportunities?
19. How good/adequate is the information presently available to them? How accessible is this information to them? What other information do you think they should have, and how should it be made available to them?
20. How would you rate the training programs now available to members of your constituency? What programs should be available, or are needed for members of your constituency?
21. What would you like to see in terms of a workforce development strategy for Ottawa, and for your constituency within that framework?

# Appendix E

## Focus Group Framework for Employers

### Objectives

Get employer input into:

- demand and supply of labour in your sector
- Skill requirements (present and future needs)
- Recruitment
- Training and development
- Gaps
- Obstacles
- What needs to be done

### Issue: Current Employment

- Which are currently the primary/largest job categories in your sector?
- How many are employed in these critical job categories?
- Is there a shortage? Which ones? Why?
- Is there an over-supply? Which ones? Why?

### Issue: Current Skills and Skills Gaps

- In the critical job categories, what are the most important skills required?
- Can they be learned by anyone?
- How would you rate the relative importance of technical vs. “employability” (soft) skills for these jobs?
- How do you emphasize and demonstrate the relative importance of these skills in your org.?

### Issue: Current Skills and Skills Gaps

- Is there a gap between the actual skills workers possess and the qualifications demanded by your sector? In what ways?
- What are the costs of the present gap between the supply of skills and the skills needs of your sector in economic and human terms?
- Are people's skills often underutilized in your sector? In what ways?
- If your organization/sector has had to lay employees off in the last few years, what was the skill profile of these laid-off workers?

### Issue: Skills Development and Transferability of Skills

- Where are the required skills for the primary job categories in your sector currently being developed in the local workforce?
- How long would it normally take for someone to develop these skills?
- What are the major obstacles in obtaining the training that people require?

### Issue: Skills Development and Transferability of Skills

- Are the organizations doing this training and skills development doing a good job?
- What organizations are currently the best/poorest providers in developing these skills?

- Is there a lag between the (evolving) demand for skills in your sector and the response of educational programs, public and private training efforts, etc.? Is so, how long?

### Issue: Skills Development and Transferability of Skills

- To what extent are the skills required for the primary job categories in your sector transferable
  - from totally different jobs?
  - from other sectors?

### Issue: Recruitment

- Where, geographically, do you look to find workers with the skills you require?
- What recruitment sources do you look to when seeking talent for your primary job categories?
- (What kinds of people apply? Do they meet your skill requirements?)

### Issue: Future Employment and Skills (existing jobs)

- Do you anticipate that the skill requirements will change in the existing critical job categories in your sector in the next 2 to 5 years? In what ways?
- What skills will be critical?
- Where will you be looking for people with these skills?
- Do you have an estimate of the number needed?

### Issue: Future Employment and Skills (existing jobs)

- Will there be a gap between the current supply of workers and skills and the future needs of your sector?
- What will be the costs of this gap?

- Which skills will be less important or no longer required?
- Are there jobs that will no longer be required? Which ones? Why?

### Issue: Future Employment and Skills (existing jobs)

- What should the sector do to anticipate and prepare for such changes?
- Who else should be playing an active role in anticipating and preparing for such changes?

### Issue: Future Employment and Skills (new occupations)

- Do you anticipate new job categories in your sector in the next 2 to 5 years?
- What skill sets do you foresee will be required?
- Where will you look for employees who have the new required skills?
- What should your organization or sector do to anticipate such changes?

### Issue: Workforce Development Strategy/Talent Plan

- What would you like to see the strategy to focus on for your sector?
- What would you like to see the strategy to focus on for Ottawa in general?

# Appendix F

## Focus Group Framework For Advocacy Groups

### Objectives

Get advocacy group input into:

- Demand and supply of labour with respect to your client group
- Job search methods used
- Skills profile (present and future)
- Transferability of skills
- Training, development, and upgrading
- Gaps
- Obstacles
- What needs to be done

### Your Clients

- Who are they?
- What is the demand and supply of labour with respect to your client group? (Numbers?)
- What percentage of your clients are employed?
- In what particular industry or occupations are your clients employed?

