

Ottawa **WORKS**

A Mosaic of Ottawa's Economic
and Workforce Landscape

Report III:

Ottawa's Workforce Development Strategy

Funded by



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The views expressed in this document are those of the Centre on Governance at the University of Ottawa and do not necessarily reflect those of the Government of Canada, the Province of Ontario or the City of Ottawa.

Abbreviations

CFO	Community Foundation of Ottawa
CLBC	Canadian Labour and Business Centre
CMA	Canadian Medical Association
CMC	Canadian Microelectronics Corporation
CRC	Communications Research Centre
GAGN	Glasgow Adult Guidance Network
GIS	Geographic Information System
HRDC	Human Resources Development Canada
IEEE	Institute of Electrical and Electronics Engineers
ICT	Information and Communications Technologies
IS	Information Systems
IT	Information Technology
LAN	Local Area Network
LASI	Local Agencies Serving Immigrants
LICO	Low Income Cut-off
LLSF	Lifelong Learning Scholarship Fund
MTCU	Ministry of Training, Colleges and Universities
NCR	National Capital Region
NRC	National Research Council
NSRS	National Skills Recognition System (Singapore)
OCGN	Ottawa Career Guidance Network
OCRI	Ontario Centre for Research and Innovation
OME	Ontario Ministry of Education
OSPM	Occupational Skills Profile Model
OTLC	Ottawa Technical Learning Centre
PPI	Progressive Policy Institute
PSW	Personal Support Worker
RN	Registered Nurse
SDF	Skills Development Fund (Singapore)
SHRC	Software Human Resource Council
TOP	The Ottawa Partnership
WAO	Workforce Agency of Ottawa

Foreword

TalentWorks is a community-based initiative building Ottawa's talent pool by providing strategic and integrated support to targeted sectors. This program is managed by the Ottawa Centre for Research and Innovation (OCRI) and is funded and supported by the Government of Canada (HRDC), the Province of Ontario (Ministry of Training, Colleges and Universities), the City of Ottawa (People Services and Development Services) and The Ottawa Partnership.

In the Fall of 2001, a major opportunity was identified to develop a more strategic approach to attract scarce talent to the Ottawa area, thus contributing to the City's attractiveness as a place to work and invest. A major gap, however, was the lack of comprehensive workforce information that could be used for strategic and economic development planning purposes. TalentWorks secured funding to complete a series of three reports to address this gap, as well as to develop an approach to some of the strategic issues. This report, *Ottawa's Workforce Development Strategy*, builds on the first two reports of the Ottawa Works series – *Ottawa's Workforce Environment* and *Profiling Ottawa's Workforce* – and serves as the third step towards generating a Talent Plan for the City of Ottawa.

The TalentWorks Steering Committee has been active in providing strategic direction for this project. We believe that we are well positioned to reflect a broad, community perspective - an important characteristic when considering the breadth and depth of recommendations in this report. We have provided feedback on each draft in the series and have assisted in prioritizing the top ten issues most likely to have the largest impact on Ottawa's workforce.

The discussion and debate around the Steering Committee table has been lively. The creation of a Workforce Development Strategy and Talent Plan have grown from a number of research and planning initiatives that have naturally evolved to a point where our community is ready to undertake some bold steps.

The Steering Committee strongly supports the underlying principles of the first twelve recommendations in this report.

Discussion of these recommendations led to an important conclusion - a successful Workforce Strategy and Talent Plan cannot operate without supportive infrastructure. There are no easy solutions and the Steering Committee sought guidance on what sort of infrastructure might be required, and what the resourcing implications might be. The Centre on Governance at the University of Ottawa was asked to develop a creative, truly integrated and comprehensive community infrastructure that provides scalability and maximizes the return on resources. Recommendation 13 articulates one possible infrastructure model at a level of detail sufficient for discussion purposes. What is the best approach for Ottawa? In creating TalentWorks, Ottawa has begun to explore a "made in Ottawa" solution to this complex question. We know that Recommendation 13 will be controversial and provoke strong reactions – it certainly did around the Steering Committee table. We think that continuing this discussion with a much wider group of potential partners and stakeholders is an important next step for Ottawa's evolving and innovative workforce infrastructure. We have taken the first step in creating TalentWorks – what should happen next in order to best meet the needs of employers, job-seekers and the community? It is time for leadership!

TalentWorks Steering Committee

November 2002

Executive Summary

Addressing Ottawa's Workforce Priorities

In this report we examine and explore resolutions for the top 10 workforce priority issues that were identified in the second phase of *Ottawa Works*. Those issues 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 and 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 education/training response.
9. Need for regular collection and publication of data found in *Ottawa Works*.
10. Need to revitalize trades education in secondary schools.

Our analysis and resolution process has been aided by references to best practices found in many other jurisdictions. From our assessment of Ottawa's workforce, detailed in the previous reports of the *Ottawa Works* series, it is apparent that the community has not been wholly successful in the following functions:

- Monitoring, intelligence gathering, and communicating workforce information.
- Skill matching, career counselling, and advocating placements on behalf of job seekers.
- Transforming existing skill sets and occupations into new ones.
- Upgrading current skills and generating a culture of lifelong learning.
- Inventorying its human capital assets.

Our analysis of the top 10 workforce priorities led to the generation of 12 recommendations as a means to address them specifically. These recommendations are listed below.

Recommendation 1

Create sufficient linkages and partnerships.

It is proposed that:

- Workforce Partnerships be created, where they do not currently exist, for each sector to share information, identify and map skill requirements, set minimum technical and employability skill levels and training standards, where not already in place, facilitate internships and personnel exchanges between industry and educators; and
- Cross-sector partnerships be formed to identify common skills and assess occupational transferability.

Recommendation 2

Create an Ottawa Works web site as a single window for workforce supply and demand information and Ottawa's training resources.

This web site would include:

1. Links to all the job posting services in Ottawa, organized by industry sector, and links to major employers.
2. A comprehensive list of education and skill training providers, the programs they offer, and links to their web sites.
3. A means by which job seekers and employers can assess educational and training programs, using comments and a one-to-five-star rating system.
4. A summary of industry and occupation trends.
5. A list of high-demand and emerging occupations.
6. Identification of skill requirements for high-demand and emerging occupations, including technical, business and interpersonal (employability) skills .

7. Links to courses and programs that provide the skills identified in item 6.
8. Links (e-mail, telephone and possibly chat links) to “live” counselling services to assist in career planning and skill transferability (this is addressed in Recommendation 7).
9. FAQs on identifying transferable skills, résumé writing, interviewing, the job search process, etc.
10. Links to networking opportunities for job seekers including:
 - Regular weekly or automatic updates of information from partner organizations .
 - A listing of resources that may be available for training and simple, straightforward presentations of requirements, deadlines and application processes.
 - Regular updates on local job opportunities available to candidates outside the organization.
 - Information on programs offered by universities, colleges and private training organizations, presented in a standardized format.
11. Links to the *Ottawa Community Index* web site discussed in Recommendation 11.

Recommendation 3

Establish a Regional Task Force on Workforce Development as a means to utilize existing industry expertise to train new talent.

The triple threat to Ottawa’s workforce – a growing economy, “baby boomer” retirements in education, and the impact of the double cohort – will require innovative responses in training and education. Combining these trends will generate a large spike in demand for knowledgeable workers capable of training new talent. Lower supply in the training sector will be accentuated by increased industry demand for the same workers. New mechanisms need to be found to enable educational and training institutions to draw on existing industry expertise to help train students in emerging areas.

Recommendation 4

Establish a capacity among the community colleges to deliver, accredit and account for shorter professional development courses that lead to a degree.

We propose that the local colleges be encouraged to:

- Develop programs leading to a certificate, diploma or degree that could be modularized into short instructional segments of 1–2 days that meet the smaller windows of available time within the workforce.
- Develop an accreditation system that would allow workers to apply their professional development learning to a recognized certificate, diploma or degree program.
- Develop a system of *learning accounts* that would enable workers to keep track of and manage their education, training and professional experience.

Recommendation 5

Create an Ottawa Skill Registry.

The system of personal “learning accounts” (introduced in Recommendation 4) that could accredit and account for small shorter programs of professional development leading to a certificate, diploma or degree would allow the skills and talents of Ottawa citizens to be inventoried. If an accreditation process existed to recognize “chunks” of academic knowledge and prior learning, then many of the skills and talents possessed by citizens that have been learned outside of the formal education process could be recognized and inventoried in a community skill registry.

Recommendation 6

Create a Lifelong Learning Scholarship Fund (LLSF).

The LLSF would collect contributions from employers and employees during periods of economic prosperity, which could be drawn upon when training time is more available in periods of economic slowdown. Use of the fund would constitute a taxable benefit that would be offset by the tax credit from the tuition cost.

Recommendation 7

Create an *Ottawa Career Guidance Network* as a mechanism to provide sufficient career counselling services.

To address the chronic underfunding of career counselling services regionally, we propose the creation of a community venture capital fund for career counselling, some redistribution of existing counselling and training resources, and the development of a network of mostly private providers to deliver career counselling services. Since the funding for career counselling and career guidance services has often been redirected to more critical short-term needs in educational and business organizations, we believe these services are viewed as “non-core” activities. Since no single stakeholder is willing to undertake the needed investment, we believe the solution lies in creating a system of incentives to generate a market for those services and a mechanism for overseeing the quality of delivery of these services to clients.

Recommendation 8

Integrate and fully utilize foreign-trained professionals.

The multi-jurisdictional conflict in this area would be addressed through increased coordination between federal, provincial and professional bodies and through the creation of an Ottawa Professional Certification Monitoring and Review Panel. The Panel’s role would be to monitor professional entry barriers and act as a complaint and appeals board for immigrant professionals who are refused work in Ottawa. Integration of foreign-trained professionals would also be aided by more affordable and accessible language training, more expedient assessment of foreign credentials, and on-the-job upgrading opportunities that are federally subsidized.

Recommendation 9

Increase employer commitment to employability skills and increase the integration of employability skills in curricula.

This recommendation extends previous work in the area to encourage the training of teachers, instructors and professors to help them design educational programs that include the development of employability skills. Local programs such as **Passport to Prosperity** and the **Teacher Internship Program** would be expanded and programs of industry awareness days and career fairs would be developed and conducted.

Recommendation 10

Map industry skills and training requirements to aid transferability.

This recommendation encourages each sector to systematically and comprehensively map the skills and training requirements for major occupations within that sector through the use of the Workforce Partnerships (Recommendation 2). This process would be similar to the one established by HRDC for its Sector Councils.

Recommendation 11

Create an *Ottawa Community Index* to collect and publish data found in *Ottawa Works Report I – Ottawa’s Workforce Environment*.

This recommendation creates a community information resource. We believe a web-based vehicle is more useful to the community than a series of bi-annual or annual reports for the purpose of presenting updated information as new data become available. Like the first report of *Ottawa Works*, it would continue to display a wide range of community data from a variety of sources to better serve the needs of a wide cross-section of stakeholders – business people, job seekers, parents, trainers, educators, investors, community planners and potential immigrants. We recommend that the coverage of information continue

to include the broad areas of the state of the economy, costs of doing business, innovation, employment, workforce transitions, access to technology, skills and education, and quality of life.

Recommendation 12

Revitalize trades education in Ottawa secondary schools.

The full range of broad-based technology programs that are currently available to Ontario schools are encouraged in local schools so that all technology programs, particularly trades-related programs, are accessible to Ottawa students. An upgraded program on the broad-based technologies would be provided for teachers and career counsellors. Local businesses and industries would provide field experience for teachers and help provide equipment and teaching resources.

Summary of Recommendations 1 to 12

In summary, while each of the above recommendations addresses specific workforce priorities, they also address the five major regional challenges, as Table 1 illustrates. As we examined the 12 proposed recommendations, we realized that many of them are interdependent, suggesting that multiple independent approaches to the same set of stakeholders would be counterproductive and a more sustained integrated approach is appropriate.

The Centre on Governance believes that the workforce challenges that have already been documented in *Ottawa Works II: Profiling Ottawa's Workforce* are so interconnected and interdependent that piecemeal approaches will prove largely unsuccessful. A true community workforce strategy (as opposed to a tactical plan) must begin by building a capacity to bring together people and resources from a variety of constituencies in a way that enables them to deal with challenges and opportunities as they emerge.

This perception led us to a final recommendation:

Recommendation 13

Create a regional human resources department for the city-region of Ottawa which we will refer to as the Workforce Agency of Ottawa (WAO).

The activities associated with the five workforce functions of monitoring, matching, transforming, upgrading and inventorying fall largely within the normal scope of a typical human resources department – intelligence gathering, the matching of skill sets to occupations, the transformation and upgrading of employee knowledge, and the inventorying of human capital within the organization. We therefore explored the use of the HR concept as an integrating framework from which to build a regional strategy. Indeed, this led us to the formulation of a strategy that simplifies, extends and enriches the implementation of each of the above 12 recommendations.

Table 1 Addressing Functions to Move Towards a More Responsive Workforce

Functional Challenges	Recommendations											
	1	2	3	4	5	6	7	8	9	10	11	12
Monitoring	X	X	X		X			X		X	X	
Matching	X	X		X			X	X	X			X
Transforming	X					X	X	X	X			X
Upgrading	X		X	X		X			X			
Inventorying			X	X	X					X		

The establishment of this Agency, within the model of governance that we are suggesting, is unique in the world and entails a number of sub-recommendations. In section V of this report we will explain our reasoning for establishing such an entity and offer the reader a process by which we feel it can be achieved over time.

Short, Medium and Long Term Strategies

The table below presents ways to consider the above recommendations in the short, medium and long term. While some elements of these recommendations can be addressed within currently existing relationships between the business and education communities and the three levels of government, the full implementation of the recommendations will likely entail a renegotiation of how these sectors interact. In addition, these recommendations do not of themselves offer an obvious workforce strategy that weaves them into a coherent framework.

Many of the above recommendations have impacts that go beyond their particular sphere of activity. Many have policy impacts on federal, provincial and municipal levels of government. Some require changes to current industry practices and attitudes. Finally, some will require the development of supporting services, programs and infrastructures.

Short, Medium and Long Term Strategies

Short Term (1 year or less)	Medium Term (1–3 years)	Long Term (3+ years)
<p>High Priority</p> <ul style="list-style-type: none"> • <i>Recommendation 1</i> TalentWorks Secretariat meets with clusters and reviews <i>Ottawa Works</i> I, II and III to explore possible projects (e.g., Establish system of peer-to-peer training for unemployed ICT workers – Report II, p. 30 –). • <i>Recommendation 1, 13</i> TalentWorks Secretariat meets with key area decision makers (i.e., community agencies, politicians) to review <i>OWI</i>, II & III and to explore possible projects (e.g., the idea of a WAO). • <i>Recommendation 1</i> TalentWorks Steering Committee members organize meetings with their stakeholder group to review <i>Ottawa Works</i> I, II and III to look for ways to implement recommendations in their planning. • <i>Recommendation 1</i> Provide cluster support regionally. • <i>Recommendation 2</i> Conduct Phase 1 and 2 of Workforce Information Network. • <i>Recommendation 3</i> Create Regional Taskforce for sector-education transfers. • <i>Recommendation 7</i> Meet relevant potential partners of a career guidance network and explore interest in an Ottawa Career Guidance Network. • <i>Recommendation 11</i> Create mechanism for ongoing collection of data for the Ottawa Community Index. • <i>Recommendation 11</i> Conduct semi-annual survey of Ottawa residents on workforce issues (e.g., Decima's Ottawa Pulse). 	<p>High Priority</p> <ul style="list-style-type: none"> • <i>Recommendation 13</i> TalentWorks Secretariat completes feasibility study for WAO and negotiates potential agreements. • <i>Recommendation 13</i> TalentWorks Secretariat creates constitution for WAO. • <i>Recommendation 1</i> TalentWorks Secretariat increases linkages via Workforce Partnerships and networks similar to those of Sector Councils. • <i>Recommendation 10</i> TalentWorks Secretariat institutes a program of skill mapping in selected sectors. • <i>Recommendation 2</i> Phase 3 of the Workforce Information Network is implemented. • <i>Recommendation 3</i> Continued implementation of ongoing work of Regional Taskforce on Workforce Development. • <i>Recommendation 7</i> TalentWorks Secretariat establishes agreements with partners for an Ottawa Career Guidance Network. 	<p>High Priority</p> <ul style="list-style-type: none"> • <i>Recommendation 8</i> TalentWorks Secretariat participates in existing foreign-trained professionals pilot project led by United Way/CLBC and LASI. • <i>Recommendation 8</i> Integrate and utilize fully foreign-trained professionals • <i>Recommendation 13</i> Workforce Agency of Ottawa (WAO) set up. • <i>Recommendation 13</i> WAO incorporated as a not-for-profit organization. • <i>Recommendation 13</i> TalentWorks Steering Committee established as WAO Interim Board. • <i>Recommendation 13</i> WAO working groups established. • <i>Recommendation 13</i> WAO piloted for 5 years.

Short Term (1 year or less)	Medium Term (1–3 years)	Long Term (3+ years)
<p>Lower Priority</p> <ul style="list-style-type: none"> • <i>Various Recommendations</i> Provide input to Canada’s Innovation Strategy (use existing Secretariat). • <i>Recommendation 12</i> Support the Regional Centres of Excellence for Skilled Occupations project as a means of revitalizing trades education within Ottawa. • <i>Recommendation 4, 5</i> Explore creation of Prior Learning and Assessment Service for assessing informally acquired skills. • <i>Recommendation 4, 5</i> Explore creation of a registry for individuals with skills targeted for certain sectors (as is being proposed by the Ottawa Manufacturers’ Network). • <i>Recommendation 1</i> Create a program of sector awareness days at the primary and secondary school levels. • <i>Recommendation 1</i> Create a coordinated program of career fairs. • <i>Recommendation 7</i> TalentWorks Secretariat facilitates the setting up of monthly networking meetings and training of counsellors in partnership with industry. • <i>Recommendation 10</i> TalentWorks Secretariat conducts a feasibility study into skill mapping in selected sectors. • <i>Recommendation 1, 9, 10</i> Facilitate structured debriefing of soon-to-retire senior employees to capture corporate wisdom and create post-retirement mentorship program. • <i>Recommendation 7, 9</i> Create program to educate small and micro-sized employers on retention strategies for employees. 	<p>Lower Priority</p> <ul style="list-style-type: none"> • <i>Recommendation 4</i> Community colleges develop accredited short professional courses that lead to a certificate, diploma or degree. • <i>Recommendation 9</i> Increase employer commitment to employability skills and increase their integration into curriculum. • <i>Recommendation 5</i> Create an Ottawa Skill Registry. • <i>Recommendation 6</i> Create a Lifelong Learning Scholarship Fund. • <i>Recommendation 8</i> Set up a Professional Certification, Monitoring and Review Panel. 	<p>Lower Priority</p> <ul style="list-style-type: none"> • <i>Recommendation 10</i> Ensure ongoing skill mapping. • <i>Recommendation 12</i> Revitalize trades education in Ottawa secondary schools.

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A community workforce strategy must begin by building a capacity to bring people and resources from a variety of constituencies together to deal with challenges and opportunities as they emerge.

INTRODUCTION

This report, *Ottawa's Workforce Development Strategy*, builds on the first two reports of the Ottawa Works series – *Ottawa's Workforce Environment* and *Profiling Ottawa's Workforce* – and serves as the third step towards generating a Talent Plan for the City of Ottawa. The comprehensive nature of the intent behind Ottawa's Talent Plan makes it quite different from other municipal plans. In fact, the scope of the elements to be coordinated in this plan is really only mirrored at national levels.

As described in Report I, this Talent Plan will have three related focuses:

1. Creating opportunities for the unemployed, underemployed 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 Ottawa's 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.