### Issue: Job Search

Methods:

- How do your clients look for a job?
- What avenues do they explore?
- Are these avenues effective?

Location:

- Where, geographically, do your clients look for jobs? (Within the region? Are they tied to this region, or are they quite mobile?)

### Information and Assistance Required:

- Do your clients know where and how to get information about job openings?
- How good/adequate is the information presently available to them?
- What other information do you think they should have?
- How should this be made available to them?

### Issue: Job Search

- Do your clients have information on the required skills for jobs they are interested in?
- Is this information readily available or accessible to them? If not, why not?
- Is information on changing skill requirements available to them?
- How up-to-date or current is this information?

### Issue: Job Search

- What assistance do you think is needed to help your clients find a job?
- Who or what organization can potentially help them look for a job?

## Issue: Training and Upgrading

### Gaps:

- Is there a gap between the actual skills possessed by your clients and the qualifications demanded by employers? (Will there be a gap in the future?)
- Do you think there is a need for upgrading of skills for your clients? Which skills?
- Issue: Training and Upgrading

### Obstacles:

- What are the primary obstacles in obtaining the training your clients require?
- How can these barriers be overcome?

## Issue: Training and Upgrading

### Information and assistance required:

- Do your clients know where and how to get information about training programs?
- How good/adequate is the information presently available to them?
- How accessible is this information?
- What other information do you think they should have?
- How should this information be made available to them?

## Issue: Training and Upgrading

- How would you rate the training programs now available to your clients?
- What programs should be available, or are needed for your clients?

## Issue: Transferability of Skills

- To what extent are the skills possessed by your clients transferable to other occupations/jobs in the same sector or industry in which they have been employed?
- Are the skills transferable to other sectors? Which skills?

## Issue: Transferability of Skills

- Do you think people are aware that their skills are transferable?
- What has been done, and what can be done to make people aware that they may have transferable skills?

## Issue: Transferability of Skills

- What do you think is required for your clients to make the transition to another occupation or industry?
- What would they need to know or do in order to make that transition?

## Issue: Barriers to Employment

- What are some other obstacles that we have not talked about so far that are barriers to employment faced by your clients?
- What information or assistance do they need in order to overcome these obstacles?
- Who should provide this information or assistance?

## Issue: Workforce Development Strategy

- What have you/your organization tried in the past that has been successful in helping your clients?
- How did it work?

## Issue: Ottawa Talent Plan/Workforce Development Strategy

- Do you think this could assist you and your clients?
- Are there opportunities for working together?
- What advice do you have for the people writing the strategy?
- What would you like to see the strategy focus on for your clients?
- What would you like to see the strategy focus on for your clients?

# Appendix G

## Questionnaire for Advocacy Group Representatives

1. Who are your clients?
2. How big is this group?
3. Can you give some demographic specifics about the group? (E.g. Are they primarily female? Are they mostly young? Are they mostly newcomers to Canada, immigrants etc.?)
4. What percentage of this group is employed?
5. What is the unemployment rate? (also for different subgroups, if pertinent)
6. Do you have information on the breakdown between full-time employed and part-time employed?
7. How would you describe the skill level of your clients?
8. Is there an over-supply or shortage of certain skills? Which skills?
9. Is there a gap between the actual skills possessed by your clients and the qualifications demanded by employers in Ottawa? Are they lacking in necessary skills? What might these be?
10. Is there a particular industry in which your constituents are employed?
11. Is there a particular occupation in which your constituents are employed?
12. Are their skills being underutilized?
13. Are they over-qualified?
14. What are the main barriers to employment for your clients?
15. How can the barriers be overcome?

### **Respondent's Contact Information**

Name, Sector, Organization, Position, Phone, Fax, E-mail



# Appendix H

## Focus Group Framework for Job Seekers

### Objectives

Get Job Seeker input into:

- Job search sources and methods used
- Skills: available? transferable?
- Training and upgrading
- Obstacles
- What needs to be done: information and assistance you need

### Issue: Job Search and Methods

- How are you looking for employment?
- What main sources are you using?
- What do you think are the most important/effective ways to find a job?