The purpose of the *Ottawa Works* project has been to create a knowledge base and a strategy that will facilitate the ongoing development of Ottawa's workforce. Knowledge generated by the project will support four workforce development objectives:

- Provide Ottawans with the information they need to make better career development decisions and to better position themselves within the broader Ottawa workforce.
- Ensure that low-income, unemployed and underemployed citizens of Ottawa have the opportunity to acquire the skills they need to gain full employment or sustainable self-employment.
- Provide better labour market information to employers and enable them to connect more easily with organizations that train, educate and recruit employees by removing barriers to collaboration.
- Attract increased business investment to Ottawa by virtue of the high quality of the workforce.

Although three separate reports have been generated (of which this is the third), they are all part of the same *Ottawa Works* project. There is, of necessity, some overlap between the reports to provide a proper context and assist the reader. As well, each successive report should be seen as an extension of the preceding one. Summaries of the

first two reports are provided in the following pages; they contribute to the foundation of the strategy proposed in this third report.

In addition, we conducted a further review of workforce-related programs in other jurisdictions for this report to extend the one conducted for Report I. From this review, we have summarized several approaches to labour force development in Appendix 1 to provide context for local developers of workforce strategies. The second purpose of this extended review was to provide implementers of such strategies with a broader awareness of current and best practices along with a starting point for some inventive solutions to common problems.

Summary of Report I

In the first report of the series *Ottawa Works: A Mosaic of Ottawa's Economic and Workforce Landscape*, over 50 indicators were presented, to broadly depict the context of Ottawa's workforce environment. These covered 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). Based on data compiled from a wide variety of sources, trends were identified and comparisons were made with other cities in Canada and the United States.

The purpose of this first report was to paint a landscape picture of Ottawa's economy and workforce. Following a review of workforce initiatives in other jurisdictions and Ottawa's economic growth plans, data were presented that seemed to impact how Ottawa's workforce was attracted, retained and developed. Because much of the data from the original sources was not designed to inform a broad audience on workforce-related issues, to be relevant to our study, the data in Report I were often reorganized, reformatted and clarified to be presented in a clear, simple, yet comprehensive manner. An easy-to-read graphic format was used to allow readers to draw their own conclusions from the juxtaposition of such a variety of statistical data. Wherever possible, comparative data were included with facts or information specific to Ottawa and the present time.

Summary of Report II

The second report extended 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 included a survey of over 500 residents of the National Capital Region, interviews with over 60 key informants, and 12 focus groups involving over 80 individuals representing the nine major industry sectors of Ottawa's economy and job seekers, anecdotal data were systematically gathered, distilled, summarized and interpreted to present a 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. The methodology of this work is outlined in detail in the appendices of Report II.

The research team developed a picture of Ottawa's workforce that revealed its depth of quality and flexibility. The report showed how the city's talent pool could enrich the local economy in the future and build a community that will benefit everyone. Attention was given to talent issues that cut across the nine industry sectors in the community, such as skills transfer and multi-skilling. The report synthesized and presented local workforce patterns and concerns, culling a total of 34 basic issues from the data collection phase. 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. From this list of 34 workforce issues a top 10 list of key workforce challenges was distilled and offered as workforce priorities.

Most of these challenges are not specific to any particular sector, 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, and they will need to consult various authorities, consider various mandates, and take into account numerous and sometimes competing interests. The complexity of this activity is precisely the reason that these concerns

have proved thorny and intractable in the past. Balancing and prioritizing these issues, and recommending practical solutions for addressing them, is the work of this third report of the *Ottawa Works* series, *Ottawa's Workforce Development Strategy*.

Methodology For Report III

To distill the top 10 workforce priorities for Ottawa, the research team engaged the TalentWorks Steering Committee in a dialogue in order to bridge phases II and III of this three-part study. This dialogue completed phase II by identifying the top 10 workforce priorities (listed below in section II), and initiated the project's third phase, strategy development. It was appropriate to involve the Steering Committee because of its high-level, cross-sector representation and its detailed knowledge of many of the local workforce-related programs and findings of the research team.

In section III, entitled *Tomorrow's Workforce*, we present a summary of key sunrise and sunset occupations and their attendant skill sets. This summary is not an industry forecast but a best guess based on feedback obtained during our investigations. In many cases we found that there was great reluctance to speculate on the future of an industry workforce because of the general volatility of the labour market.

In section IV, *Addressing Ottawa's Workforce Priorities*, we propose specific community-based solutions to deal with each of the 10 workforce priorities. Each recommendation identifies enabling objectives; change agents and stakeholders; implementation requirements; expected outcomes for job seekers, employers and the community; areas for measurement; and best or current practices. Each recommendation also suggests short-term, medium-term and long-term activities that may be undertaken to achieve the overall goal of the initiative.

During the debate with the Steering Committee on the 34 workforce issues that emerged in the second phase of the *Ottawa Works* project, the concept of a "regional Human Resources department" was discussed as a framework to organize the various elements of a workforce strategy. This idea was raised by the Steering Committee, and the Centre on Governance has seized upon the concept and developed it as a cornerstone of the strategy presented in this report (Recommendation 13). The regional HR concept is elaborated in section V, *A Workforce Strategy for Ottawa*.

Once the high-priority issues were identified and the organizing framework of an HR model was chosen, the research team explored the literature on the management of human resource organizations in search of "best practices" (i.e., successful solutions to an identified problem) that might be applicable to workforce development. The decision to use a regional HR model as a basis for Ottawa's workforce strategy resulted from the review of recent management literature, the data provided by the 54 regional indicators compiled in Report I of *Ottawa Works*, and the issues and recommendations emerging from the industry interviews and focus groups discussed in Report II. All of these were ultimately shaped by the priorities and framework identified by the TalentWorks Steering Committee.

As a result, specific strategies – aimed, for instance, at issues like language training, or child care, or support for the disabled, or the need to reduce the high caseloads among line workers dealing with the unemployed – were not dealt with in this report. This was not because we considered them unimportant but because the limits of time required that only a few of the 34 issues outlined in Report II be considered at this stage. The Steering Committee felt that addressing the top 10 priorities was likely to have the largest impact on Ottawa's workforce, and therefore the focus of this report remains with them. While the Centre on Governance supports the Steering Committee's priorities, we would strongly encourage the many Ottawa stakeholders we consulted not to lose sight of the other issues that we have not been able to tackle at this time.

Fundamentally, our proposed strategy, as explained in section V, is to move TalentWorks from its present structure as an informal forum to a more formalized regional institution – what we later refer to as the Workforce Agency of Ottawa (WAO). Recommendation 13 goes on to discuss the WAO's functions, structure, resourcing, governance, and implications for existing organizations in Ottawa. Section VI concludes the report.

This report also includes five appendices. Appendix 1 gives a detailed account of various international and national workforce approaches. Appendix 2 provides details on current and best practices in workforce development. Appendix 3 lists the 34 workforce issues identified in *Ottawa Works II*, and Appendix 4 provides a sample of short industry-sector profiles that have relevance to the short-term objectives for Recommendations 1 and 2. Appendix 5 consists of a glossary of terms.

OTTAWA'S TOP 10 WORKFORCE PRIORITIES

The following descriptions of workforce priorities from the Executive Summary found in Report II of the *Ottawa Works* series are repeated here because they form a transition from the workforce “profile” to the workforce “strategy.” This list is a result of the Steering Committee’s review of the 34 workforce issues identified by the research team.

1. Insufficient linkages and partnerships

Despite the research team’s initial perception that Ottawa had evolved fairly extensive networks between business and government, between these two and the community, between businesses and institutions of higher education, and between businesses and schools, the inadequacy of cross-sector linkages was a recurrent theme during this consultation. In particular, industry participation in shaping curriculum 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 of industry and education to exchange personnel; 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 the absence of a widespread system for mentoring or “training the trainer” initiatives.

It was 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, Quebec, 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 College’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 available training programs that might address these demands. Such information should be easily accessible to employers and employees, the unemployed, and potential new Canadians. There is a need for a “one-stop shop” of reliable information rather than a multiplicity 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 presented by the retirement of 30 percent of the senior professors, trainers and teachers in the workforce in the next few years. Given that Ontario is also creating fewer Ph.D.s today than in 1990, we know that there will be fewer people, particularly at the post-secondary level, to provide the training needed. Second, the next big wave of students, the children of the baby boomers, is currently moving through the post-secondary system. This, combined with the impact of the double cohort that begins in the fall of 2003 (the elimination of Grade 13 resulting in two graduating classes from high school the same year), 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. Last, the talent demand of the next wave of advanced technology growth will probably begin in the next two to three years. The demands of a growing economy will probably siphon off specialists from the education system, as occurred between 1997 and 2001. The net result of this "triple crunch" is that just as the demand for talent reaches its highest point, the community's 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 is consistent from industry leaders, job seekers, placement organizations, and education and training organizations. The standard advice to clients from existing career services is to get a university education in order to get work 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.

5. Underutilization of foreign-trained professionals

Due to artificial barriers created by immigration policies, provincial regulations, and the regulations and standards of certain professional associations, foreign-trained professionals remain underutilized in Ottawa. Further, the lack of policy coherence among the federal government, provincial governments and the national professional associations creates a perverse situation: individuals are encouraged to come to Ottawa because of a talent they may never be able to use in Ottawa. The root of this incoherence stems from a lack of investment in the immigrant screening processes in the countries of origin, a failure to assess and recognize immigrant qualifications, and an insufficient amount of resources dedicated to immigrant skills upgrading.

6. Insufficient employer commitment to employability skills and failure of educators/trainers to integrate employability skills in curricula

Despite an overriding recognition of the importance of "soft skills," or employability skills, there is no long-term vision or commitment to the systematic development of these skills, backed by appropriate incentive systems. In today's job market, firms consider candidates on the basis of their technical skills but select them on the basis of employability skills. When the job market picks up this is unlikely to remain the case and the bias towards technical skills may once again screen out many good potential candidates. Even though we have heard from those we surveyed and interviewed that technical skills are "what you train for" and employability skills are "what you hire for," (underscoring the importance of employability skills) education and training programs continue to focus more on technical skills and largely treat employability skills as a given.

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 skills and integrate them (to the benefit of their employer). 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 do develop the necessary business and personal skills and integrate these with their technical skills or they leave the industry. Since educators and trainers have failed to integrate these skills employers must rely on employees graduating from “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. A prominent exception is the mapping conducted by the Software Human Resource Council. The SHRC has created the Occupational Skills Profile Model (OSPM)¹, designing it as a reference tool for Canadians interested in Information Technology (IT). This model clarifies job definitions for software workers and describes the skills required for jobs in the software industry. The lack of this kind of skill mapping in other sectors limits skill transferability within sectors and makes it difficult for job seekers and employers to assess skill transferability across sectors. Ultimately this lack of knowledge reduces the flexibility of the workforce to adapt to the ups and downs of any particular industry.

8. Need to reduce the lag time between skill identification by employers and the education/training response

Educational institutions and government cannot respond adequately to changes in skill sets and changes in skill demands. There is a significant lag time between the recognition of a skill need within an industry and the response by educational organizations. In the case of

colleges and private sector trainers, that lag time may be 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 developed, educational institutions seem to be consistently preparing for the past. For example, we have in Ottawa successfully “doubled the pipeline” for Information Communication Technology (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 technology 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 was presented in the first report of the *Ottawa Works* series. What appears to be most attractive about the data presented in Report I is that the breadth of information allows almost everyone to find some utility in it. There is information of use to economic development needs of the city, as well as different data to assist employers, workers, educators/trainers and prospective workers. The document is therefore a convenient starting point for cross-sector conversations on workforce development. 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 collect and compile the data? How should that service be resourced? Where should the service be housed? What form should the organization that delivers this community information service take? 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 at area high schools. The schools over-concentrate on ICT studies at the expense of the other broad-based technologies such as the skilled

1. <http://www.shrc.ca/ospm/index.html>

trades. Therefore, students are not being introduced to the full range of trades and technology opportunities. Compared with students in other school districts, the number of Ottawa students enrolled in the broad-based Technological Studies program is low. This imbalance, combined with the inadequate career counselling that is available to students, may deter students from developing career paths in the professional trades.

The seven Technological Studies programs offered by the various Ottawa school boards are broad-based and not specific to any particular trade or vocation. 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 variety of trade- and vocation-specific areas. The seven programs are:

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

In summary, these top 10 workforce priorities represent the strategic challenge of this report – to address these needs in a coordinated way. The assessment of Ottawa's workforce provided in Reports I and II of the *Ottawa Works* series shows that from a regional perspective the community has not been wholly successful in the following activities:

- Monitoring, gathering and communicating workforce information.
- Skill matching, career counselling and advocating placements for job seekers.
- Transforming existing skill sets and occupations into new ones.
- Upgrading current skills and generating a culture of lifelong learning.
- Inventorying its human capital assets.

Before we begin addressing each of these priorities or crafting an overall strategy, in the next section we briefly review how Ottawa's workforce is expected to change, from the perspective of the many people we interviewed.

TOMORROW'S WORKFORCE

TOMORROW'S WORKFORCE

In this section we present a summary of the key sunrise and sunset occupations (i.e., the emerging and declining job prospects) and their attendant skill sets. This is presented not as an industry forecast but as a best guess based on the feedback we received during our investigations. Many respondents were reluctant to speculate on the future of an industry workforce because of the general volatility of the labour market. Yet in some cases interviewees seemed quite confident that certain occupations and certain skills would or would not be demanded in the future. Similarly, interviewees were sometimes quite direct in their comments about how to achieve the talent levels required.

Agri-Food

Due to the emergence of large, highly specialized farms, the traditional generalist occupation of farmer is disappearing. In the future, much more specialized jobs in agriculture will be in demand. Given the increasing demand for organic foods, expertise in this area will be increasingly sought after. There is also an increasing demand for “custom workers” to do specialty work for agricultural producers; for example, an owner of a large piece of equipment who will go from farm to farm, working on customized jobs. This trend is the result of the high cost concerns of farmers, who do not want to invest in expensive heavy equipment that may sit idle for long stretches of time.

Competent farm or food production workers and machine operators will continue to be in demand. Besides specific technical skills (such as milking, calf care, machine operation, computer usage, measuring of chemicals and nutrients, electrical or mechanical installation and repair), the importance of employability (soft) skills was highlighted by many of those we consulted. The consensus was that providing and improving both technical and employability skills has to be the responsibility of educators, as farmers have no time or money to invest in training.

Sunset occupations include:

- Family farmers.
- Unskilled labourers.

Sunrise occupations include:

- Organic farmers.
- Machine operators.
- Milkers.
- Agricultural accountants.
- Nutrient specialists.
- Farm equipment operators.

Construction

While there will be continued demand for the primary job categories in the construction sector, such as plumbers, masons, plasterers, electricians and general labourers, cost considerations are driving employers to hire non-certified specialty workers such as framers or interior finishers. These specialty occupations will continue to be in high demand, although the future for a fully qualified (seen as over-qualified and too costly) journeyman carpenter is uncertain. There is a decreasing demand in the long run for stonemasons due to their cost; however, the trade itself is dying out due to the aging of the tradesmen and the increasing use of alternative materials. Journeyman electricians are also on the decline, because contractors are replacing them with non-certified skilled labour as a way to contain costs. Not surprisingly there is a big demand for apprentice electricians because of their lower cost.

In addition to people with the essential technical skills, employers are looking for employees with problem-solving skills, organizational skills, employability skills, and an aptitude for learning new technical skills. These soft skills are considered important at all levels of the construction industry, not only at management levels.

Sunset occupations include:

- Journeyman carpenters.
- Stonemasons.

Sunrise occupations include:

- Framers.
- Interior finishers.
- Home renovators.

Education

This is a sector that has a high degree of predictability based on demographic trends. For instance, the major demand in this sector is at the post-secondary level of universities and colleges where the children of the "baby boomers" are moving through the system. In particular, professors and instructors for the "hot" skills connected

to advanced technologies, such as computing and biotechnology, will be in great demand but in short supply. There is not only an alarming shortage of Ph.D. graduates in many fields, but also an acute shortage of graduates who will go into university teaching. Over 30 percent of post-secondary professors will retire in the next eight years. High-demand occupations in the private sector will include qualified educators who are able to transfer knowledge and skills in short, brief packages that meet the need of the working population.

Qualified teachers and professors in the areas of teacher education, nursing education and rehabilitation therapy will continue to be in great demand, as current shortages in those sectors are addressed with program growth. A continuing great demand is also anticipated for bilingual teaching and support staff at the post-secondary level. Middle-level managers for colleges are in high demand as well. In the school boards, the demand for primary and secondary teachers will likely remain steady until the children of the "baby boomers" begin raising their own families.

Besides teaching skills, computer literacy is increasingly being demanded of educators. "People skills" and other soft skills, particularly those related to communication and teamwork, will continue to be critical competencies for teachers and professors.

Sunset occupations include:

- Secretarial and support workers.

Sunrise occupations include:

- Primary and secondary teachers with computer backgrounds.
- Bilingual school teachers and support staff.
- LAN administration and maintenance.
- Electrical engineering professors.
- Optical engineering professors.
- Bio-informatics and biotechnology professors.
- Internet technologies and multimedia trainers.
- E-business trainers.
- E-learning trainers.

Health, Social Services and Life Sciences

In the health field, there will be continued high demand for all the major health professions, such as physicians (in particular, specialists such as geriatric specialists), nurses (RNs), pharmacists, physical therapists, occupational therapists, physiotherapy aides, and occupational therapy aides. Several recently published reports² highlight some alarming shortages, particularly in nursing, anaesthesiology, radiology and surgery. While the demand for these professionals remains high or even acute it is nonetheless constrained by public policy

Our research found an emerging new field in personal support workers (PSW) and personal care attendants that is likely to become a major health-care job category. This is due to an aging population and an increasing demand for such services by local long-term care facilities, hospitals, and private home-care providers. Much of the front-line work in nursing, such as bathing, feeding, dressing and other patient personal care, could be done by PSWs, freeing nurses (RNs) to act as full-fledged, equal members of a professional health team that includes doctors and other health professionals.

Skills required for PSWs are not high-level. They can be acquired in a relatively short training period (e.g., 5 months) that incorporates classroom training, clinical practice and job shadowing. A standard provincial exam is currently in place for testing of skills after the training period, and is recommended as a mandatory screening process for work placements. A minimum of Grade 10 English is also recommended, and bilingualism is an asset.

In the community and social services arena, as in many other sectors, there is a growing demand for experienced middle managers. While qualified, experienced social workers will continue to be in demand, program managers in fundraising and communications are eagerly sought after.

Beyond technical skills and knowledge, soft skills – including interpersonal skills, communications skills, active listening skills, client-centredness, conflict resolution skills, problem solving, and diversity awareness – are considered critical for professionals in this sector.

The life sciences are a major growth area. It is anticipated that there will be phenomenal growth in various occupations in this sub-sector. Seventy-five individual disciplines have been identified so far within the sub-sector, each with its own education and skill requirements. But future occupations will be increasingly multi-disciplined, and specialists must function in multi-disciplinary teams. The Ottawa Life Sciences Council has identified several likely areas of high future demand.

The most significant demand will be for occupations in research and in manufacturing and production. Technical skill requirements vary by occupation³, but soft skills, business skills, regulatory skills, entrepreneurial skills, team skills, managerial skills and experience are considered critical for those working in this growing sector.

Sunrise occupations include:

- Nurses.
- Anaesthesiologists.
- Radiologists.
- Geriatric specialists.
- General practitioners willing to locate in rural areas.
- Physiotherapists.
- Personal support workers.
- Research and development, and clinical research (lab technicians/technologists) positions in biochemistry, genomics, plant biotechnology, oncology, infectious diseases, epidemiology, neurobiology, combinatorial chemistry, proteomics and other areas.
- Manufacturing and production specialists (mechanical or electrical assembly).
- Administration and operations personnel (sales, business development, HR).
- Engineering specialists (computer scientists and engineers).

2. *Our Health Our Future: Creating Quality Workplaces for Canadian Nurses*, Final Report of the Canadian Nursing Advisory Committee (Health Canada 2002).
3. See discussion of skill and hiring requirements for various occupations projected to be in demand for the life sciences sub-sector in *The Next Wave: Harnessing Our Potential, Life Sciences Human Resource Needs in the Ottawa Region* (Ottawa Life Sciences Council, September 2000).

Information and Communications Technology (ICT)

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 people, and those whose jobs have significant budgets attached to them, such as marketing and advertising managers. However, there are still critical shortages of microchip designers (a worldwide shortage), optical systems designers, senior business leaders, and people with certain specific skills, such as web designers, RF engineers, AFIT designers, top salespeople and some programmers (ERP, PeopleSoft, Oracle and 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.

The ongoing shortages of microelectronics results from the difficulty in finding qualified professors. Regarding the future, we can expect that ICT employment will again increase by 25 percent over the next five years. The primary technical skill set required by workers in this sector could radically change in five years, towards bio-informatics, in which case it is unclear how local companies will develop or attract the needed talent.

Work in ICT generally requires a high degree of technical education, but in the current market technical skills alone are insufficient. Employers are hiring on the basis of combined technical, business and interpersonal skills. The two most important gaps in 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 related sub-industry. Generally industry views experience as the means by which employees hone their business and interpersonal skills; however, they recognize that this does not always happen. The second gap, therefore, is the need for people with a combination of technical, business and interpersonal skills.

While core technical skills (not related to a specific tool or software language) do not change much over time, the specific skill sets (operating systems, languages, wireless IPs) are continuously evolving. It is impossible to forecast changes to these specific language or tool-based skill sets.

Those who have a portfolio of skills – technical, management and soft skills – will do much better and have more stability than those without a diversity of skills.

Sunset occupations include:

- MS Windows-based jobs.
- Fibre optics engineers.
- Computer programmers.
- Information systems and data processing managers.
- Electrical and electronics engineers.

Sunrise occupations include:

- 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.

Public Administration

In the federal public service, occupations that will be in demand include regulatory inspectors, construction inspectors, traffic specialists, economists, legal secretaries, patent lawyers, and engineers. At the municipal level, city planners and building inspectors will continue to be in demand. Bus operators will be needed as a result of expansions, retirements and a growing emphasis on public transit. Retiring police officers and firefighters will require replacement. Automotive mechanics, tradespeople, paramedics, nurses, and long-term care workers are occupations that will continue to demand qualified people. As in other sectors, effective, experienced middle managers sorely are needed in the public sector.

The need for purely clerical, transactional types of skills will slowly disappear as everyone is expected to provide their own support or use machines. Occupations requiring high-level skills will be in demand in the future: scientists, specialists, people who can interpret regulations, professionals in emerging areas such as biotechnology.

Sunset occupations include:

- Administrative support personnel.
- Client support.
- Parking attendants.

Sunrise occupations include:

- Experienced senior managers.
- Computer support specialists.
- LAN Administrators.
- ERP, PeopleSoft, Oracle, JAVA programmers.
- Bilingual support staff.

Tourism, Arts and Entertainment, Accommodation and Food

As in other services sectors, there is demand in this sector for people with well-developed employability skills and a strong sense of customer service. Traditional occupations such as kitchen staff (chefs, dishwashers, kitchen managers), mid-level hotel managers and entry-level event planners will continue to be needed to meet existing shortages. In general, this is an easy-entry industry, but the need for bilingual staff can place it out of reach for many otherwise qualified job seekers. As in other industries, aside from the necessary technical skills related to the position, computer knowledge is becoming increasingly important. New positions such as IT managers have been created and are in demand in this sector.

Sunset occupations include:

- Unilingual staff.

Sunrise occupations include:

- Mid-level chefs.
- Mid-level hotel managers.

- Event planners.
- Database managers.

Business Services

While no particular occupations have been identified as being on the decline or on the rise, this sector has a growing demand for fluently bilingual professionals and support personnel. Particular areas of concern include bilingual legal secretaries, bilingual staff for call centres, and bilingual and Francophone trainers and consultants.

Every employer in this sector whom we interviewed 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. Proficiency in using the computer is also considered crucial. As in many other sectors, the sentiment is that educational institutions need to help prospective employees develop not only the technical skills, but also the soft, employability skills, for the workforce of the future.

Sunset occupations include:

- Unilingual professionals and support staff.

Sunrise occupations include:

- Bilingual professionals and support staff.

Transportation

Many of the occupations in this sector are in the skilled trades. Well-defined technical skills are therefore required, often with accompanying requirements for occupation-specific certification. In addition, employers look for interpersonal skills, team skills, technical-mindedness, problem-solving skills, the ability to multi-task and prioritize, and literacy skills sufficient to understand technical manuals and instructions. As equipment, automobiles and diagnostic tools become more computerized, proficiency in computing technologies will become increasingly important. Technicians with these skills will continue to be in high demand, particularly since significant shortages are anticipated in the next few years due to retirements. Supervisors with broad technical experience and interpersonal and management skills will also be in high

demand, as employers in the transportation industry compete with manufacturers in other sectors for these employees.

Many employers in the transportation sector feel that the responsibility for developing the major technical and employability skill sets for their sector rests on the shoulders of the education system. Tomorrow's transportation workforce, they believe, should be better prepared than today's by an education system that provides job-relevant technical training (such as appropriate "technical reading" required in the trades and for operations management), that will not continue to eliminate programs in certain critical trade areas (such as automotive mechanics), and that incorporates more hands-on work experience and co-op opportunities in the curriculum.

Sunset occupations include:

- Mechanics.

Sunrise occupations include:

- Automotive repair technicians.
- Truck repair technicians.
- Security personnel.

ADDRESSING OTTAWA'S WORKFORCE PRIORITIES

In this section we present ways to address the priorities involved in attracting, retaining and developing Ottawa's talent workforce. We make 12 recommendations, each of which is followed by a description of enabling objectives that represent necessary steps in the realization of each recommendation. As well, we identify the change agents who will be engaged in meeting those objectives, we lay out the basic requirements for implementing the objectives, we suggest a time frame (short, medium and long term) for activities, and we identify expected outcomes and proposed measurements that will help determine the success of the initiatives.

Finally, for each recommendation we identify some current or best practices found in the literature as possible models for the decision makers to use as they work towards meeting the objectives. These current or best practices are further detailed in Appendix 2. After presenting the first 12 recommendations, we return to the question of developing a workforce strategy for Ottawa in a manner that can link all 12 recommendations together into a coherent and evolving whole. This is embodied in Recommendation 13.

Recommendation 1

Create sufficient linkages and partnerships

Workforce partnerships already exist in many local industries, and they serve their specific sectors very well. However, education and training programs designed to serve more than one occupation are less common locally, and cross-sector partnerships and linkages are even less frequent. Making better use of the existing talent pool through better exchanges within and between workforce sectors would mean reduced recruiting costs, a more stable workforce, more stable employment, and reduced workforce transition costs. Similar initiatives, as described under "Key Best Practices," have been implemented elsewhere with great success.

Enabling Objectives

1. Create *Workforce Partnerships* for each sector where they do not already exist, with the following functions:
 - Share information about industry and job trends, identify high-demand occupations, identify skill requirements (especially employability skills), and provide feedback on training and education programs.

- Set minimum technical and employability skill requirements for key occupations (where this has not already been done) and set training standards that support the required skill levels. These standards provide a way to assess an education/training organization's teaching program, in effect providing a "seal of approval" for training programs and graduates who have completed approved courses.
- Create a web site to make the above information publicly accessible and invite employers, employees and job seekers to give feedback and rate training programs.
- Identify new skill requirements, track increasing or decreasing occupational demand, and assist with curriculum development for secondary, post-secondary and private training programs.
- Improve student access to industry members to create better awareness of industry opportunities, to help students document changes in the sector through case studies, and to promote internships or co-op placements in area companies and organizations.
- Help identify industry teachers and instructors who could deliver curriculum in educational or training institutions and help school teachers and professors gain industry experience through summer internships or sabbaticals.
- Advise appropriate federal, provincial and municipal authorities on policy issues related to training, education and training incentive measures.

The Workforce Partnerships are similar to the existing Sector Councils of HRDC. The Sector Councils are led by a partnership of representatives in a particular area of economic activity. The Councils seek to identify and address current and anticipated human resource challenges, as well as skills and learning challenges, in various areas of the Canadian labour market. The Councils bring together representatives from business, labour, education, other professional groups, and government to understand issues and implement long-term, human resources planning and development strategies for their respective sectors. The proposed Workforce Partnerships draw on

the work done at the national level, add to it information provided by local partners, and apply it to Ottawa's dynamic workforce environment.

Eleven HRDC Sector Councils are relevant to Ottawa's major industries:

- Health – Biotechnology Human Resource Council.
- ICT – Canadian Council of Professional Engineers, Canadian Council of Technicians and Technologists, Canadian Equipment Industry Training Committee, Canadian Technology Human Resources Board, and the Software Human Resource Council.
- Tourism and Hospitality – Canadian Tourism Human Resource Council and Cultural Human Resources Council.
- Transportation – Canadian Trucking Human Resources Council.
- Construction – Construction Sector Council and the Women in Trades and Technology National Network.

The Agriculture, Business Services, Education, and Public Administration sectors have no Sector Council equivalent, although Education, Health and some Business Services have professional associations that perform many of the data collection activities of the Sector Councils.

The goal of the Workforce Partnerships is to provide a local anchor to the national organizations and a conduit for workforce information to flow to local industry members, job seekers, educators, trainers and policy makers.

2. Create *Cross-Sector Partnerships* to identify common skills and assess occupational transferability. These cross-sector partnerships will:

- Share occupational information and identify areas of increasing or decreasing skill overlap across sectors.
- Generate new skills programs.
- Advise education and training providers of common skill requirements and training needs.
- Publicize occupational and skill transferability information.
- Help provide counselling and assessment services to aid job seekers or employees seeking a change of employment.

3. Create a *Workforce Partnership Council* to coordinate the understanding of skill transferability between sectors. (See Recommendation 10 on transferability of skills).
4. On the *Ottawa Works* web site (described in Recommendation 2), publish the results from the activities of the sector and cross-sector partnerships.

Ottawa's industry sectors are not all at the same level of development. ICT, Health, Education, and Public Administration already have sub-sector associations or other mechanisms in place to track occupations and skills; therefore, these sectors may need only some form of encouragement to consolidate their efforts across their industry. On the other hand, Agriculture, Business Services, Construction, Tourism, and Transportation have no such knowledge infrastructure. These groups need more significant support: staffing, office space, technical and administration support.

Change Agents

The main stakeholder groups are employers, industry associations, private training providers, school boards, relevant college and university departments, placement and recruitment organizations, and public agencies for job seekers. Stakeholder participation is not limited to administrative personnel but also includes end users or practitioners such as engineers, marketers, artists, nurses, teachers, instructors and professors.

Implementation Requirements

To be successful the Workforce Partnerships require that individual firms are open to sharing the workforce information they possess and consider to be proprietary – industry trend assessments, skill demand, employment levels, skills inventory, et cetera. Industry data are aggregated to form a regional picture without harming the individual interests of participating companies.

In high-skill areas, if there is a great demand for certain skills, industry shares instructional personnel with educational and training institutions to assist in teaching new students.

Educational and training institutions reduce the obstacles preventing industry and public sector professionals from delivering courses within their institutions. Provincial education authorities permit industry personnel to teach in schools to supplement the knowledge and experience of teaching staff.

Industry finds the resources to support the necessary personnel to link their respective company with the sector Workforce Partnership and advise on curriculum development and policy issues. Educational and training organizations encourage industry involvement in curriculum development. Provincial education authorities permit local input into curriculum development. Teachers and especially teachers' unions accept industry participation in teaching within local schools.

School boards encourage summer internships for teachers so they can gain direct experience of industry and professional development credit as a result.

Implementing the Workforce Partnerships begins with their set-up – identifying the partners, securing resources, hiring a partnership manager, establishing office space, providing equipment and hiring support personnel. Agriculture, Business Services, Construction, Tourism, and Transportation will require the most support in this regard to develop their partnership networks locally. A rough estimate of costs for setting up each of these partnerships is \$200,000 over 8 to 12 months. However, for Education, Health, ICT and Public Administration we estimate less – possibly only \$100,000 over the same period.

Once these partnerships are set up, individual projects are identified; these include the development of an occupational skills profile, the identification of training suppliers, or the identification of industry personnel to develop and deliver curricula. Additional resources will have to be sought for these projects. Finding those additional resources could easily take up a large part of the partnership staff's time.

In addition, the set-up of cross-sector Workforce Partnerships and the Workforce Partnership Council can be easily accomplished by housing the partnerships in one facility, making it easy for them to interact with one another, network, and learn from each other. Some administrative support for the cross-sector partnerships is required.

Time Frame

Short Term

- TalentWorks Secretariat meets with “clusters” to review *Ottawa Works* I, II and III and explore possible projects (e.g., establish system of peer-to-peer training for unemployed ICT workers).
- TalentWorks Secretariat meets with key local decision makers (i.e., community agencies, politicians) to review *Ottawa Works* I, II and III and to explore possible projects.
- The members of the TalentWorks Steering Committee organize meetings with their own stakeholder group to review *Ottawa Works* I, II and III to explore ways to implement its recommendations in the planning of those stakeholders.
- Present the Workforce Partnership concept to each industry group and initiate steps to establish a Workforce Partnership in each sector and the Workforce Partnership Council within 8 to 12 months.
- Create a program of sector awareness days in the primary and secondary schools.
- Create a coordinated program of career fairs.
- Facilitate structured debriefing of soon-to-retire senior employees in the public sector to capture corporate wisdom and create post-retirement mentorship program.

Medium Term – 1-3 years to resource and implement sector-based projects to provide sector occupational and skill data.

Long Term – 3-5 years to negotiate cross-sector skill transferability and industry participation in educational and training organizations.

Expected Outcomes

For Job Seekers

- Increased awareness of personal skills and their transferability to other jobs and industries.
- More stable, even if more mobile, employment.

- Curricula that are more relevant, more current and more standardized.
- More realistic appreciation among students of an industry, its occupations, and the education and training requirements for work in that industry.

For Employers

- Better basis for cost comparison among education and training providers.
- Greater emphasis on employability skills at secondary and post-secondary levels.
- Increased industry and work experience among new graduates.
- Increased pool of potential workforce due to transferability.

For the Community

- More transparent competition among training providers based on exceeding minimum standards or on the quality of their program delivery, resulting in higher-quality education and training programs.
- Additional industry participation generates a more up-to-date technical curriculum and reinforces the need for employability skills – communication skills, interpersonal skills, judgement and critical thinking, problem solving, continuous learning – which are all elements of a “well-rounded education”.
- More flexible workforce.
- Improved workforce policy.
- More fluid movement between industry and educational and training institutions.

Proposed Measurement

- Achievement of industry objectives to identify trends, occupations, skills, standards.
- Achievement of a mechanism for rating training and education programs.
- The number of industry awareness activities at primary and secondary education levels.

- Surveys of students, job seekers and employers to determine the information they require about the workforce, occupations and skills.
- The number of industry employees teaching at post-secondary level.
- Statistics on status of the economy, co-op placements and workforce transitions.

Key Best Practices

*Careers Scotland Sector Profiles*⁴ describe how 31 industry sectors are performing, whether they are expanding or declining, and the resulting effect on the demand for workers. At a local level, this translates into how companies are doing, whether they are hiring staff, and the salaries they are paying for various jobs. Underlying all of this are national and international economic trends like inflation or downturns and interest rates. Samples of these sector profiles are presented in Appendix 4.

*The Humboldt County California Workforce Development Partnership*⁵ is a system that is both coordinated and responsive to the needs of its customers, businesses and job seekers. The strategy focuses on the retention and growth of existing businesses and the expansion of several small business clusters. The envisioned workforce development system consists of three networks:

- North Coast School-to-Career Consortium (education/training).
- Industry Development Network (economic development, business/industry and labour).
- One-Stop Delivery System (labour support services).

*The Workforce Partnership Initiative*⁶ of the Joint Venture: Silicon Valley Network involves the region's key stakeholders:

- To address the Valley's need to develop the region's workforce (there is a critical skilled workforce gap, with enormous cost implications for employers and residents, threatening the sustainability of the region).
- To ensure that the supply of skilled workers matches the available opportunities.

- To analyze underlying causes of the skilled workforce gap and identify potential strategies for a collaborative, integrated approach.
- To ensure that businesses are attracted to the region and that they remain there, by providing them with access to a diverse and skilled talent pool.

Recommendation 2

Create an *Ottawa Works* web site as a single window for workforce supply and demand information and Ottawa's training resources

The desire to have more timely and more complete supply and demand information on Ottawa's workforce was repeated by almost all of the participants in the *Ottawa Works* project. Creating a one-stop location for that information would benefit job seekers, employers, workers seeking to upgrade their skills, potential immigrants, and investors. In addition, providing information on available jobs, skill requirements for jobs, and education and training information in a useful way would assist the workforce to respond positively to changing demands.

Enabling Objectives

The *Ottawa Works* web site includes:

1. Links to all the job posting services in Ottawa, organized by industry sector, and links to major employers.
2. A comprehensive list of education and skill training providers and the programs they offer, and links to their web sites.
3. An interactive mechanism for users, both job seekers and employers, to assess educational and training programs, using comments and a one-to-five-star rating system.
4. A summary of industry and occupation trends.
5. A list of high-demand and emerging occupations.
6. Skill requirements for high-demand and emerging occupations, including technical, business and interpersonal (employability) skills.

4. Samples are provided in Appendix 4 and originals viewed at <http://www.careers-scotland.org.uk/careersscot/web/site/Work/AboutWork/sectorprofiles.asp>

5. www.calregions.org/publications.html

6. www.calregions.org/publications.html

7. Links to courses and programs that provide the skills identified in item 6.
8. Links to "live" counselling services to assist in career planning and skill transferability (this is addressed in Recommendation 7).
9. FAQs on identifying transferable skills, résumé writing, interviewing, the job search process, etc.
10. Links to networking opportunities for job seekers.
11. Regular weekly or automatic updates of information from partner organizations.
12. A list of resources that may be available for training – OSAP, Ontario Works, EI, corporate subsidy, scholarships, bursaries, the Lifelong Learning Plan, etc. – and simple, straightforward presentations of requirements, deadlines and application processes.
13. Regular updates on local job opportunities that are available to candidates outside the organization.
14. Links to the Ottawa Community Index web site discussed in Recommendation 11.
15. Information on programs offered by universities, colleges and private training organizations, presented in a standardized format, including course and program entrance requirements, enrolments, intake levels by course and program, program completion requirements, registration and application procedures, ongoing research projects, and innovative developments.

Universities and colleges allow advanced standing or exemptions where programs or course content are similar or have overlap between them. While this kind of accreditation is commonly allowed between universities or between colleges, it is not common between universities and colleges.

To allow the public to understand and compare program offerings at the four local Ottawa school boards, the boards will need to provide program information in a standardized format on their web sites about location of schools, size of schools, programs offered, special services, enrolment in programs, and recent innovations.

Change Agents

Stakeholders come from the sector Workforce Partnerships, the City of Ottawa (People Services, Development Services, and GIS Department), OCRI, the four area school boards, the two universities and the colleges, private training colleges and institutes, major businesses, Internet job boards, placement and recruiting agencies, the Ottawa office of HRDC, the Public Service Commission, Treasury Board, Statistics Canada, advocacy organizations like the Caledon Institute and the Social Planning Council, the Ontario Ministry of Training, Colleges and Universities (MTCU), and the Ontario Ministry of Education (OME).

Implementation Requirements

The fundamental requirement of this initiative is the funding of its initial set-up and the regular maintenance and updates of the system. In particular, given the OME's funding formula for school boards, Ministry resourcing must be provided to the boards to support this initiative; without it, little or no involvement from the four local boards can be expected.

Given the information links occurring between partners in this initiative, adequate security to protect partner networks is an essential element.