### Issue: Job Search and Methods

- What do you wish to be done to help you find a job?
- What information or assistance do you think you need to find a job?
- Who or what organization can potentially help you find a job?

### Issue: Skills and Transferability of Skills

- What skills do you think employers are looking for?
- Do you feel your skills are transferable to another occupation within your industry?
- Do you feel your skills are transferable to another occupation in another industry/sector?
- Which skills?
- Which industry?

### Issue: Skills and Transferability of Skills

- What type of assistance would you need in order to make the transition to another occupation or industry?
- Who should provide this assistance?

### Issue: Training and Upgrading

- Do you plan on upgrading your skills for a job similar to your last one?
- Do you plan on upgrading your skills for a future job?
- What skills do you want to upgrade?
- Do you know where and how you can obtain this upgrading or training?

### Issue: Training and Upgrading

- How good is the information presently available on training and upgrading opportunities?
- How accessible is this information?
- What other information do you wish to have?
- How should it be made available to you?

## Issue: Barriers to Full Employment

- What are some other obstacles that we have not talked about that are keeping you from obtaining the type of position you are looking for?
- What information or assistance do you need to overcome these obstacles?

## Issue: Workforce Development Strategy/Talent Plan

- Do you think this could assist you?
- What advice do you have for the people writing the strategy?
- What would you like to see the strategy focus on for job seekers like yourself?
- What would you like to see the strategy focus on for Ottawa in general?

# Appendix I

## Summary Framework for Anecdotal Data

The following is a conceptual framework for qualitative analysis of anecdotal data by industry sector.

### 1) Sector Overview

- Description & parameters
- Estimate of the number of people employed
- Major occupations
- Identify shortages or over-supply

### 2) Skills

- Skill sets required
- Comment on employability skills
- Transferability among jobs and other sectors
- Identify key gaps among skills needed and skills available

### 3) Education

- Education/training required (including time required)
- Identify training providers (comment on effectiveness and responsiveness)
- Key weaknesses in education

### 4) Recruitment

- Geographic targets
- Recruitment sources
- Applicant profile
- Obstacles to obtaining workers

### 5) Layoffs

- Recent and anticipated layoffs
- Most vulnerable groups
- Economic predictors

### 6) Forecasted Employment & Skills

- Anticipated changes numbers
- Anticipated changes skills
- Preparation required
- Sunrise occupations
- Sunset occupations

### 7) Comment on Demographics

- Women
- Youth
- Mature workers
- The unemployed
- Persons with disabilities
- Newcomers to Canada

### 8) Gap Analysis

- (Rank issues)

### 9) Quality and Accessibility of Existing Workforce Information

### 10) Suggestions for Workforce Development Strategy

# Appendix J

## Discussion of Skills Transferability

Transfer of training takes place when an individual sees that a particular skill(s) acquired in one setting is applicable in another. In other words, transfer occurs when workers generalize their personal knowledge to more than one application because they identify common elements between and among settings. Both hard and soft skills are transferable. Transfer processes, which are cognitive processes, can be learned.

Soft skills, often referred to as “employability skills,” can and should be the most transferable from one work setting to another. It is appropriate to expect that education/training programs, career and job placement counsellors, and human resources personnel working with employees being “downsized” will help individuals to acquire soft skills and to recognize the settings in which they can apply both their hard skills and their soft skills.

### Skill Pattern Identification Matrix

In the table below, the cells are numbered so the transferability of skills among sectors can be shown. Cells 1.1, 2.2, 3.3, and so on show transferability within sectors. Cells 1.2, 1.3, 1.4, and so on (whose values are repeated in cells 2.1, 3.1, 4.1, etc.) show transferability between sectors. Some cells may be empty. Particular skills, both hard and soft, are noted.