The school boards standardize the presentations of their data.

The appropriate faculties or schools of the universities and colleges meet to standardize the presentations of their program and course offerings and other information.

The resourcing for this initiative will need to address the creation and maintenance of a web site, the coordination of counselling services, and the administrative support for both. Office space is required for a project and partner manager, a content developer, a translator and a technical implementer. The counselling services require an accessible central office and a coordinator for bilingual counselling. (Ideally, the actual counselling is contracted out to a variety of local providers as required.)

During the summer of 2002, after a process of community consultation, a feasibility study conducted by TalentWorks recommended the building of a portal web site that would be a one-stop, Internet-based employment resource tool for the Ottawa community. Its recommendation for a Work Information Network included many of the elements discussed above, but did not include the provision of counselling services.

This portal option presents a variety of advantages:

- It uses current and future partner databases and other information storage mechanisms.
- It respects the community's needs and concerns.
- It provides the public with current, reliable information from an organized source.
- It acts as a quick and easy query and information retrieval tool.
- It provides access to other suppliers of information not directly involved.
- It links to existing powerful search engines and database-driven information systems.
- It builds on the success of similar projects carried out in the past.

While the community prefers to have a "Cadillac" version of this one-stop site for workforce information, it is not prepared to wait for this option to be developed at the expense of an interim vehicle. TalentWorks therefore recommended a phased approach that would begin immediately to address the needs identified and build on existing online infrastructures, adding on enhancements as required to make the portal a comprehensive and interactive tool.

The TalentWorks recommendation for a work information network portal requires at least 12 to 16 months to complete its two phases. Phase 1 focuses on defining and building a portal with basic features, while phase 2 defines the features and costs for an expanded, more sophisticated portal. Phase 3 would follow to fully implement the portal and maintain it.

The Centre on Governance team supports the idea of a Work Information Network but also recommends that the scope of the TalentWorks proposal be expanded to include counselling services. This could be accomplished by addressing Recommendation 7.

Time Frame

Short Term

- Define and build the web information portal with basic features. Identify career counselling service providers. Identify the parameters and resources for an advanced version of the web portal. Link the web information portal to the Community Information Index referred to in Recommendation 11.

Medium Term

- The advanced version of the web portal is built.

Expected Outcomes

For Job Seekers

- More job opportunities in the public domain.
- A better way to identify the "right" training for a particular occupation.
- A better way to compare education and training providers and assess value for money.
- Improved education and training, since providers would share a common basis for curriculum development.

For Employers

- A marketing vehicle to attract the needed talent to the region from other parts of Canada and abroad.
- A transparent vehicle that allows firms to influence labour supply and that encourages accountability among education and training providers to develop that supply.

For the Community

- Encouragement of education and training providers to compete on the basis of quality – providing a service better or delivering content beyond the minimum standard.
- A means to aid transfer of occupations within and across industries.

Proposed Measurement

- Registration of users to obtain statistics on demographics – job seekers, employers, women, men, immigrants, disabled, etc.
- The number of job postings.
- User satisfaction, determined through surveys.
- Public awareness of service, determined through surveys.
- Usage of counselling services and level of satisfaction with them.

Key Best Practices

*Tillsonburg's Livingston Centre*⁷ provides a “one-stop shop” of services focusing on client needs. This eliminates the barriers encountered when clients are forced to access all players (often different levels of government) in the system separately. Services are grouped in suites – for example, “the employment suite brings together, under one roof, Ontario Works, Job Connect, Veterans Affairs, Students’ Services, etc.” In this way the site services a wide variety of clients (not only Employment Insurance recipients).⁸

*Careers Scotland*⁹ is a new organization that gives guidance on work and learning to anyone in Scotland. Its aim is to give people what they need in order to make the most of their working life. It connects people with up-to-the-minute information and support to develop their skills and increase their job prospects, wherever and wherever they are.

Careers Scotland provides assistance in the following areas:

- Advice and guidance on individual career plans.
- Information about the labour market.
- Learning and training opportunities.
- Job vacancies.
- Links to other agencies.
- Navigational help to find a school or college career counsellor.

Recommendation 3

Establish a *Regional Task Force on Workforce Development* – a means to utilize existing industry expertise to train new talent

The workforce “triple crunch” – caused by a growing economy, “baby boomer” retirements in education, and the impact of the double cohort – will require innovative responses in training and education. Most important is the need to secure sufficient educators and trainers. Existing industry expertise will be needed to help train students in emerging areas.

Enabling Objectives

- College and university planners work with the business community to plan for a coordinated community response to the “triple crunch.” The coordinating groups that already exist at the school board level, at the university and college level, and at TOP (The Ottawa Partnership, representing the city’s major employers, economic development agencies, chambers of commerce, government and education) are brought together to form a special *Regional Task Force on Workforce Development*. The idea of a task force is meant as a temporary measure to meet the unique need of the “triple crunch.”
- Educational institutions, particularly colleges and universities, develop and implement strategies to retain enough highly qualified, highly motivated instructional staff while keeping class sizes reasonably small. These strategies include:
 - Cross-appointments between institutions.
 - Sessional appointments from industry and government partners.
 - Use of retired professors to teach courses.
 - Intensive teaching skills training for graduate teaching assistants.

7. The Conference Board of Canada, *Labour Market Transitions Models That Work* (November 2001).

8. Ibid.

9. <http://www.careers-scotland.org.uk>

- Working with the Workforce Partnerships, the colleges and universities identify industry and public sector experts (retired or otherwise) who can be added to the rosters of part-time teaching staffs.
- Colleges and universities expand their joint programs, building on the experience of Algonquin College and Carleton University's Bachelor of Information Technology program. They also joint-list some courses to take full advantage of the teaching talent pool.
- Universities and colleges restructure their school years into three trimesters to maximize use of facilities. Public and private education/training institutions use alternative forms of course delivery (e.g., web-based and field-based courses) to increase efficiency.

Change Agents

Stakeholder participation is drawn from TOP, the school boards, the universities and colleges, HRDC Sector Councils, Ontario Ministry of Training, Colleges and Universities, the Council of Ontario Universities, faculty unions, the Workforce Partnerships, and private and public research centres (for example, the Canadian Microelectronics Corporation, the Communications Research Centre (CRC) and the National Research Council (NRC)).

Implementation Requirements

To be successful this initiative requires that adequate funding is in place for (a) the hiring of more part-time academic staff, (b) the creation of additional instructional space, (c) the training of industry personnel in order to integrate them into the academic environment, and (d) the creation of more residential space for students.

University and college administrations reduce their entry barriers for qualified industry personnel and pursue agreements with industry members to share personnel for teaching and training purposes.

Colleges, universities, government and businesses demonstrate a willingness to share teaching resources to overcome staff shortages in emerging and specialized

areas that constrain the development of local workers. This requires unions and employers to reconsider the staff appointment process, credentials and varying rates of compensation.

Educating parents, students, employers and teachers on the complexities and costs associated with the double cohort problem is made a priority. The media are engaged in this process.

Industry members second or lend out key personnel to local educational and training institutions. Given that salaries in the education and training sector are generally lower than those in industry, industry tops up compensation for personnel seconded or loaned to educational institutions. In concert with a more effective co-op placement program, firms steer students into positions of need within their own organizations.

Time Frame

Short Term

- Create Regional Taskforce on Workforce Development to facilitate personnel transfers from industry sectors to educational and training organizations.

Medium Term

- Continue to implement ongoing work of Regional Taskforce on Workforce Development. Utilize industry personnel in teaching environments.

Expected Outcomes

For Job Seekers

- The capacity of colleges and universities to respond to high-demand programs will be increased. Out-of-date and redundant programs will be phased out.

For Employers

- Strategic relationships will be formed between the academic and business communities to meet specialized instruction needs and/or niche demands in industry.

For the Community

- The capacity of educational and training institutions will be increased without reducing program quality and academic rigour.

Proposed Measurement

Using the year 2002 as a baseline, we propose the following measures:

- Full- and part-time program enrolment and capacity per faculty/school.
- Average class size per program.
- The number of full- and part-time teaching staff per program.
- The number of industry or government employees in teaching positions.
- The amount of industry–university research per faculty/school.
- The number of co-op placements/internships per faculty/school.

Key Best Practices

Year-round school operations and co-op programs such as that established at the University of Waterloo (and now followed by many other universities) should be used more extensively.

The new Bachelor of Information Technology program established jointly by Algonquin College and Carleton University is a “best practice” response to staffing needs and emergent technologies.

Recommendation 4

Enhance a capacity among the community colleges to deliver, accredit and account for shorter professional development courses that lead to a degree or diploma

The “triple crunch” will add even more pressure to deliver training and education in smaller, more bite-sized pieces. As reported in *Ottawa Works II*, several interviewees said, “when we have the money to train, we don’t have the time. When we have the time to train, we don’t have the money.” To meet the challenge of the “triple crunch,” training should be provided in the time and cost increments that are available to employees, job seekers and employers. We believe that the delivery format of formal education needs to be modified somewhat and that initially targeting the colleges would represent the best strategy for reform.

Enabling Objectives

Consequently, we propose the following:

- The colleges develop programs that lead to a degree and that are modularized into segments based on 6, 12 or 18 hours of in-class contact. Since industry employees can make commitments for professional development more easily over two- to three-day periods than for 10 or more weeks, the colleges design programs leading to a diploma or a degree that fit the smaller windows of availability in the workforce.
- The colleges develop a “prior learning” assessment and accreditation system that allows workers to apply their professional development learning to a recognized diploma or degree program. To facilitate this, reinstate the “undeclared major” (once the most subscribed degree program at Carleton University), and thus assist workers to learn from a constantly changing range of knowledge.
- The colleges develop a system of *learning accounts* that enables workers to keep track of and manage their education, training and professional experience.

- Public and private sector education/training institutions expand their recognition of credits from other institutions as partial satisfaction of degree or diploma requirements.

Change Agents

Stakeholder representation includes Algonquin College, La Cité collégiale, Carleton University, the University of Ottawa, the private training colleges, the Workforce Partnerships, and MTCU.

Implementation Requirements

The Province extends the degree-granting authority of Algonquin College and La Cité collégiale to allow them to deliver undergraduate degree programs in applied science and engineering, computing, business, health and bioscience, and education.

Colleges extend their ability to assess “prior learning” and evaluate professional development courses so they can apply occupational and skill credits in applied science and engineering, computing, business, health and bioscience, and education.

Colleges create a system of “learning accounts” to record students’ professional and academic learning history.

Time Frame

Short Term

- Conduct a feasibility study of establishing learning accounts.
- Explore creation of a Prior Learning and Assessment Service to assess informally acquired skills.

Medium Term

- Negotiate extended degree-granting authority for colleges.
- Develop “short course” programs for applied science and engineering, computing, business, health and bioscience, and education.
- Colleges negotiate prior learning assessment criteria with sector Workforce Partnerships.
- Colleges implement learning accounts.

Expected Outcomes

For Job Seekers

- Increased accessibility of training.
- Recognition of existing experience or expertise.
- Easier recognition of foreign training.

For Employers

- More employees obtaining degrees.
- Better fit between training and employee availability.

For the Community

- Increased level of recognized education and training in the workforce.
- Increased attractiveness of the workforce.

Proposed Measurement

- The average educational attainment levels in Ottawa.
- The number of employees taking training.
- The number of employees enrolled in degree or diploma programs.
- The number of students with “learning accounts”.

Key Best Practices

Singapore has established a *National Skills Recognition System* (NSRS) to develop definitive workplace skills standards and to recognize training programs that meet these standards. A National Skills Council comprising industry players, learning providers, unions and the government is being formed to direct the development of the NSRS.

Recommendation 5

Create an Ottawa Skill Registry

The system of personal learning accounts, which can recognize and accredit brief programs of professional development in a manner that leads to a degree, makes it possible to inventory the skills and talents of Ottawa citizens. If an accreditation process exists for “chunks” of academic

knowledge, then many of the skills and talents citizens possess that have not resulted from formal education can be recognized and inventoried.

For example, if someone learns a foreign language because their mother tongue is neither of the two official languages, or if someone develops a software skill while engaging in some form of peer-to-peer training, this learning is currently not recognized or accounted for. We may know in some aggregate sense, from Census data or Statistics Canada surveys, that certain knowledge exist in Ottawa, but we have no way of identifying individual portfolios of skills. As a result, employers cannot identify individuals with specific skill sets unless the individual comes to them. If citizens realize that registering their informally acquired skills can lead to a recognized degree, employers will be able to identify persons with very customized skill sets, such as a Chinese-speaking professor of human resource management who is self-taught in HTML and JAVA. Developing such a registry would give Ottawa employers a competitive advantage that no other community possesses.

Such a registry would also help in assessing the skills of retired persons or new immigrants.

Enabling Objectives

- The colleges establish systems of *learning accounts* to account for “short courses” and professional development courses that lead to a degree.
- Local firms create a database of individuals and their skills. Currently, such a database is being proposed by the Ottawa Manufacturers’ Network, a group of local business professionals and companies who are committed to excellence in manufacturing, quality, continuous improvement, and innovation. In its efforts to help reduce manufacturing expenses through such initiatives as the network purchase of services and supplies and the sharing of functional techniques and best practices, the OMN has proposed the development of a “people pool.” This pool consists of workers who have as broad as possible an array of skills and knowledge that would allow them to gain employment in a variety of manufacturing settings such as photonics, precision machining,

biotech, or microelectronics. The occupations being considered within this “people pool” would include assembly, financial, administrative, research and development, managerial and quality control.

- The Workforce Partnerships, NRC, CRC, the school boards, the colleges and the universities develop an individual skills profile as a basis for the construction of a regional skills registry.
- A publicly accessible web site is created that allows residents to register their skills using the individual skills profile. Submissions from individuals are verified and added to the registry.

Change Agents

Major stakeholders include the Workforce Partnerships, Algonquin College, La Cité collégiale, major firms, Ottawa Manufacturers’ Network, NRC, CRC, the universities and the school boards.

Implementation Requirements

- Occupational skills are updated and clearly defined for each industry – a task proposed earlier for the Workforce Partnerships.
- Prior learning assessment instruments are established, as proposed in Recommendation 4.
- A skill registry office is created and managed. Individuals register their own skills online, but the verification of skills is done by an “admissions office” type of review.
- Local firms agree to share aggregated HR data on their employees.
- High school, college and university graduates are encouraged to register their skills.
- New immigrants are required to register their education, training and skills.

Time Frame

Short Term

- Conduct a feasibility study of the skill registry to determine information requirements and costs.
- Explore the creation of a registry for individuals with targeted skills for certain sectors (i.e., as being proposed by the Ottawa Manufacturers' Network).

Medium Term

- Negotiate linking of existing skill databases among private and public organizations.
- Develop skill databases for industry. Develop individual skill profiles.

Long Term

- Establish an Ottawa Skill Registry Office for members of the public to voluntarily register their skills. Require immigrants to register.

Expected Outcomes

For Job Seekers

- Formal recognition of existing experience and expertise.
- Increased exposure to employment opportunities.

For Employers

- Easier access to individuals with specific job skill sets, particularly retirees and immigrants.
- More effective utilization of employees through the use of brief employee sabbaticals and temporary outsourcing of outside contractors.
- Improved employee commitment and innovativeness.

For the Community

- An inventory of community skills.
- Increased ability to apply existing community skills where and when needed.
- Easier access to skill sets among foreign-trained professionals.
- An inventory of the skills of retirees.

Proposed Measurement

- Registry usage – numbers of registrants and employers.
- Satisfaction surveys of registrants.
- Satisfaction surveys of firms, research labs and educational institutions.

Recommendation 6

Create a Lifelong Learning Scholarship Fund (LLSF)

Meeting the need for training, professional development and skill upgrading in an environment where time and money are never simultaneously available requires that time and money be managed separately. Recommendation 4 addressed the need to make more time available by shortening the time commitment needed for an element of learning, allowing workers to undertake recognized learning activities in the time they have available. This recommendation proposes to create a *Lifelong Learning Scholarship Fund*, which employers and employees can contribute to during periods of economic prosperity and which can be drawn upon in periods of economic slow-down when training time is more available. For example, a 0.5 percent "tax" on local employment income would net about \$100 million annually (or \$1700 per family), which could be made available for training or invested for future use. Contributions would be tax deductible; use of the fund would constitute a taxable benefit, but this would be offset by the tax credit from the tuition cost.

Enabling Objectives

- Establish an independent local public investment vehicle that can receive funding, manage it and disburse scholarships.
- Negotiate authority to collect contributions.

Change Agents

The primary stakeholder groups include leading firms, MTCU, Canada Customs and Revenue Agency, HRDC, and OCRI.

Implementation Requirements

- Undertake a feasibility study to set up the fund and determine the most appropriate funding mechanism – block grants, localized employment tax, etc.
- Empower a local authority to levy a lifelong learning “employment tax.”
- Establish criteria for collecting funds and disbursing scholarships.

Time Frame

Short Term

- Conduct a feasibility study to determine the best way to fund the LLSF, the required authorities, and the costs to set up and maintain the fund.

Medium Term

- Create the investment vehicle and negotiate the funding mechanism.

Long Term

- The LLSF collects contributions, manages funds and distributes scholarships.

Expected Outcomes

For Job Seekers

- Easier and more timely access to training resources.
- Increased job stability.

For Employers

- An alternative to lay-offs in periods of economic downturn.
- A reliable source of training resources.
- A situation where the burden of training costs is shared.

For the Community

- More people engaged in educational upgrading and re-skilling programs.
- Fewer lay-offs.

Proposed Measurement

- The number of scholarships and the amounts disbursed.
- The knowledge areas in which scholarships are applied.
- The amount of funds invested.

Key Best Practices

The *Employment Insurance* program is federally funded under Human Resources and Development Canada; it provides temporary assistance to workers who lose their jobs and helps unemployed people get back to work. The EI premium rate for employees is 2.2 percent (up to a yearly maximum of \$858). This is added to the premium rate of 3.08 percent for employers (up to a yearly maximum of \$1,201) to create a pool of resources to provide assistance. Both premiums are collected by employers and submitted to HRDC. If a person becomes unemployed, they can then apply to receive benefits under the program.

The *Community Foundation of Ottawa* (CFO) is a unique charitable organization established to enable generous citizens and organizations to enhance the quality of Ottawa's community life and achieve their own charitable objectives through permanent, well-managed endowments. The CFO has received high praise for its management of over \$65 million in assets and the distribution of \$2.9 million in grants and scholarships.

The *Skills Development Fund* (SDF) was established in Singapore in October 1979 with the institution of the Skills Development Levy (SDL) Act. The primary objective of the SDF is to encourage employers to invest in upgrading the skills of their workers. The SDF does this by offering financial incentives to companies to mount training programs for their employees.

The SDF is financed by the Skills Development Levy, which is imposed on employers who have workers earning \$1,500 or less a month. The current levy rate is 1 percent of the monthly remuneration of these employees. Incentives are offered on the basis of a cost-sharing principle and the training must be relevant to the economic development of Singapore. The amount of incentive a

company can obtain is not tied to the levy contribution. Since 1979 the SDF has supported about 8 million training places amounting to a total value of \$1.6 billion (USD).

In August 2000, Singapore created a \$5 billion Lifelong Learning Fund. This Fund will provide significant resources to support training programs for workers. It will create more learning opportunities for individuals, particularly in courses that certify workers, and thus enhance their employability. Among the schemes that the Lifelong Learning Fund supports are localized initiatives by community groups. In addition, Singapore is broadening its criteria for courses eligible for income tax relief to include courses that may not be directly related to an individual's existing business, profession or employment but serve to enhance his or her employability. The tax relief ceiling is reviewed regularly to keep pace with the increasing cost of courses.

Recommendation 7

Create an Ottawa Career Guidance Network as a mechanism to provide sufficient career counselling services

Job providers and job seekers alike were highly critical of the limited resources (both human and time resources) given to career counselling in schools and adult guidance in employment centres. Due to resource shortages, schools have redirected career counselling resources to the more critical short-term need for crisis counselling. Information about industry needs and requirements is not flowing to career counselling offices and personnel promptly enough. Job searching and career counselling have not been treated as parts of the same whole. Job seekers have not been effectively linked with skill training and upgrading opportunities, and jobs that match existing training and upgrading have not been identified.

Enabling Objectives

Create an Ottawa Career Guidance Network (OCGN) and supply the appropriate incentives to develop a range of guidance service suppliers. If career counselling and career guidance services have fallen so universally out of fashion in education, industry and government, as our

interviews suggest, then it must be concluded that career counselling is perceived by them as fundamentally non core to their organizations. However, if the findings in Glasgow (see "Key Best Practices" below) are perhaps applicable in Ottawa (both economies are valued around \$25 billion CDN), then one-third of the people who are making career choices are choosing wrongly. If that is true in Ottawa, the cost to Ottawa's economy might be in the order of \$100 million annually, a significant impact at the community level.

Since no single stakeholder seems willing or able to undertake the needed direct investment in career counselling, the solution seems to lie in creating incentives to generate a supply of services in a market where there is clear demand but no supplier. In addition, there is a "public good" need to provide a mechanism to oversee the quality of career counselling services being delivered to clients.

We estimate that a total of 70 additional career counsellors are required for the primary and secondary schools in the four local school boards. Additional counsellors are also required for university and college students (30), for adults seeking career changes and new opportunities (20), for job seekers (20), and for immigrants (10). We can therefore estimate the cost of a career counselling service as being approximately \$10 million. Such a service system could make over 150,000 contacts annually (allowing time for networking and professional development). If one-third of the individuals contacted improved their income by an average of \$1,000 annually as a result, the community would see employment income rise by \$50 million (without considering secondary and tertiary effects). A return on investment of 5 to 1 in such a service seems eminently reasonable.

The most effective incentive to catalyze an Ottawa career services market would be some form of local investment pool or community venture capital fund. Since the beneficiaries of this investment would span three levels of government and the private sector in Ottawa, we recommend each group contribute 25 percent of the investment. Contribution levels based on added tax revenues or enhanced profitability could be negotiated later, but at the outset this might prove too difficult.

The fund should be managed professionally and have a board of directors with representatives from each funding group, recognized experts in career counselling, and service providers. The management team would work with individual providers to develop service fees, delivery standards and performance reviews. This could also be a membership organization, where annual participation fees are used to offset administrative overhead.

Principles

- Career counsellor training or retraining programs would put more emphasis on academic and career counselling rather than family, social or psychological counselling.
- Career counsellors must be diligent about keeping up to date on occupational trends and post-secondary and trades education, and be accessible to students and parents.
- Career counsellors must strive to eliminate the current bias that favours college diplomas and university degrees over trades certification.
- Networking opportunities should be created for career counsellors to learn from each other and from sector Workforce Partnerships.
- Career counselling programs should make more effective use of business, industry and institutional experts to gain information on careers in their sectors.
- Career counsellors should make use of and contribute to an *Ottawa Works* web site (as described in Recommendation 2) to assist students, parents, job seekers, employees and employers.

In addition, colleges, universities and private sector education/training institutions would provide timely information about programs and registration procedures to secondary school counselling offices and the OCGN. The network of Workforce Partnerships would facilitate this.

Government agencies would employ more career counsellors and equip them with the information and diagnostic tools necessary to assist the unemployed and underemployed in maximizing their workplace potential.

Change Agents

Stakeholders include school guidance counsellors, university and college career counsellors, placement/outplacement/recruiting firms, City of Ottawa People Services, HRDC, Industry Canada, the Ontario Ministry of Education, and corporate HR personnel.

Implementation Requirements

The essential requirement to establish the OCGN is the negotiation of a shared funding agreement between the OME, HRDC, the City of Ottawa and regional employers.

Policies on the delivery of career counselling and guidance services need to be established through a feasibility study. These services are provided privately to the four client audiences – primary and secondary students, university and college students, employed adults, and job seekers.

- Career counselling service delivery firms and individuals are identified.
- Officers and directors of the OCGN are identified, a corporate charter is established, and funding agreements are negotiated.
- The Ontario Ministry of Education and the local teachers' unions accept agents of the OCGN as deliverers of career counselling services to primary and secondary schools.
- The service and medium mix is established.
- Monitoring and reporting mechanisms are established.
- Agreements are concluded with the OME and the local teachers' unions.
- Contracts are signed with career counselling service delivery firms or individuals.

Time Frames

Short Term

- Conduct a feasibility study to map the career guidance providers, to identify the required content and to determine the appropriate mix of services – online, over-the-counter, telephone support, or printed materials.

- TalentWorks Secretariat meets with potential partners of a career guidance network and explores interest in creating an Ottawa Career Guidance Network.
- TalentWorks Secretariat facilitates the setting up of a monthly career counselling interest group similar to OCRI's Zone 5 or 45th Circuit networking groups. A program of networking meetings and training for counsellors is developed in partnership with industry.
- Conduct Career Fairs directed towards adult audiences.
- Conduct industry awareness fairs aimed at existing career counselling and guidance personnel.

Medium Term

- TalentWorks Secretariat establishes agreements and funding mechanisms with partners for an Ottawa Career Guidance Network.
- New guidance services are provided through the OCGN.
- Service standards and monitoring and reporting mechanisms are established.
- Drawing on existing work, the OCGN develops a framework for Career Education tailored to the Ottawa environment.
- Working in conjunction with the Workforce Partnerships, the OCGN conduct industry awareness fairs for students, adults and guidance counsellors.

Expected Outcomes

For Job Seekers

- Increased availability of career counselling and guidance services.
- Improved career planning and career choices.
- More successful job placements.

For Employers

- Reduced costs of adult career counselling and guidance services.
- Reduced recruitment costs.

For the Community

- More flexible workforce.

- Improved regional economic performance.
- Reduced workforce emigration.

Proposed Measurement

- Cost of providing career counselling services to public and private users.
- User satisfaction, determined through surveys.
- Recruitment costs.
- The ratio of successful placements to total placements.

Key Best Practices

The *Glasgow Adult Guidance Network* (GAGN) in Glasgow, Scotland, deals with the statutory provision of guidance services and career advice to adults in the Glasgow area. The cost of an ineffective guidance system for Scotland was estimated at over \$8 billion CDN (£3.3 billion), with Glasgow's proportional share estimated at \$100 million. It has been estimated by the Scottish government that when students or job seekers make choices regarding their future careers, fully one-third of them choose the wrong opportunity.

The GAGN took about a year to develop because there were no accepted quality standards among the guidance providers in the area and there was no standardized training for guidance counsellors. Communication between the guidance suppliers was poor and the profiling and marketing of guidance services was inadequate.

Today Glasgow's Adult Guidance Network organizes four networking meetings per month for area guidance counsellors. It also provides staff training for 350 people each year.

The Adult Guidance Network is owned by its members. Essentially the GAGN is a virtual organization that is not formally constructed. It is hosted by Glasgow City Council through a formal contract with the city's employment services and is a profit-generating centre for the city.

Recommendation 8

Integrate and utilize foreign-trained professionals

A recent report by the Conference Board of Canada entitled *Brain Gain*¹⁰ states that Canada would gain up to \$5.9 billion annually by implementing a system to recognize the learning of foreign-trained professionals. This would involve lowering barriers to employment for these professionals. It is estimated that between 33,600 and 83,100 post-secondary degree holders could be added to the ranks of the workforce in the fields they were trained in, and could thus contribute to the innovation and productivity of the country.

Enabling Objectives

Federal and provincial authorities jointly set immigration policy, with input from the professional associations. Unilateral immigration quotas are not permitted.

Create an *Ottawa Professional Certification, Monitoring and Review Panel* to monitor professional entry barriers and act as a complaint and appeals board for immigrant professionals who are refused work in their field of expertise in Ottawa.

Under our current system, the federal government sets immigration policy, and the municipality pays for integrating immigrant workers into the community. Good governance suggests that policy and costs should not be separated in this way: it leads to the perverse situation described in *Profiling Ottawa's Workforce*, in which individuals are encouraged to come to Ottawa because of a talent they may never be able to use in Ottawa. To correct this: The federal government takes financial responsibility for integrating new immigrants during the three-year period it takes to become a citizen.

As part of the transitional support package for new immigrants, the federal, provincial and municipal governments make English or French language training affordable and accessible to foreign-trained professionals to allow and accelerate their integration into the Ottawa labour market. An assessment of foreign credentials and support for on-the-job upgrading opportunities must be part of the same

package. This assessment is made easier by implementing Recommendation 4. These support and assessment programs are made adaptable to the specific needs of individuals.

On-the-job skill upgrading or education upgrading programs for new immigrants are federally subsidized to encourage employer participation, to ensure a reasonable standard of living for foreign-trained professionals, and to ensure that immigrants can make a contribution to Canada. Foreign-trained professionals who are not on EI or Ontario Works are made eligible for federal subsidies to access upgrading programs or on-the-job training programs.

Change Agents

Key change agents include Citizenship and Immigration Canada, Human Resources Development Canada, the Ontario Ministry of Labour, the Ontario Ministry of Training Colleges and Universities and various licensing, certification and accreditation bodies (e.g., Ontario College of Teachers, the Ontario College of Nurses, the Ontario College of Physicians and Surgeons, the Law Society of Upper Canada). Additional stakeholders include Local Agencies Serving Immigrants (LASI), the United Way, educational and training institutions (such as universities and colleges with existing expertise in assessing foreign qualifications), employers, and advocacy groups.

Implementation Requirements

Citizenship and Immigration Canada and HRDC establish mechanisms of cooperation at the local level with the sector Workforce Partnerships to accurately identify and forecast the skill requirements that are used as bases for immigration screening.

More resources need to be allocated to the screening process in the countries of origin so that there is more vigilant screening of skills (language, technical and soft skills).

Citizenship and Immigration Canada need to share immigration policy making with the provinces and with licensing, certification and accreditation bodies to ensure that immigration approval of foreign-trained professionals leads to gainful employment after entry.

10. M. Bloom and M. Grant, *Brain Gain: The Economic Benefits of Recognizing Learning and Learning Credentials in Canada* (The Conference Board, September 2001).

Licensing, certification and accreditation bodies need to consider allowing a transition period to phase in experienced, qualified foreign-trained professionals. This period is used for skills upgrading that can be accomplished within a short period of time.

With federally sponsored incentives, employers hire qualified foreign-trained professionals as interns and invest time and resources to provide the short-term training these individuals need to be fully contributing employees.

Through the activities of the Workforce Partnerships, each sector identifies its occupational and skill requirements. Backed by this information TalentWorks provides immigration authorities with data on workforce demand in Ottawa, and assists in developing educational and training programs to help new immigrants make the transition.

The membership of the Ottawa Professional Certification, Monitoring and Review Panel cuts across the professions. A nine-member blue-ribbon panel would include a prominent medical doctor, a nurse, a lawyer, an engineer, a teacher, a dentist, a university or college professor, an accountant, and a financial manager. An administrator is hired to act as a point of public contact, to register complaints and create case files.

TalentWorks develops an administrative capacity to monitor, compile and distribute information on how effectively immigrant professionals are integrated into the community.

As a single contact point for funders, TalentWorks funnels resources to the community organizations that serve immigrants. These organizations provide immediate, efficient and extensive services that connect newly arrived foreign-trained professionals with employers and training institutions.

Time Frame

Short Term

- TalentWorks Secretariat participates in the existing foreign-trained professionals pilot project led by United Way/Canadian Labour and Business Centre (CLBC) and the Local Agencies Serving Immigrants (LASI).

- TalentWorks Secretariat continues to work with industry associations and later the Workforce Partnerships to determine suitable projects to facilitate integration of immigrants into Ottawa's workforce.
- Conduct a feasibility study to assess the costs and requirements of establishing a Professional Certification, Monitoring and Review Panel.
- Increase resources for immigration screening at Canadian missions abroad.

Medium Term

- Establish the Professional Certification, Monitoring and Review Panel.

Long Term

- EITHER allocate responsibility for immigration quotas to the level of government currently responsible for supporting immigrants' transition to the Ottawa community OR shift the financial burden of support to the level of government determining those quotas.

Expected Outcomes

For Job Seekers

- Fewer foreign-trained professionals underutilized or on social assistance.
- Foreign-trained professionals are able to maintain a reasonable standard of living while upgrading their skills in preparation for full employment in their field.
- Foreign-trained professionals are recognized for their credentials and more likely to work in their field of expertise.

For Employers

- Satisfaction of requirements for skilled employees.

For the Community

- Effective utilization of foreign-trained professionals in the Ottawa labour market.
- More effective immigration policies and processes.
- Reduced burden on Ottawa services and taxpayers for decisions made at the federal level.

Proposed Measurement

- The ratio of the number of foreign-trained professionals working in Ottawa to the number of local immigrants.
- The ratio of the number of foreign-trained professionals working in their field in Ottawa to the number of foreign-trained professionals coming to Ottawa.

Key Best Practices

World Skills (the employment unit of LASI, responsible for all immigrant employment-related initiatives in Ottawa-Carleton) 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. The three-year pilot project began in July 2002 with funding from the Ministry of Training, Colleges and Universities, Access to Professions and Trades Unit and support from the City of Ottawa. Qualified foreign-trained teachers (with a degree and experience, but lacking the one-year certificate beyond the degree) are on a one-year training program that includes seven weeks at Queen's University, seven weeks in Ottawa, and about twenty weeks of practical teaching under a mentor in a school within the Ottawa-Carleton District School Board.

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 paid). 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 teacher shortages. For their practicum, participants are placed at schools (eight of these have been selected) that have the highest immigrant population and where their services are most needed.

Recommendation 9

Increase employer commitment to employability skills and increase the integration of employability skills in curricula

While employers have long recognized the need for enhanced employability (soft) skills, this recognition has not always been demonstrated in their training and recruitment practices. The talent glut in the technology sector has modified this practice somewhat, but other industries have not followed suit. More important, this recognition of the importance of employability skills within the technology sector has made little impact on the education and training sector, which remains largely technically focused. The extent to which these employability skills are emphasized in post-secondary training programs and school curricula seems to depend solely upon the degree of exposure trainers and educators have had to the concept and on the direct explicit demand by industry for these skills. There is ample room for improvement in this area. For instance, there is little incentive for schoolteachers to engage in efforts to understand what employability skills companies actually want. Time spent by schoolteachers in learning the needs of industry does not qualify as professional development and participants receive little professional recognition for their efforts.

Enabling Objectives

Primary, secondary and post-secondary curriculum planners and private trainers embed "employability skills" into their courses and programs. This is not simply a matter of adding content. Rather, employability attributes are often best acquired through an instructional program in which students use those skills, whether through role-playing, group work, practicum work or a host of other innovative approaches.

Feedback in Report II of *Ottawa Works* suggests that although employability skills are now well defined, their practical application in the workplace is not well understood by educators and trainers. Addressing this lack of understanding has been the focus of local initiatives like

OCRI's Teacher and Educational Leadership Internships program. In the program teachers learn, from first-hand experience during summer work placements, the technical and employability skills that are required for employment in industry. Upon their return to the classroom, participants are better able to represent to students the needs and realities of companies. Programs like OCRI's Teacher Internship need expanding in Ottawa.

In addition, programs of industry awareness days and career fairs are developed and implemented to create better awareness of the employability skills required by industry (see Recommendation 1).

Change Agents

It has been argued that curriculum reform rests primarily with the Ontario Ministry of Education and is therefore a provincial matter. This is only partially true. The mandated curriculum accounts for a portion of the content, but the balance is a local matter, and the instructional strategies teachers use to deliver the content is a concern for local boards and classroom teachers. The change agents who can effectively bring employability skills to the fore in Ottawa classrooms are the Workforce Partnerships, area school boards, local university and college teaching staffs, faculties of education, OCRI, HRDC, Industry Canada, and the OME.

Implementation Requirements

Course developers and instructors at all levels become familiar with the *Employability Skills 2000+* guidelines. As well, they use the *Employability Skills Toolkit*¹¹ published by the Conference Board to design courses that encourage development of employability skills. Work begun by the Conference Board of Canada on employability skills is extended through broader participation by area schools and businesses.

Ontario Ministry of Education and Ontario College of Teachers revise their guidelines to incorporate a stronger emphasis on employability skills in the curriculum and the practical imparting of these skills in the classroom.

Industry representatives meet with local curriculum developers to help plan introduction of employability skills in the classroom (this is linked to Recommendation 1).

Private skill trainers embed employability skills in their course protocols.

Instructors structure the teaching and learning processes used in their programs to include time for students to actually use employability skills. ("Time on task" is the most powerful variable in getting results.)

Cooperation with Workforce Partnerships in career fairs or industry awareness programs leads to industry-specific employability skills being developed in the classroom.

To extend the work of the Conference Board of Canada, the colleges, universities, and private sector training providers establish "train the trainers" programs to assist local educators and trainers in designing programs that address employability skills.

Time Frame

Short Term

- Create a program to educate small and micro-sized employers on strategies to keep employees, including an emphasis on employability skills.
- Conduct a local survey of employers to determine the best incentives for the promotion of employability skills among local companies.

Medium Term

- Collaborate with Workforce Partnerships to develop industry awareness programs for school students.
- Collaborate with Workforce Partnerships to develop a program of industry career fairs for school students.
- Increase employer commitment to employability skills and increase the integration of these skills into curricula.
- Ontario Ministry of Education guidelines and Ontario College of Teachers revise their guidelines to increase the emphasis on employability skills.

11. www.conferenceboard.ca/education/learning-tools/employability-skills.htm

Expected Outcomes

For Job Seekers

- Reduced resistance from employers to hiring individuals who lack prior experience.
- Increased scope of work they might qualify for, leading to increased job satisfaction.
- Increased transferability of skills and occupations.

For Employers

- Reduced time and costs to develop a fully functional employee.
- Increased problem-solving ability among their employees.
- Increased team productivity.

For the Community

- Increased attractiveness of Ottawa's workforce.

Proposed Measurement

- Before- and after-training measures are taken (either by observation or self-reporting) in selected industries to determine the increase in the effective use of employability skills in the work place.

Key Best Practices

OCRI¹² has established a number of programs with schools whereby students become directly engaged in using (and developing) employability skills. These skills are not treated as a separate entity in the programs. Rather, they are embedded in the processes or activities the students engage in. Examples of these programs are the Passport to Prosperity program and the Teacher and Educational Leadership Internships.

Many best practices in this area have been documented by the Business Education Centre of the Conference Board of Canada and the National Association of Partners in Education in the United States.

At the national level, the Conference Board has established an awards program for outstanding schools-to-business projects. In these projects, schools become

linked to businesses and provide students with real, on-the-job work experiences. Conference Board member organizations have adopted the profile and embedded the skills in staff development programs¹³.

Recently, the Conference Board has generated case studies on a number of outstanding programs. Following are brief descriptions of four outstanding programs aimed at three different levels of the education system.

1. Simon Fraser University's Integrated Studies Program: Developing Employability Skills Through Engagement with the Western Canon of Great Books. The focus of this program is on developing employability skills through a degree program that combines general arts and business courses; it is for mid-career employees finishing degree requirements on a part-time basis.
2. Mount Royal College's College-Wide Learning Outcomes Initiative: Developing Transferable Skills for Workplace Success and Continuous Learning. This program assesses and develops the employability skills among community college and university transfer students.
3. Careers: The Next Generation Foundation – Enhancing Community Capacity to Develop Skills. This program develops the employability skills of secondary school students and recent graduates through workplace learning programs. These programs are developed at the community level to enhance young people's career prospects.
4. New Brunswick Youth Apprenticeship Program: Balancing Academic Aspirations with Labour Force Requirements. The focus in this program is on developing the employability skills of secondary school students by facilitating school-to-post-secondary education or school-to-work transitions.