A third dimension to the matrix, which makes it a 3-D model, is the EI and Ontario Works groups. Skills gaps noted by these groups are assigned to the appropriate cells for discussion purposes. (The Education and Training sector is both an employer and a service deliverer, especially when it comes to discussion of input from the EI/Ontario Works groups.)

Cells are shaded to show the degree to which transferability ACROSS SECTORS was reported within and among the sectors. The darker the shading, the higher the transferability.

	Business Services	Public Admin	ICT	Health & Social Services	Tourism, Arts, etc.	Education	Construction	Transportation	Agri-Food
Business Services	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9
Public Administration		2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
Information & Communications Technology			3.3	3.4	3.5	3.6	3.7	3.8	3.9
Health & Social Services				4.4	4.5	4.6	4.7	4.8	4.9
Tourism, Arts, etc.					5.5	5.6	5.7	5.8	5.9
Education						6.6	6.7	6.8	6.9
Construction							7.7	7.8	7.9
Transportation								8.8	8.9
Agri-Food									9.9

# Appendix K

## Workforce Recommendations from Interviewees and Focus Groups

This section summarizes the recommendations we heard for improving Ottawa's workforce during the four months of consultation. THESE DO NOT REPRESENT THE RECOMMENDATIONS OF EITHER THE CENTRE ON GOVERNANCE OR TALENTWORKS — they are a compilation of the suggestions and feedback we received over the period of the study. We table them here to make sure this valuable input is not lost, and so they can become a starting point for future discussions. They are also the basis for the recommendations that will be presented in the third report of the Ottawa Works series, *Ottawa's Workforce Development Strategy*.

### Agri-Food

- Identify and encourage links between equipment manufacturers and training institutions.
- Enhance the knowledge of career counsellors about the agri-food industry.
- Promote agri-tourism to increase interest in the industry.
- Petition the federal government to provide more benefits to low-paid workers.

### Construction

- Reform the apprenticeship system to bring it in line with the twenty-first century.
- Revitalize trades education in secondary schools.
- Do more in the area of career counselling.
- Improve linkages among employers, ministries and colleges.

### Education

- School board directors and college and university presidents should meet regularly and be open to suggestions regarding data sharing, data presentation, web site design, etc.
- Career counselling at the elementary and high-school levels must be improved — currently it is too focused on a narrow range of vocations. The Ministry of Education, school boards and the universities (esp. U of O, Faculty of Education) should be cooperatively involved.
- If forums are created, action plans must follow with clear accountabilities for deliverables.
- Attention must be paid to the advantageous lifestyle that comes with the teaching profession (i.e., vacation time, part-time employment, sabbatical leaves, etc.) to offset lower wages.
- Identify ways to get more minority group representation in teaching ranks.
- Sabbatical time out from teaching and into industry and *vice versa* would help both sides of the equation (two to three years).
- Middle management training for education administrators needs to be addressed by appropriate institutions.
- Establish networks so jobs can be found for spouses when filling critical job categories.
- Provide clear, ample information about quality of life variables in Ottawa for would-be teaching candidates to help attract them.
- Develop a generic curriculum to orient students to internships.