Recommendation 10

Map industry skills and training requirements to aid transferability

Human Resources and Development Canada has taken a major first step through its Sector Councils towards assisting trade areas to identify the skills required in

12. www.ocri.ca

13. www.conferenceboard.ca/nbec

various occupations. This work gives the various occupational areas a basic framework for generating skill assessment reports. Occupational assistance of this kind needs to be pursued and applied more vigorously on a local level across all industry sectors. Local firms and sector organizations could easily collaborate as suggested in Recommendation 1; if skill requirements were identified at the local level rather than at the provincial or national level, they would be much more targeted to Ottawa's economy. Feedback could still be provided to or from the appropriate provincial and national ministries, labour unions, or training institutions.

Enabling Objectives

Each industry sector systematically and comprehensively maps out the skills and training requirements for major occupations within that sector. This local information is linked to data generated by Industry Canada, HRDC and Statistics Canada as they carry out regular updates on the various skills needed in existing and emerging industries.

Trades and occupational training programs continuously upgrade their content to reflect changes in skill requirements.

Industries and trade unions proactively inform training institutions of changes to skills required in the various trades and occupations.

Advisory councils made up of tradespeople and trades trainers advise training institutions.

Change Agents

Stakeholders in this initiative include the Workforce Partnerships, local unions, Industry Canada, the Sector Councils of HRDC, Statistics Canada, industry councils (such as the Canadian Advanced Technology Association), the Ottawa Life Sciences Council, the Ottawa Tourism and Convention Authority, and professional associations (such as IEEE, CMA).

Implementation Requirements

An agent within each sector is given the responsibility to collect, collate and disseminate information from employers about job and skill requirements.

Major employers in each sector cooperate to develop information-gathering processes that seek to identify and assess the skill and training requirements of jobs in their sector.

Major employers in each sector cooperate through the Workforce Partnerships to continually update and inform educators and trainers of changes to the requirements.

Employers are willing to share information on skills and occupations.

Industry Canada cross-references technical skills and soft skills across occupations.

Time Frame

Short Term

- TalentWorks Secretariat conducts a feasibility study into skill mapping of selected sectors.
- TalentWorks Secretariat identifies lead industry personnel in selected sectors to oversee skill mapping.
- TalentWorks Secretariat negotiates resourcing of skill mapping projects.

Medium Term

- TalentWorks Secretariat institutes program of skill mapping in selected sectors.

Long Term

- TalentWorks Secretariat renegotiates resources to ensure ongoing skill mapping.

Expected Outcomes

For Job Seekers

- Up-to-date information by sector for employees, job seekers and students for use in job searches, training and career planning.

- Up-to-date and accessible information for employees, job seekers and students on skills transferability across sectors, easier identification of the skill shortages of the job seeker and the training required to move him or her to another sector.

For Employers

- Identification of skills and training requirements for each sector, to be used for hiring and staff development.
- Identification of the skills that are transferable across industries.
- Tracking of skill requirements across industries and over time.
- Identification of sunrise and sunset occupations.

For the Community

- Up-to-date information for economic planning and workforce development strategies.

Proposed Measurement

- Survey the use of a core skills concept by curriculum planners in program development.
- Compare certification criteria in order to identify skills that are common to two or more occupations.

Best Practices

The *Software Human Resource Council* (SHRC), a non-profit HRDC Sector Council, has created the Occupational Skills Profile Model (OSPM),¹⁴ designed as a reference tool for Canadian IT employers and workers. The OSPM is a dictionary that captures skills and accountabilities for 24 IT job streams. It allows users to build job profiles for themselves from skill sets, identify skills gaps, and establish training needs. For industry, government and individuals, such a comparison offers the opportunity to highlight knowledge gaps and identify emerging trends in the sector. It also allows users to compare occupations across industries and time.

The Industry Development Network in California is another example of skill mapping used to aid economic development through business, industry and labour

cooperation. It aims at developing an economic development strategy that will be broadly adopted, using as its core the industry cluster model. The strategy includes:

- An analysis of current workforce and infrastructure needs.
- Identification of opportunities for the growth of those industries.
- The creation of more formalized linkages within industry clusters as well as between industry clusters and the education /training sector.

Recommendation 11

Create an Ottawa Community Index to collect and publish data found in Ottawa Works Report I – *Ottawa's Workforce Environment*

The information in *Ottawa Works I* was gathered and presented to benefit a wide range of information users in Ottawa – businesses and institutions, job seekers, potential immigrants and investors, advocacy groups, and the community as a whole. If its measures are updated on an ongoing basis, they can be used to indicate community progress (or lack of it) in a variety of areas, and they can be used by strategic planners and community developers. It is vitally important that the information be reliable, current and user-friendly. It should be presented in a format that facilitates its use by a wide array of end users for the broadest variety of purposes.

Enabling Objectives

Since the data prepared for the first report of the *Ottawa Works* series change regularly and stakeholders have clearly indicated the need for timely, up-to-date information on Ottawa, we recommend that the *Ottawa Community Index* be established to collect, update and disseminate this type of information on an ongoing basis. The *Index* should be seen as a community information resource. Rather than bi-annual or annual reports, we recommend that a web-based vehicle be used so the information can be updated as new data become available.

14. <http://www.shrc.ca/ospm/index.html>

The Index continue to display a range of community data from a variety of sources to better serve the needs of a wide cross-section of community stakeholders – business people, job seekers, students, parents, trainers, educators, investors, community planners and potential immigrants. We recommend that the information include the broad areas of the state of the economy, costs of doing business, innovation, employment, workforce transitions, access to technology, skills and education, and quality of life. The web site is user-friendly and easy to navigate. It provides graphic summaries as well as links to original statistics and research. It is searchable by area of interest and geography (ranging from neighbourhood to wards to city level to NCR level). Comparisons with other jurisdictions continue to be made. The site will help reveal what's right with Ottawa but also where attention needs to be given. The site is linked to the *Ottawa Works* web site described in Recommendation 2.

An independent board of directors is established to oversee the operation of the Ottawa Community Index. The board regularly reviews the list of indicators to determine which data to include, to help standardize the presentation and interpretation of data, and to help manage the relationships between the various data providers.

Links to data providers are included in the web site presentation, however, for the ease of user navigation, these links are to source data rather than to the providers' home pages.

Change Agents

Data providers participating in the governance of the Ottawa Community Index would include the City of Ottawa (Development Services and People Services), OCRI Economic Development, HRDC's local Ottawa office, the Ottawa Real Estate Board, Royal LePage, Decima Research Inc., the school boards, the Social Planning Council, and the Champlain District Health Council.

Implementation Requirements

Agreements with Statistics Canada are negotiated to make local information pertinent to the Ottawa Community Index more quickly and more easily available, similar to

those established with the *Community Accounts* initiative in Newfoundland (see "Key Best Practices") or in Statistics Canada's own neighbourhood data project. In addition, Statistics Canada alters its policy of truncating employment statistics data below 1500.

Agreements are established so that local data providers agree to use common formats when providing data on the same subject.

Agreements are established so that providers of data send new data to the Ottawa Community Index as they become available.

Initiative and data providers address issues related to copyright.

The Ottawa Community Index is staffed with at least one half-time position to coordinate with data providers, maintain web site changes, and respond to directions from the board of directors. The position could be housed with the City or with OCRI but it should be clear that overseeing the Index is the responsibility of the multi-stakeholder governing body. This is essential to retaining an independent and neutral status for the Index.

The presentation format makes it easy to download and print all or portions of the data. Public access to the data is important to support ongoing research and economic development programs.

Time Frame

Short Term

- Create a mechanism for ongoing collection of Ottawa Community Index data.
- Conduct semi-annual survey of Ottawa residents on workforce issues (such as Decima's Ottawa Pulse).
- Link Ottawa Community Index to *Ottawa Works* web site (Recommendation 2).

Medium Term

- Conduct workforce trend analysis and other research.

Expected Outcomes

For Job Seekers

- Job seekers easily access information pertinent to job availability, job skill requirements, housing, transportation, education and training facilities, and arts/culture/recreation facilities.
- Advocates for job seekers are provided with more easily accessible statistics on the region and its workforce.

For Employers

- Up-to-date regional information available to help attract new employees and make it easier for them to move to Ottawa.
- Easy access to comparative cost data.

For the Community

- Community progress report.
- A single portal to community data.
- Data to compare Ottawa with other leading knowledge centres.

Proposed Measurement

- Monitor the number of visits made to the web site.
- Surveys to determine user satisfaction.

Key Best Practices

The *Community Accounts*¹⁵ web site is a community-based information system that enables citizens to retrieve and analyze data for communities and regions of Newfoundland and Labrador. Unique among web providers of community information, this site allows users to drill down to a neighbourhood level – the equivalent of collecting economic and social information on the Glebe neighbourhood in Ottawa.

The information included on the *Community Accounts* web site includes:

- Provincial, regional and community information.
- Data for 11 domains of interest: health, education, social, income, labour market, demographics, resource/wealth, production, consumption, environment and well-being.
- Over 50,000 tables and illustrative graphics organized by topic and geographic region.
- Relative measures of well-being for ease of comparison.
- Analysis tools to help summarize and interpret data.
- Community and regional profiles based on user input.

Joint Venture: Silicon Valley network created the annual *Index of Silicon Valley*¹⁶ in order to provide a reliable source of information on the economy and quality of life in Silicon Valley, California. In addition to helping to foster a sense of regional identity, the Index provides a sound basis for proactive, coordinated efforts to make Silicon Valley a better place to live, work and do business.

The Progressive Policy Institute (PPI) has developed the *Metropolitan New Economy Index*,¹⁷ which examines the 50 most populous U.S. metropolitan regions in terms of their adaptation to the “New Economy.” PPI uses 16 indicators divided into five categories that best capture what is new about the New Economy:

- Knowledge jobs.
- Globalization.
- Economic dynamism and competition.
- The transformation to a digital economy.
- Technological innovation capacity.

Recommendation 12

Revitalize trades education in Ottawa secondary schools

The former curriculum in Ontario secondary schools to teach individual trades has been transformed over the past decade into a broad-based technology approach whereby the trades curriculum is organized into seven technology areas, including ICT. Each of the broad-based

15. <http://www.communityaccounts.ca/communityaccounts/onlinedata/default.htm>

16. www.jointventure.org/resources/2002Index/index.html

17. www.neweconomyindex.org/metro/index.html

areas takes in and integrates a number of trades in order to give students exposure to a range of skill areas, with the intention of opening up more options to them. Although in the end a student may focus on a single trade at the apprenticeship level, it is hoped that he or she will have an appreciation for the context in which that trade is practised. However, the seven technology areas are not equally emphasized in Ottawa schools. What is more, the implementation of this curriculum change in area schools has been uneven, resulting in trades education becoming significantly de-emphasized as an option for secondary students in Ottawa. This should be changed. It is short-sighted to assume that all students will pursue university education. Making better use of existing curricula would be an important first step in correcting the current imbalance.

Enabling Objectives

The Ontario Ministry of Education (OME) ensures adequate funding of broad-based technology programs¹⁸ so that all technology programs, and trades programs in particular, are accessible to all Ottawa students who would like to pursue them.

School boards regularly consult with the colleges, the Ministry of Training Colleges and Universities, and appropriate industry sectors regarding skill changes in the various trades. Employers and unions must clearly articulate the needs of the trades for the benefit of the colleges, and the colleges must communicate the prerequisite skills for trades training to the schools. It is essential that trades training be laddered in such a way that the transitions are smooth.

The Ontario College of Teachers and the OME establish an upgrading program for teachers and career counsellors on the broad-based technologies and, in particular, trades programs.

Local businesses and industries employing tradespeople make personnel available to schools as resource persons.

Local businesses and industries provide teachers with the opportunity to spend time in “the field” to experience at first hand changes that have taken place in the workplace.

Pilot programs in some schools that can point the way for other area schools, so called lighthouse programs, are identified or established to assist teachers with program development.

More interdisciplinary courses are generated for use in local high schools.

Local businesses and industries assist in providing equipment and teaching resources for the broad-based programs.

Existing programs that complement secondary education (currently available from Sector Councils) continue to be available and are implemented more widely. Examples of these kinds of programs include the Ontario Tourism and Education Council's Hospitality Program and the Canadian Aviation and Maintenance Council's Youth Internship Program.

Change Agents

Stakeholders include the Council for Skilled Careers (composed of the four Ottawa school boards, two Ottawa colleges, City of Ottawa, the Learn to Earn Program of the Ottawa Technical Learning Centre with support and funding from the Ontario Ministry of Municipal Affairs and Housing), the Ontario Ministry of Education, the Ontario Ministry of Training, Colleges and Universities, the Ontario College of Teachers, teachers' unions, trades unions, and representatives of sectors employing certified tradespersons.

Implementation Requirements

A single, broad-based, technological studies advisory board is set up for the City of Ottawa. This board includes representatives from all the change agent groups noted above to ensure that trades education and training is emphasized within the broad-based technology curriculum.

Improved, dedicated space must be provided for these broad-based programs. Since these programs are meant to be project- and activity-centred, their activities are not curtailed by space restrictions.

Up-to-date equipment is provided for each instructional area.

18. The broad-based technology programs cover an assortment of computer and trades training. While computer programs have been emphasized in Ottawa's secondary system, trades-related programs have not.

New updating and upgrading courses for broad-based technology teachers are added to the offerings of faculties of education and other institutions, and approved by the Ontario College of Teachers.

Teachers' unions, trade unions, school boards and local businesses need to work out ways whereby teachers and resource persons from the trades can exchange work settings from time to time.

To ensure that the programs adhere to the guidelines set out by the Ontario Ministry of Education, school boards must carry out a regular assessment and upgrading of broad-based technology courses.¹⁹

Based on the principle that "curriculum is best implemented by those who design it," teachers of broad-based technology programs must be given the time, resources and advice needed to expand the current OME guidelines into courses.

The governance system of trades education and training is reformed to reflect both 21st-century requirements for quality performance in the trades and the economic needs of employers.

Time Frame

Short Term

- Community support for the Regional Centres of Excellence for Skilled Occupations project is an essential element of revitalizing trades education within Ottawa. The project's objectives are to create an awareness-raising program, facilitate links between industry and education/training providers for the development of training, establish an information clearinghouse, and increase the use of alternative training and e-learning.
- Incorporate Sector Council programs to supplement or complement secondary school curricula.

Medium Term

- Revitalize trades education in Ottawa secondary schools by implementing the broad-based technologies program more widely. Negotiate additional space and equipment.

Long Term

- Governance reform of trades education and training.

Expected Outcomes

For Job Seekers

- Access for Ottawa secondary school students to broad-based courses in technology that follow the OME guidelines.
- Greater access to trades-related education and training.
- A wider range of career choices for students.

For Employers

- Increased numbers of available and informed apprentice candidates.

For the Community

- More students pursuing and completing apprenticeships and college programs.
- More tradespeople in Ottawa to alleviate existing shortages.

Proposed Measurement

Using the year 2002 as a baseline, the following will be monitored:

- The number of registrants in college programs and apprenticeship programs.
- The number of apprentices receiving a certificate of apprenticeship and/or qualification.
- As established by annual surveys, the numbers of employers having difficulty in attracting apprentice candidates.

Key Best Practices

The Ottawa Technical Learning Centre (OTLC), formerly McArthur High School in the Ottawa-Carleton District School Board, has been identified as exemplary, and its replication in other geographic settings within that board and its sister boards is recommended. It has also set a new standard for responsiveness – responding with training

19. <http://mettowas21.edu.gov.on.ca/eng/document/curicul/secondary/grade1112/tech/tech.html>

within as little as a week of the identification of a need.²⁰ Employability skills are developed throughout the curriculum and the students see themselves as prepared to continue their skill development in the workforce and/or through post-secondary education.

Similarly, La Cité collégiale and le Conseil des écoles catholiques de langue française du Centre-Est (CECLFCE) have partnered to construct the *École secondaire catholique de formation professionnelle et technique* on the campus of La Cité collégiale. This school will be offering trades-related education and training in a unique paperless format.

Both of these examples offer a broad range of technical skills programs with strong connections to the world of work. The schools have elevated the perception of technical education to its rightful place in the general scheme of secondary school education, and will continue to do so; they are also elevating the self-confidence of students who choose the trades as a destination occupation.

California's North Coast School-to-Career Consortium has increased integration of academic subjects and created new opportunities to apply classroom learning to real-life and workplace situations. They have also created a transparent system of skills development and upgrading for key industry clusters in the region.

*Hampton High School and Irving Pulp & Paper Partnership in Education*²¹ focuses on adding relevance to secondary school technical training programs. This has helped to raise awareness about technical education

opportunities and career opportunities and to develop employability skills. So far, the students have participated in three major activities:

1. *Original Mill Model* involved building a scale model of a mill and constructing operational models of mill processes.
2. *Job Fest '97* focused on job readiness training (e.g., résumé writing, interview preparation).
3. *Digester Project* involved forming project management teams and completing a project.

Summary of Recommendations 1 to 12

As already outlined, our assessment of Ottawa's workforce was that from a regional perspective the community has not been wholly successful in the following functions:

- Monitoring, intelligence gathering and communicating workforce information.
- Skill matching, career counselling and advocating placements for job seekers.
- Transforming existing skill sets and occupations into new ones.
- Upgrading current skills and generating a culture of lifelong learning.
- Inventorying its human capital assets.

Table 1 summarizes the impact of the 12 recommendations on these functions.

Table 1 Addressing Functions to Move Towards a More Responsive Workforce

Functions	Recommendations											
	1	2	3	4	5	6	7	8	9	10	11	12
Monitoring	X	X	X		X			X		X	X	
Matching	X	X		X			X	X	X			X
Transforming	X					X	X	X	X			X
Upgrading	X		X	X		X			X			
Inventorying			X	X	X					X		

20. This was done recently with respect to the City's identification of a need for additional stonemasons: the OTLC created and staffed the training program within a week.

21. Conference Board of Canada. Hampton High School and Irving Pulp & Paper Partnership in Education. August 1998.

As we examined the 12 proposed recommendations within the above context, we observed five critical success factors that seemed to predominate:

- Achieving sufficient scale in terms of people, funding and attention.
- Overcoming the tendency for jurisdictional gridlock – a key factor.
- Recognizing the interdependence of the recommendations, which suggests a more sustained, integrated approach is required.
- Recognizing the comprehensiveness of the recommendations by providing the broadest base of information and addressing the needs of the widest stakeholder audience.
- The capacity to be both proactive and responsive, which suggests a need for understanding workforce changes and acting in response to those changes.

The importance of these critical success factors in terms of the 12 recommendations are outlined in Table 2.

To attend to these five critical success factors and to optimize the impact of the 12 workforce recommendations, some institutionalized mechanism of supra-regional coordination seems to be required. The strategy embodied in the following recommendation, Recommendation 13, is an attempt to achieve this wider institutional coordination simply and reliably.

Due to the nature of this recommendation we have departed from the established format of listing enabling objectives, change agents, basic implementation requirements, a time frame, expected outcomes and proposed measurements consecutively. These will all be addressed, but in a different manner. First we offer a summary of the recommendation and its sub-recommendations. Then, in section V, we flesh out this recommendation in more detail and describe it in the context of an infrastructure for the implementation of the other 12 recommendations.

Recommendation 13

Create a regional Human Resources department for the city-region of Ottawa, which we will refer to as the *Workforce Agency of Ottawa (WAO)*

This recommendation is not meant to add more of a regulatory burden to the working lives of Ottawa’s citizens but rather to simplify them. In particular, this recommendation supports low-income persons, the underemployed, the unemployed, employers and business investors. It has three major focuses:

1. Attracting talented workers to Ottawa.
2. Retaining talented workers in Ottawa.
3. Continually enriching the quality and diversity of Ottawa’s talent pool.

Table 2 Critical Success Factors Among the 12 Recommendations

Critical Success Factors	Recommendations											
	1	2	3	4	5	6	7	8	9	10	11	12
Scale	X		X		X	X	X		X	X		
Jurisdictional Gridlock	X		X			X	X	X	X			X
Interdependence	X	X		X			X	X			X	X
Comprehensiveness	X	X		X	X					X		
Proactive/ Responsive		X	X	X	X	X		X				X

As we observed previously, the 12 recommendations address the kinds of issues HR departments tend to deal with on a regular basis. The need for a supra-regional organization to coordinate initiatives and deal effectively with the top 10 workforce priorities suggests the concept of a regional HR department. We have extended the “framework” of the HR model to make it the basis of a recommended strategy itself.

Creation of the *Workforce Agency of Ottawa* (WAO)

This regional HR department would be created by transforming TalentWorks and pooling the existing mandates and resources of Ottawa's workforce stakeholders.

A well-designed and structured WAO would be able to deal with the top 10 workforce priorities listed in *Ottawa Works II: Profiling Ottawa's Workforce*. It would be an organic, fluid entity capable of anticipating and proactively addressing future local HR issues. Ottawa's workforce development would become an ongoing, continuous process, realigned with the evolving demands of local citizens, firms and the city as a whole.

Recommendation 13a

That the *Workforce Agency of Ottawa* be established as a prototype institution for a period of five years

At the end of this period it will be evaluated on its ability to meet its mandates and its viability as a model of regional workforce coordination that could be exported to the other 26 metropolitan regions of the country.

Recommendation 13b

That the *Workforce Agency of Ottawa* be structured with five working groups and three sub-groups:

- A Workforce Strategy and Planning Group.
- A Workforce Development Group (consisting of a Training and Education sub-group and a Career Planning/Counselling sub-group).

- A Workforce Policy Advocacy Group.
- A Recruitment and Placement Group.
- An Operations Group (with an IS sub-group).

Recommendation 13c

That the *Workforce Agency of Ottawa* be guided by a Board of Directors and administered by duly appointed officers

The board should consist of representatives from the three levels of government, industry sectors, education/training institutions, and community groups.

Recommendation 13d

That the TalentWorks Steering Committee be appointed as an Interim Board for the *Workforce Agency of Ottawa*

In the short term, however, we propose:

Recommendation 13e

That TalentWorks undertake a feasibility study to define the funding required for the WAO, recommend a shared or self-funding or alternative model, and negotiate potential commitments of stakeholders to the WAO

Recommendation 13f

That TalentWorks undertake a project to define a corporate constitution for the *Workforce Agency of Ottawa*

A WORKFORCE DEVELOPMENT STRATEGY FOR OTTAWA

The *Ottawa Works* series of reports will be incorporated into the City of Ottawa's *Ottawa 20/20* process,²² the City's growth management strategy which includes the City's Official Plan. By law, every municipality must have an Official Plan (visit <http://city.ottawa.on.ca> and click on *Official Plan*). The Official Plan contains City Council's policies for managing the physical development of Ottawa by charting the expansion of transportation infrastructures, land use, public works, housing development and other physical assets of the city.

Ottawa 20/20, however, incorporates more than just the Official Plan; it sets out the City's overall vision for where the community wants to go over the next 20 years and how it wants to get there. *Ottawa 20/20* is not a bureaucratic exercise in urban planning but an iterative process of community decision making that was begun at the Smart Growth Summit in June 2001. In addition to the Official Plan, the *Ottawa 20/20* process will generate an Arts and Heritage Plan, a Human Services Plan, a Corporate Strategic Plan and an Economic Strategy. The Economic Strategy includes a Talent Plan. The information and recommendations from the *Ottawa Works* reports will be used as a basis for the *Ottawa 20/20* consultations to help create the Talent Plan, which is necessary to support future economic development in Ottawa and to meet the *Ottawa 20/20* guiding principles. In particular

the Plan will need to reflect Ottawa – specific characteristics such as the bilingual, multicultural nature of the City in order to meet the principles of “A Caring and Inclusive City” and “An Innovative City Where Prosperity is Shared by All”. The extent to which the community accepts the recommendations described in this report will be the extent to which the Talent Plan will mirror the Workforce Development Strategy.

The 20/20 process and the Smart Growth Summit grew out of a report tabled by Ned Lathrop with the Planning and Development Committee and the City Council on March 8, 2001. Building on recommendations from The Ottawa Partnership, the Lathrop report identified nine export-oriented economic growth clusters: (1) telecommunications equipment, (2) microelectronics, (3) software and communications services, (4) professional services, (5) tourism, (6) life sciences, (7) photonics, (8) new media, (9) environmental technologies. That report states, “The first seven [of these clusters] are at different points in their life cycles, while the latter two are just now taking shape.”

The *Ottawa Works* series has embraced those nine export clusters from the Lathrop report, but broadened them to allow discussion of occupations and talent development within clusters that are not driven by exports and to reflect the large agricultural reality of the newly expanded City of Ottawa. According to the Lathrop report, new employment growth in the Ottawa area will likely come

22. www.ottawa2020.com

primarily from the first seven clusters. However, overall employment will also reflect changes in education, health and public sector employment. Consideration of these three must therefore be included to predict growth in employment opportunities in Ottawa over the 20-year span of the 20/20 visioning process.

In 2002, City Council recognized cluster-based economic development as its main approach to business development. The global competitiveness of Ottawa's businesses is directly influenced by local economic health and quality of life, and this competitiveness in turn influences employment levels, new job creation, and the integration of new technologies into business processes. Local investment flows expand and contract according to the performance of the export clusters, thereby directly and substantially affecting the profitability of other local businesses and their growth opportunities.

It is very important, therefore, for the community to recognize that a forward-looking local workforce strategy should support Ottawa's export clusters for their ability to attract new investment, but not forget to support the internal and rural economies that are the mainstays of our community. In addition, the realities of the knowledge economy clearly show that traditional cluster theory is incomplete. Today, economic development is at least as dependent on the level of community development as it is on industry networks and value chains, and on putting in place community infrastructures that are attractive to the principal resource of knowledge companies: knowledge workers. In the first *Ottawa Works* report we quoted Richard Florida, a keynote speaker from the Smart Growth Summit: "To compete successfully in the age of talent, regions must make quality-of-place a central element of their economic development efforts." Consequently, we have attempted in this report to balance obvious industry needs with the needs of people.

The strategy set out in this document is meant to support low-income persons, the underemployed, the unemployed, employers, investors, and all other Ottawans. As a result, it has three major focuses: (1) attracting talented workers to Ottawa, (2) retaining talented workers in Ottawa, and (3) continually enriching the quality and diversity of Ottawa's talent pool. Many of the recommendations proposed here have effects that go beyond a

particular activity or initiative. Many affect policies of the federal, provincial and municipal levels of government. Some require changes to current industry practices and attitudes. Finally, some require the development of supporting services, programs and infrastructures. The Centre on Governance believes that many of the workforce issues that have already been documented are for the most part interconnected and interdependent, and therefore that piecemeal approaches will prove largely unsuccessful.

In our research and consultations we heard time and again about the need to develop a local capacity to address not only the top 10 priorities that have been identified in *Ottawa Works* but also other workforce issues that will invariably arise in the future. To build a 21st-century workforce we believe a systemic approach is needed – one that addresses the system as a whole.

Consultations with the TalentWorks Steering Committee led to an organizing concept of a regional HR department²³ as a way to integrate the diverse directions that Ottawa seems to be required to move in. Ultimately that analogy led the Centre on Governance to a workforce strategy that embodies the workings of a city-wide Human Resources department. Like any organizational HR department, the regional entity of "Ottawa Inc." would address issues of information gathering, recruitment, training, career development, counselling and support, policies, funding, et cetera.²⁴ This notion of a regional HR department provides a practical way of thinking and acting on a wide range of workforce issues at a regional level. For example, while many organizations are focused on recruitment and retention of their own employees, a single regional HR department would collect information and develop services to aid all firms to recruit and retain talent in the Ottawa area. Given the initial attractiveness of this HR department analogy, the Centre has pursued it further, using Human Resources management theory (see also Figure 3).

A community workforce strategy must begin by creating the ability to bring people and resources from a variety of constituencies together to deal with challenges and opportunities as they emerge. It cannot focus only on increasing the number of engineers, or photonics researchers or waitresses or carpenters or automotive repair specialists – even if these occupations may be in

23. Appreciation goes to Rod Brandvold, Vice President of Organization Development at Cognos, for the analogy.

24. This is not to say that *all* HR activities in the region would or should be coordinated in this way, only that those that are common among firms, that pose no competitive threat to each other and would benefit from this type of consolidation.

demand today. By the time a community can act within the current structures to fulfill a particular labour demand in a given sector, the original need may have evaporated – as it did when we doubled the pipeline for computer and engineering specialists. Even before we could produce the additional graduates, the ICT sector had imploded and students were looking elsewhere for education and employment. Therefore we cannot be simply reactive; we must be proactive. However, we categorically state our belief that centralized labour planning has never worked, does not work now, and never will work.

We have focused on 10 priorities, but there were 24 other issues identified in the second *Ottawa Works* report that will also need attention at some point. And over time, other regional HR issues are sure to arise, as the present research has likely only revealed the “tip of the iceberg.” What is needed, therefore, is a comprehensive mechanism to address issues as they become prominent, or better yet, to proactively anticipate issues and resolve them before they become critical problems that have a negative impact on Ottawa's workforce and economy.

Our examination of the 12 proposed recommendations found five predominant critical success factors. In some cases achieving sufficient scale in terms of people, funding and attention is important to achieve significant impact. In other cases, overcoming the tendency for jurisdictional gridlock is a key factor. Many of the initiatives are interdependent, suggesting that multiple independent approaches to the same set of stakeholders would be counterproductive and a more sustained integrated approach is appropriate. The success of a number of initiatives depends on their comprehensiveness, providing the broadest base of information and addressing the needs of the widest stakeholder audience. Lastly, the need to be both proactive and responsive suggests that the ability to understand workforce changes and the ability to act in response to those changes be integrated. The impact of these critical success factors on the first 12 recommendations was outlined in Table 2.

Having identified these critical success factors, we believe the most important capacity required to improve Ottawa's workforce is that of helping people and organizations make better choices for themselves. Making better choices requires essentially two things – improving the quality of available information and removing any artificial or unreasonable barriers to people's ability to realize their choices. Providing better information and removing barriers underscore all of the first 12 recommendations of this report. To achieve success in these efforts, the critical success factors must be addressed. This led us to conclude there is a need for a supra-regional entity, since existing organizations either cannot provide all five success factors or their current interrelationships may reduce availability of information and create the barriers that inhibit personal choice.

Given that many of the issues raised in Report II of *Ottawa Works* parallel the concerns normally dealt with by a typical HR department, the idea of a regional HR initiative has a natural appeal. Such an initiative would have to coordinate and benefit both citizens and organizations; it would also have to benefit the community, at whose collective discretion it must necessarily function. Such an organization would need to operate in the background, unobtrusively supporting the many sectors of Ottawa life. It would not be an initiative that does things, in the way that firms make things or governments deliver services, but it would be an initiative that helps people and organizations get things done.

To date, the region has not been successful at monitoring, skill matching, transforming, upgrading, and inventorying its talent base. In addition, no single stakeholder in the community has the ability to deal with these fundamental issues on a city-wide basis: no one stakeholder has all the authority, the resources (human and financial), and the ability to consistently focus on these issues in order to address them. Therefore, the first strategic recommendation of the *Workforce Development Strategy* responds to all of these considerations:

Recommendation 13

That TalentWorks create a regional Human Resources department for the city-region of Ottawa, which we will refer to as the *Workforce Agency of Ottawa (WAO)*

As a response to the five regional challenges listed above, the WAO would:

- Help people make better choices with improved quality of information, whether they are job seekers or employers.
- Provide the services necessary to match skills with available work and encourage the development of the right sets of skills.
- Connect the people who need to change their skills with the programs that can help them do so.
- Provide for lifelong learning within the context of current workforce conditions, tailoring programs to the needs of workers and employers.
- Create an altogether new capacity to account for the region's human capital.

Such an institution is philosophically consistent with a strong city-region, one of the drivers of the global knowledge economy. It reflects the emphasis placed on collaborative community capacity-building by the Official Plan of the City of Ottawa. A WAO that involves key workforce stakeholders on its board raises community collaboration to a very high and sophisticated level, allowing for more thorough integration of all aspects of workforce development. The aggregation of many HR functions at a regional level would result in the elimination of many redundancies, in savings for organizations, and in improved quality of services (for instance, better training, improved career planning, and reduced costs for recruitment, retention and training). Most important, a regional HR department would create sufficient scale and focus that its activities would receive the attention of a core business.

The biggest risk of such an entity is the complexity required to put it in place. For instance, the Province of Ontario and the Government of Canada have again this year been unable to resolve their differences with regard to establishing a

labour market agreement. The letters of agreement necessary to establish a Workforce Agency involving participatory funding and governance would be even more complicated to accomplish. But the WAO would be an entirely local entity that should be able to sidestep federal-provincial jurisdictional disputes.

However complex, the consequences of not creating such an agency will continue to limit the community's ability to integrate resources and services and respond in a timely fashion to changes in the workforce environment. Further, the challenge of distributed governance makes resolution of some issues highly unlikely, as in the case of career counselling and foreign-trained professionals – even if obvious and common-sense solutions presented themselves – until some form of mutual accommodation can be reached.

Implementing a Regional HR Strategy

To operationalize the WAO as a regional HR department, an actual department must be created. A totally virtual organization with the mandate and financial tools being envisioned needs a presence, it needs a staff and it needs clear accountability. Because of the pooled mandates and resources, this cannot take the form of a hierarchical organization. We recommend a matrix structure where members/partners/officers are accountable to their stakeholder group as well as to the regional initiative.

A regional HR initiative could potentially take many forms. It could be a function added to the municipal government. It could be a virtual partnership much like TalentWorks is today. It could be an independent institution mandated by the provincial or federal governments like the National Capital Commission. Or, as we believe, it can be an institution with a delegated temporary mandate that exists only for as long as the stakeholders who create it see fit to continue it.

Typically, the HR department of an organization is not a revenue-generating centre. Neither is it a production or marketing centre. Its coordinating and serving roles require a staff, an information system and a budget. To operationalize a regional HR function we recommend that the WAO be similarly staffed and budgeted. Without an

HR function at a regional level, the HR activities are performed at the individual organization level, where scale and regional focus can be lost. The clear feedback reported in *Profiling Ottawa's Workforce* is that the five HR functions we have identified are not being handled well, or are not being handled at all, at the individual organization level. Since regional workforce monitoring, matching, transforming, upgrading and inventorying activities are not central to any individual organization, the aggregation of many of these activities within a WAO could well save HR costs for organizations and improve the quality of HR services to individuals and organizations.

As well, there are currently too many overlaps and redundancies in HR-related initiatives and efforts across constituencies and institutions in Ottawa. Under the umbrella of the WAO, these efforts can be coordinated, and much duplication of resources, time and effort can be eliminated, resulting in larger impacts for existing resources, as well as better direction and more utilization. This is not to say that all HR activities in the region would or should be coordinated in this way; rather, only that those that are common among firms, that pose no competitive threat, and that would benefit from this type of consolidation would be part of the WAO's mandate.

The WAO would have a coordinating and serving role, both from the client perspectives of citizens and organizations and from the perspective of the community, at whose discretion it would function. It would be an initiative that helps people and organizations get things done.

A well-designed and structured WAO would:

- Provide the capacity to deal with the 10 issues prioritized in Report II of *Ottawa Works*.
- Create an organic, fluid entity to anticipate HR issues and proactively address local HR issues.
- Provide cost savings through the reduction of duplication by area organizations.
- Ensure Ottawa's workforce development is an ongoing, continuous process continually realigned with the evolving demands of local citizens, firms and the city as a whole.

- Provide the community with the continuing capacity to resolve regional HR issues in a comprehensive holistic manner rather than piecemeal, as is the norm today.

The concept of a WAO may seem daunting, but HR specialists in large companies regularly deal with different functions, with different groups, and with services and business that have different cultures, values, needs and expectations. Therefore the diversity of needs and interests in the region should not deter us.

Caution, however, needs to be advised. The major risk in creating a new regional institution is that we may add to an already overly complex system. We say "complex" rather than "bureaucratic" because there exists no single, ponderous workforce authority in Ottawa. The space of workforce issues in Ottawa is a multi-stakeholder arena. However, there may be the temptation with a WAO to over-engineer, micro-manage, or inadvertently obstruct the natural process of workforce evolution rather than truly nourish the workforce through the formation of full, rich, dynamic partnerships and connections whose outcomes cannot always be predicted in advance. Again, centralized planning is to be avoided at all costs.

What we propose for the WAO is not additional bureaucracy but a new regional governance mechanism. We believe accountability and transparency on workforce matters will increase as currently competing stakeholders hold each other to public account in the context of an operating WAO. Its role is to intervene just enough to enable the participants within this regional workforce "eco-system" to stimulate self-organizing,²⁵ organic, "open-system" synergies that result in all the stakeholders getting what they need when they need it.

Recommendation 13a

That the Workforce Agency of Ottawa be established as a prototype institution for a period of five years

TalentWorks is a unique model of community collaboration. Although TalentWorks has evolved as an informal mechanism to achieve workforce coordination, it lacks direct access to resources and the authority to act assertively in multiple directions. Moreover, Ottawa is not

25. In *Birth of the Chaordic Age* (San Francisco: Berret-Koehler Publishers, 1999), Dee Hock, the former CEO of VISA, writes about finding a balance between chaos and order, what he calls "chaordic," where we invest our efforts in the few most influential activities that will put good things in motion and that ultimately make the biggest difference.

alone in requiring workforce coordination at a regional level. If the WAO were formed as a demonstration project to explore the viability of similar Workforce Agencies beyond Ottawa, it could benefit the other 26 metropolitan regions of the country that comprise just over 64 percent of Canada's population, or about 19,297,000 people. We propose, therefore, that the WAO have a mandate of five years, after which a review and evaluation be undertaken. The possibility of continuing the WAO experiment and exporting it to other regions of the country could then be explored.

Recommendation 13b

That the Workforce Agency of Ottawa have the following structure of five working groups and three sub-groups

1. A sector-neutral *Workforce Strategy and Planning Group*, which would make sure that all economic development planning for the region is done in accordance with a workforce strategy. Its members would include the WAO Board and representatives from the City of Ottawa.
2. A *Workforce Development Group* consisting of two sub-groups:
 - A *Training and Education* sub-group concerned with policy issues as well as curriculum and programs, involving all stakeholders as well as public and private agencies education and training agencies.
 - A *Career Planning/Counselling* sub-group concerned with programs and services to assist with career planning and transitioning. Its members would include representatives of sector HR departments; school/college/university counselling personnel; private sector career counselling businesses; and local, federal and provincial offices offering career counselling.

The *Workforce Development Group* would also develop the content for an easily navigable web site which would contain every training and educational offering in the region.

3. A *Workforce Policy Advocacy Group* would tackle, in various ways, barriers to workforce participation, such as lack of child-care access, requirement for

bilingualism, lack of accreditation of foreign-trained professionals, journey-person–apprenticeship ratios, etc. Its members would include representatives from advocacy groups and pertinent departments within the governance system of the City of Ottawa.

4. A *Recruitment and Placement Group* that would work to attract people to Ottawa and facilitate job finding or employer–employee matching. The group would be responsible for assessing motivators to attract and retain workers and communicating local opportunities to potential workers. It would coordinate with the *Operations Group* and the *Development Group* to ensure information is integrated with the *Ottawa Works* web site, the Ottawa Community Index, and employer web sites in the region. Its members would include HR representatives from all industry sectors in Ottawa.
5. An *Operations Group* that would run the HR Information System and keep the web site up to date, and occasionally do assessments, evaluations and surveys to see how well the WAO is meeting everyone's needs. An Information Systems (IS) sub-group would support operations activities. Representation in this group should come from the City of Ottawa, OCRI/TalentWorks, HRDC, Industry Canada and Statistics Canada.