## Health and Life Sciences

- Increasing the funding of health care is a necessity for increasing supply and training.
- Ensure that education programs are available locally in sufficient numbers.
- Industry and government should work closely with colleges, universities and training organizations to identify new training and educational programs and expand existing programs in advance of the needs (e.g., in life sciences).
- Create a system for clinical placements to benefit students and employers.
- Support and assist employers who provide in-house training, cross-training, and skills upgrading.
- Encourage associations and licensing bodies to simplify and expedite accreditation of foreign-trained health professionals.
- Provide assistance to talented immigrants by helping to work on language skills and prior learning assessment.
- Expand outreach to elementary and high schools to recruit students to university and college programs and create awareness of potential careers in the health and life sciences sector (public and private).
- Develop an awareness program targeting individuals with allied skills (computer engineering, manufacturing, management, etc.) regarding potential career opportunities in the life sciences.
- Make current data and other information available to be used as a basis to plan and to develop strategies.
- Create partnerships between colleges and universities to assist in the transition from a college nursing diploma to a bachelor's degree
- Improve marketing of the city and local companies as a destination for leading-edge life sciences research and development.
- Encourage the community to consider collectively marketing local health employment opportunities outside the region.
- Put money into people by equalizing salaries and benefits (for people who work for community services and those who work for the City).
- Break down barriers for poor people or unemployed people to get the help that they want. For example, address the difficulties faced by people who are going back to school to be trained — the changes to the student loan regulations and the fact that people cannot be simultaneously on welfare and collect student loans to pay for tuition, which prevents people from getting the upgrading or the training they need.
- Continued support for the programs in community colleges such as La Cité and Algonquin is needed.
- Place higher value on the health care profession so people will want to go into that profession.
- Continue with innovative programs, such as the PSW employment/training program at GEM (for \$5,000 — tuition plus social assistance support and other employment-related expenses — you get a fully employable person who eventually comes off social assistance and contributes to the city) and IRAP (Industrial Research Assistance Program, an NRC program to help those unemployed or underemployed who are under 30 years old, or university or college graduates who cannot find a job).
- Continue to support initiatives such as the partnership between Life Sciences Council and Vitesse in re-skilling programs. (An example of one important outcome: 250 people who are on welfare have been identified as having science degrees or being underemployed; these people could be re-skilled for accreditation and developed in terms of soft skills.)
- Regional economic development plans must take into consideration the growth potential in the life sciences sector, including planning for new facilities and protecting the quality of life.



## ICT

- We need to get a detailed baseline of the ICT sector. What are the jobs that are critical and what are the skills that are needed? SHRC has made a start but more is needed.
- Develop an online training registry that can identify training opportunities — when, where, at what cost, and with a rating.
- Need for placement organizations to connect with organizations that can retrain people for these up-and-coming areas.
- “Why can't we have a program in Ottawa where engineers from industry come and teach the critical microelectronics skills during periods of lower demand in a cyclical industry?” Industry and universities could collaborate by staffing a full-time position to collect industry skill requirements for various sectors. This has been done in Quebec with success, in aerospace.
- There is a need to collect in an ongoing way statistics on industry sales, employment in major job categories, skills forecasts. Some partnership is necessary other than the microelectronics association where people work only part time.
- There is a need to take ICT job stream descriptions and the best aligned alternatives from other sectors to identify which positions are most transferable from other sectors.
- We need to be able to find ways to retain people in Ottawa rather than losing our entrepreneurial and technical talent to other areas.
- We need to ensure that we have a balanced lifestyle. Managing the city's growth is critical so there is a good balance between working and living.

## Public Administration

- There needs to be more dialogue with the educational institutions about what the needs are, the skills gap, so that they can be more responsive. For example, “if we know that the schools are not turning out enough paramedics and we know that the demand is going to increase throughout Ontario, then somebody should be getting the message that here is a hot area that you

should be putting a program on for encouraging people to take because there are automatic jobs when you come out of it. Same with nursing . . . The bureaucratic system moves too slowly.”

- A need for government to partner with universities to help them to put on some programs to develop leaders.
- More participation in schools by the public sector (e.g., speaking to classes, co-ops).
- A need to identify areas of concern, come up with potential solutions and try to foster support for getting them into place. E.g., One of the areas of concern is in the leadership across Canada, given the number of retirements to occur in the next five years.
- A need for mentoring programs, perhaps formal programs.
- A need to develop young graduates. Despite the risk that they will leave the organization, “if you hire five and you keep three, then you're still a little farther ahead....you know where they are in the future and you can get them back....There is a tendency to always want to go out and hire the person that comes in today and do the job...That is where the lack is right now, where it will continue to be. We don't all step up and say, yes we are going to have a program that is going to develop junior people into seasoned veterans.”
- Educational institutions must play a better role in providing basic skills that a person can bring to a job, e.g., good written and oral communication skills, good analytical skills, “awareness of what the business world needs,” team skills.
- A need to support apprenticeship programs in the trades, to recognize and value that they are good and respectable jobs
- For both fire and police, the City should set up a school to let people come forward and be trained before they apply for a job. “Paying firefighter wages while we train them is a very costly process.”
- A need to develop and retain bilingual employees.
- More exchanges and secondments between sectors to learn from one another, and to benefit each other.
- A commitment of employers in the region to help one another (e.g., with the city amalgamation, many executives were out of jobs; the “feds” put on information

sessions and some of them got jobs; in the case of Nortel, “rather than firing so many, maybe the feds could have taken some of those employees for a time, with an understanding that in two years they would go back to Nortel. There could even be cost-sharing.”).

- Share best practices.
- OCRI should work more with government (all levels).
- “OCRI sings the benefits of Ottawa, but it’s too formal... Needs to be more of an informal process.”
- Need for information (“the federal government does not have good knowledge of what’s out there as far as education and training are concerned. We need to know more.”)
- Need for universities to be less bureaucratic.
- Need informal networks at the community level.
- More research into what are the barriers to the formation of networks, what are the natural networks in the community that could work for us.
- 2–3 natural networks that could be encouraged with a small investment and would be less formal.
- Need for potential job seekers to understand the range of work that the government does, and the opportunities available.

## Tourism

- There is a need for more partnerships and linkages between education/training providers and the private sector.
- More emphasis should be placed on this sector as a viable career choice through improved career counselling.
- More opportunities for cross-training to avoid oversimplification of jobs.
- There is a need for more organized continuing education possibilities (i.e., management training).
- Many of the front-line positions in this industry require bilingual staff.

## Services

- Preparing for the next high-tech boom: the City needs to recognize the services sector as a priority sector and should consider the inter-relatedness and tensions between services and technology economic cycles.
- Outreach: need to professionalize sales and retail occupations.
- Recognition of professional certification within Canada and for certification granted outside Canada.
- Possible need to regulate the consulting profession (difficult to identify labour shortages in this industry, experiencing “quality control” difficulties because anyone can call themselves a consultant but they may not have the experience and expertise that is required by businesses in the Ottawa area).

## Transportation

- Through apprenticeship board and Ministries, go into schools to promote this industry and trades (players: Ministries, apprenticeship committees, industry associations, provincial advisory committees, school boards).
- Bring back “shop.”
- Specific forecasts for what to anticipate in the workforce (e.g., If there will be a shortage of electricians, what sectors will experience the shortage or suffer? Which sectors will be affected?)
- Anticipating needs: Schools and employers need to cooperate in order to respond as new regulations are written.

## Job Seekers

- Hire people from within the system where you can. An example of this would be hiring job seekers as child-care workers to provide day care for those seeking employment, or who work shift work.
- The government should hire Ontario Works and Employment Insurance candidates in the same way they do visible minorities. IT should be an affirmative action (employment equity) campaign.

- Attempt to match caseworkers with candidates based on their skills assessment. In this way counsellors would not have to know every program, but could have lots of knowledge in a specific area.
- Stop adding new programs and always changing names. Simply work within the existing programs to change the framework, and improve services.

## Advocacy

- There is a need for an inclusive Workforce Development Strategy, i.e., that the special needs of groups such as those for the people with disabilities, or immigrants and newcomers, are an integral part of the strategy and its formulation.
- There is a need for awareness and commitment to universal design principles and universal accessibility so as to enable the full participation of people with disabilities.
- Foreign-trained professionals: There is a need to examine what can be done about facilitating the recognition of the skills of foreign-trained professionals so that they can be a vital part of the Ottawa workforce. Various levels of government, professional organizations and education/training institutions should plan ways to facilitate the accreditation and certification of qualified landed immigrants and incoming foreign professionals while maintaining integrity in the practice of the professions.
- There is a need to help immigrants and newcomers in making the transition to a new country's labour market through access to training and upgrading resources and information on labour market trends, training and employment opportunities.
- Consultation or representation from those who are knowledgeable about the immigrant workforce and the institutional or systemic barriers confronting them must be an integral part of the process involved in the development of a Workforce Development Strategy.
- There is a need to support and facilitate community economic development and the endeavours of community-based business.
- There should be a mapping of skills existing within the community.
- There is a need to support innovative partnering initiatives and to explore more possibilities.
- There is a need to provide and share up-to-date, Ottawa-specific information for informed planning and decision making for all parties.
- Career counselling: Teachers, besides guidance counsellors, should be able to provide information to students as to where to go for help with their careers.
- Business associations (such as RGA, OCRI, Entrepreneurship Centre) should all provide information on who is looking for work in various areas.
- There should be a gender perspective in the Workforce Development Strategy. That is, any information that is provided should have a gender component to allow for proper planning and strategy formulation.
- Employers need to communicate opportunities in their organizations and explain what it takes to get there.
- Companies need to be open-minded and give people opportunities.
- Companies need to work with institutions to develop programs for shortage areas.
- Companies need to work with schools to talk about current and future needs to develop courses.
- There is a need to change the perception of the trades to seeing them as attractive occupations (with guidance counsellors, with parents). The proper information has to be provided early, at the elementary school level.
- Have one place where one can go for information, with descriptions on what you can find and a link, and a name of someone you can talk to for information; there is a need to bring all the appropriate information together (either a web site or quarterly/annual report).
- Such a web site should be properly branded before it comes out.
- Stop having five different organizations, sponsored by federal and provincial governments, doing the same thing.
- The community needs to talk to each other.

# Appendix L

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# Appendix M

## Naic Codes

Group	Name	NAIC Codes
1	Agriculture & Agri-food	111 + 112 + 1151 + 1152 + 311
2	Construction	23
3	Info. & Comm. Techn.	334 + 3359 + 5112 + 513 + 514 + 5415 + 5416 + 5417
4	Transportation	481 + 482 + 483 + 484 + 485 + 488
5	Tourism and Recreation	487 + 5111 + 711 + 712 + 713 + 721 + 722
6	Business Service	491 + 492 + 493 + 522 + 523 + 524 + 526 + 53 + 5411 + 5412 + 5413 + 5414 + 5418 + 5419 + 55 + 561 + 562
7	Education	61
8	Health & Social Services	62
9	Public Administration	5211 + 91





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## About TalentWorks

TalentWorks provides strategic, integrated support for building Ottawa's talent pool. Through community-wide collaboration TalentWorks seeks to bring together business, government, education and community partners to attract, develop and retain qualified talent within all industry sectors in Ottawa. Its activities encompass the development of project plans, the delivery of customized projects matched to the economic development priorities of the region, and the support of identified needs among employers and job seekers. TalentWorks is managed by a Secretariat of four staff and is overseen by a Steering Committee that represents all the groups being integrated through this initiative — public and private sector employers, job seekers and community groups. TalentWorks is funded by Human Resources Development Canada (HRDC) and by the City of Ottawa.

TalentWorks is an initiative of The Ottawa Partnership (TOP) that is managed by the Ottawa Centre for Research and Innovation (OCRI). TOP is the economic development steward for Ottawa. Its members represent a cross-section of the city's major employers, economic development agencies, chambers of commerce, government and education. OCRI is a not-for-profit organization supported by over 600 members, including large corporations and research laboratories, small and medium-sized technology companies, post-secondary academic institutions, all of the region's school boards, local government and private individuals. OCRI works in collaboration to advance research and development, lifelong learning, professional development and community infrastructure. This level of integration is providing Ottawa with a competitive advantage over other cities seeking to find qualified workers to grow their economies.

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The Centre on Governance is an interdisciplinary research and teaching unit at the University of Ottawa that was created to examine the changing patterns of organizational and social coordination. Launched in the Spring of 1998, the Centre brings together leading academics from different university faculties and a number of first-rate practitioners from the private, public and civic spheres. Focusing on research and educational programs like Corporate Governance, Innovation, E-Business, Distributed Governance and Social Learning, the Centre pursues solutions to governance issues that are consistent with guiding organizations through the challenges of today's socio-economy.

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