These five groups and three sub-groups are depicted in Figure 1.

The WAO would be an independent multi-stakeholder institution for resolving regional workforce issues, requiring formalized commitments (in funding and resources) from the three levels of government, businesses and the social sector. It would not be a controlling institution, but a workforce intelligence gatherer, an agent for workforce education and training, an advocate for job seekers steering “clients” to relevant providers or agencies, and a coordinating body. It would have the following characteristics:

- Guided by a multi-stakeholder form of governance to ensure accountability.
- Not mandated by any new authorities but operating as an agency from the bottom up (i.e., its authority would be derived from delegated authorities from its stakeholders).

- Not owned by any government (federal, provincial or municipal), nor any particular industry sector or community organization.
- Residing *in* the city of Ottawa, but not *with* the municipality of the City of Ottawa (the government).
- Operating with an established budget adequate for its purposes, adequately staffed and appropriately housed.

Recommendation 13c

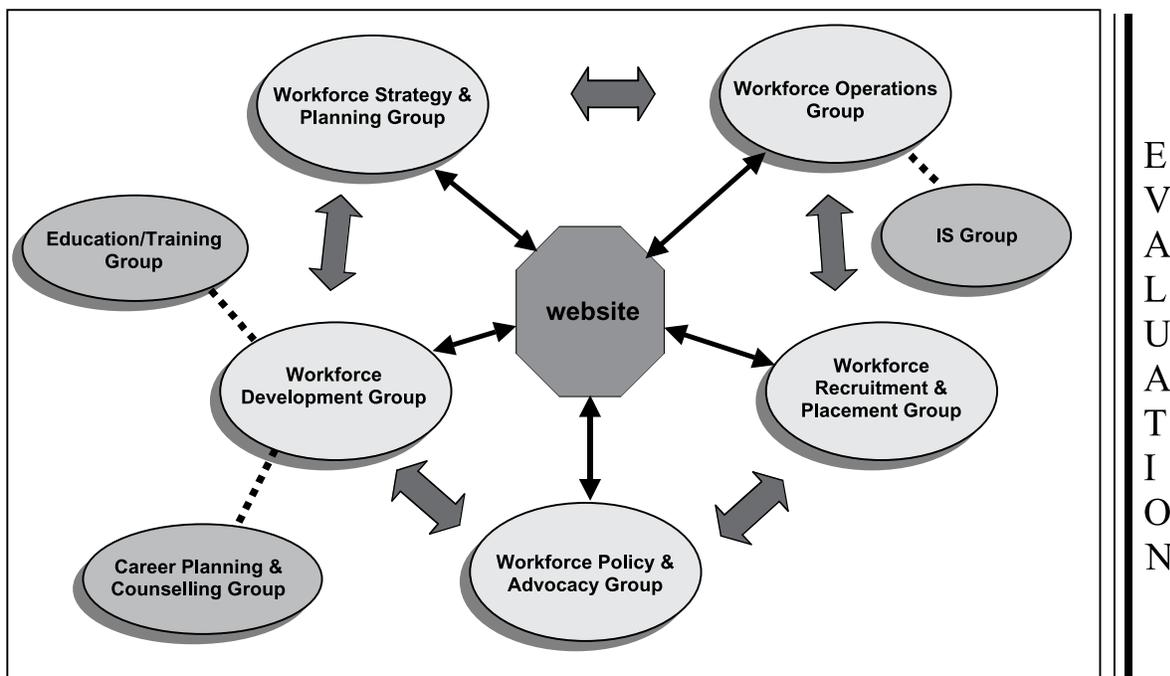
That the Workforce Agency of Ottawa be guided by a Board of Directors and be administered by duly appointed officers

The delegation of multiple mandates to the WAO and the significant resources that would be allocated to it demand a degree of accountability both to contributing stakeholders and to the public that cannot be provided by an informal body.

The WAO Board would consist of representatives from the three levels of government, industry sectors, education/training institutions and community groups. From a corporate governance perspective, a good size for a board is 10 to 15 members. This facilitates manageability and effective learning. We recommend the WAO Board have 12 members, comprising the following:

- One representative from each of the three levels of government – federal, provincial and municipal.
- One member representing the universities and colleges, another representing the private training sector, and a third representing the area boards of education.
- Three representatives selected from the industry Workforce Partnership Council²⁶.
- One member representing recruiting and placement organizations.
- One member representing job seekers.
- One member representing advocacy groups.

Figure 1 The Structure of the Workforce Agency of Ottawa



26. The Workforce Partnership Council is a network of the nine industry Workforce Partnerships described in Recommendation 2 in section IV.

We recommend that members have a term of two years and that half the representatives be rotated each year.

The Board initially would take responsibility for setting up the nine Workforce Partnerships described in Recommendation 2. It would be responsible for setting up the mechanisms for monitoring the activities of the WAO, receiving input from the working groups, and reporting to stakeholders and the public. It would hire the Director of the WAO and approve his or her choices to chair the working groups. A controller and auditor would also be appointed by the Board.

Since a similar board composition can be found in the TalentWorks Steering Committee, we propose:

Recommendation 13d
That the TalentWorks Steering Committee be appointed as an interim Board for the Workforce Agency of Ottawa

Working groups would include several Board members complemented by appropriate stakeholder participation.

Each of the five working groups and three sub-groups would be headed by a manager with the requisite expertise related to the HR issues and the partner management under her or his responsibility. This individual would chair the working group of partners and be responsible for the continuity of the group's activities and knowledge, its

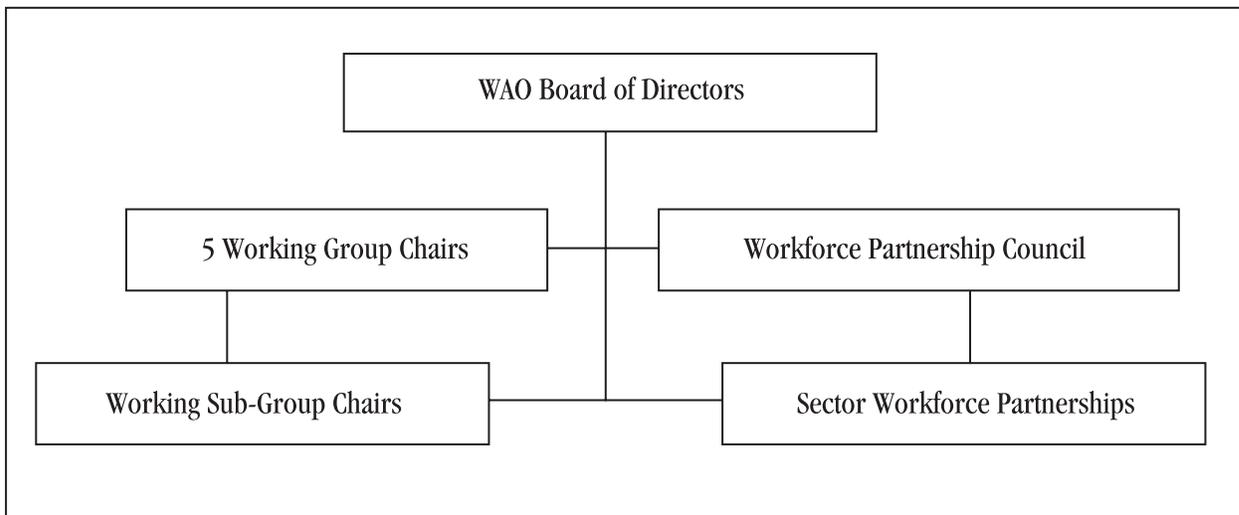
reporting to stakeholders and the public, and other routine functions. Members of each group would be chosen from the Board and from appropriate additional stakeholder groups in Ottawa as needed. Each of these groups would oversee the formation and proper functioning of sub-groups or partnerships that may need to be established to resolve particular HR issues (such as the 10 priorities identified above).

Staffing of managers, analysts, administrative support, and web support for each of the groups should be conducted as soon as the working groups and sub-groups are established. The managers in particular are needed to move ahead on targeted issues. Given the existing human resource personnel in a variety of Ottawa organizations, secondments from these organizations would provide a quick means for the WAO to get started.

Justification

The WAO will eliminate overlaps and redundancies in HR-related initiatives and efforts across constituencies and institutions in Ottawa. For example, the local HRDC office is working on local labour force issues; provincial counterparts such as MTCU and OME are extending their efforts in similar areas; the federal government is involved in workforce transitions through Employment Insurance, as is the municipal government through its activities with Ontario Works clients. This reality underscores the reason TalentWorks was originally created. Under the umbrella of

Figure 2 WAO Governance



WAO, these efforts can be more effectively coordinated, and much duplication of resources, time and effort can be eliminated, so that existing resources will have larger impacts, being better directed and more utilized.

The WAO will avoid additional bureaucracy. The make-up of the Board and the background variety of its officers (from governments, industries, education, etc.) will likely maintain a dynamic tension between them within the organization. While a uniformity of thought is not required of the Board members or group members a willingness to engage in dialogue and consensus building is. In addition, its stakeholders, not stockholders or legislation, decide the mandate of the WAO. The proposed funding mechanism, its implementation and its disbursements also circumvent the formation of a big bureaucratic machine. What is required is the commitment to invest resources with appropriate public accountability.

What Will Make It Work?

- Funding and commitments to invest resources with appropriate accountability: some form of shared funding commitment among the three levels of government and the private sector using direct and in-kind contributions will be necessary. For instance, the federal government spends approximately \$15 million on workforce development, the Province about \$10 million (excluding funding for school boards and colleges and universities) and the City about \$4 million.²⁷ Corporations in Ottawa, at a conservative estimate, spend approximately 3 percent of payroll on training and development. Substituting employment (but not self-employment) income in Ottawa, which is approximately \$21 billion, for payroll income indicates about \$600 million of corporate spending on training and development in Ottawa each year. If 5 percent of that could be reallocated to the WAO, then together with contributions from federal, provincial and municipal authorities funding the WAO on the order of \$50 million is not unrealistic. Mechanisms to self-fund the WAO, such as a payroll type of tax for training and development, could be explored to ensure sustainability.

- The WAO needs its own “home” with no attachment to any government, industry, university or other existing institution.
- The commitment of stakeholders to share governance and their willingness to coordinate policy development and share information is essential.
- The WAO must be established on the firm commitment to the attraction, retention and development of an excellent workforce.
- A willingness to take a risk will launch the WAO but public perception of its legitimacy as a credible means of resolving workforce issues will sustain it in the long run.
- WAO stakeholders must continually see and receive value in order to sustain their commitments.

What Is Needed in the Near Term?

Recommendation 13e

That TalentWorks undertake a feasibility study to define the funding required for the WAO, recommend a shared or self-funding or alternative model, and negotiate potential commitments of the stakeholders to the WAO

Recommendation 13f

That TalentWorks undertake a project to define a corporate constitution for the Workforce Agency of Ottawa

The WAO and Ottawa's Workforce Environment

While each of the HR functions shown in Figure 3 is distinct, the functions are interrelated and they affect each other. Every local organization, industry sector or stake-

27. City of Ottawa People Services. This represents expenditures on training to aid unemployed workers gain employment.

holder is able to influence the WAO and have a role to play, in a regional HR department that works as a matrix type of organization – that is, one that is not hierarchically organized. Moreover, while each organization and sector may establish its own rationale and mechanism for dealing with any individual function, the different stakeholders taken together or in some form of partnership must establish a *quid pro quo* for their mutual benefit and the benefit of the community when dealing with these functions in an interrelated fashion.

As depicted in Figure 3, the regional HR environment is fluid and dynamic, with overlapping and organic processes. The activities of the WAO would be interlinked and each would be linked to the stakeholder groups that interact with it.

1. Environment

This is the Ottawa workforce environment, the context within which talent-related activities take place. Its characteristics include the indices that were compiled in the first report of *Ottawa Works*: the state of the economy, the growth or decline of industries, levels of education and skill development, the policies and regulations that encourage or hinder workforce development, demographics, levels of bilingualism, et cetera. This workforce environment also includes elements external to Ottawa, including federal and provincial policy making, the global economy, and other communities (competing for Ottawa's talent). The need for better environmental data was raised in phase II of *Ottawa Works*.

2. Stakeholders

The stakeholders are all those who are affected by decisions made at the WAO. Stakeholders are not all equal. Some are more influential, some less. Some have more resources or more authority or more knowledge, and some have less. Some have more invested in Ottawa's workforce, some less. Some will be affected more by a particular decision and some will be affected less. Care should be taken, with regard to each function and each issue, to include the appropriate stakeholders. Each stakeholder will likely have an affinity for a particular HR function, but they may also have a leadership role in the overall functioning of the WAO. Some of the main stakeholder groups include the three levels of government,

the business community, the training and educational institutions, the school boards, prominent individuals and advocacy groups, as well as industry and employee associations. Cooperation, strategic alliances, collaboration and partnerships should be explored in relation to each function or group of interrelated functions. This will ensure comprehensiveness, effectiveness and timeliness.

3. Goals and Objectives

The future visions and objectives for Ottawa citizens drive everything – including the type of place those citizens want Ottawa to become in coming years. *Ottawa 20/20* is the vehicle driving the overall vision and the umbrella under which the Talent Plan must fit, and similarly the broad goals and objectives of the WAO will have to reflect the outcomes of *Ottawa 20/20* consultation process.

4. Strategic Planning

Strategic planning broadly refers to the activities that describe how the goals and objectives are to be realized and in what time frame. In response to the *Ottawa 20/20* vision, the WAO will delineate how achieving certain workforce objectives will help realize the 20/20 vision. In lieu of a WAO, that is the role of this report and the Talent Plan.

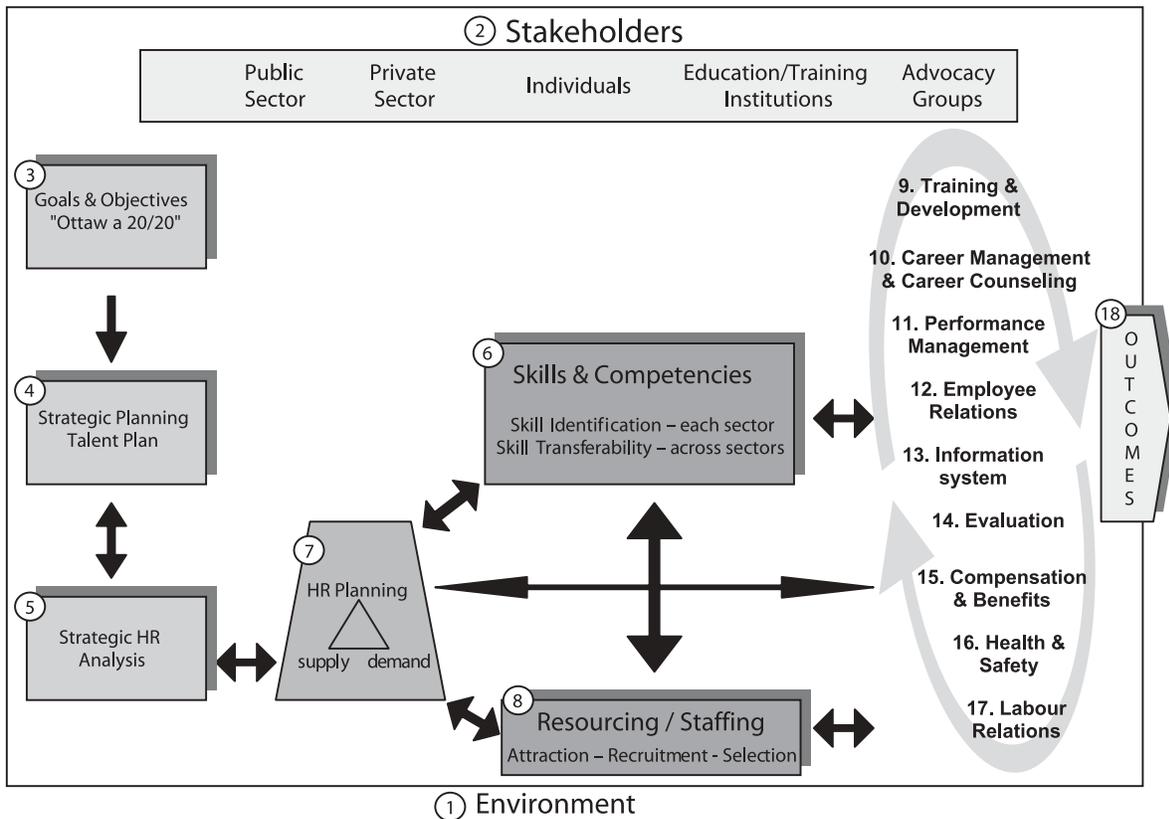
5. Strategic HR Analysis

The *Ottawa Works* project has begun the process of strategic HR analysis by helping to formulate the Talent Plan. This process of analysis should be ongoing and adaptive. At the very least, there should be some formalized revisiting by key stakeholders on a regular basis (e.g., every six months). At this juncture, Ottawa should be conducting its strategic HR analysis almost continuously, to take into account the impact of the “triple crunch,” to give citizens the opportunity to contribute to the creation of a local development strategy, and to ensure that the lessons of the technology boom are not lost.

6. Skills and Competencies Mapping

A job analysis (with its resulting information on job context, content requirements and skill requirements) is the foundation of almost all HR functions in any organ-

Figure 3 The Regional HR Milieu



ization; also critical is the identification of skill and knowledge requirements for major jobs in each sector. This information, which is almost always present within an organization, needs to be shared, compiled, synthesized and made accessible to recruiters, trainers, educators, career counsellors and schools. A mechanism such as the Workforce Partnerships should also be in place to identify how skills may be transferred across sectors. Skills information within sectors and the information on transferable skills should be fed into other HR functions (such as HR planning, resourcing, training, career management, etc.) and should receive information from these HR functions. The cooperation of industry is essential to this process.

7. HR Planning

Specific information on available skills, trends in workforce supply and demand, education and training capacities, recruitment potential, and retention levels allow for

HR planning by individual organizations, by industry sectors, and by the community at large. The supply and demand picture gives information on potential sunrise and sunset occupations, and has implications for other functions in the WAO.

8. Resourcing and Staffing

As each organization, each industry sector, or the community as a whole reconciles the demand for talent with the supply of talent, subsequent actions will affect efforts to resource and staff organizations. Depending on the availability of essential workers, this influences hiring requirements, training and retraining practices, recruitment strategies and selection. In this context, questions arise about local workers – are they available, can they be trained, are they available in other sectors, can they be retrained? Does the organization have to bring people in from outside Ottawa? If so, can they work here? As well, multi-partner attraction and recruitment strategies that

may be used by individuals, organizations, sectors and the community can be explored in order to reduce costs. Cross-sector endeavours can also be considered, especially if information about skill transferability is well known.

9. Training and Development

Training and development activities derive from and feed into other major HR functions (e.g., HR planning, skills mapping, career management, etc.). Individuals, organizations, sectors and the community all need to analyze what training is required, who can provide it, the cost of providing it, and the reliability of these provisions. Each stakeholder or stakeholders' alliance can determine what to train for, and how.

The findings of phase II of *Ottawa Works* suggest a need for

- Soft skills training.
- Integration of technical, soft and business skills.
- Cross-training.
- Exchanges between industry and academia.
- Language training.
- Increased training for the unemployed, in particular.

There is also a clear need to have information on educational and training programs, such as:

- Training providers.
- Program listings and enrolments.
- Availability and cost of training programs.
- Assessment of training quality and effectiveness.
- Accessibility of training programs, their eligibility requirements, and their level of recognition.

In other words, there is a need for some form of training registry. All of this suggests major cooperation and collaboration among stakeholders in order to increase profitability among firms, increase job opportunities for job seekers, and ensure prosperity and equitableness across the community.

10. Career Management

Career management involves managing the careers of workers and their mobility within organizations and within and across sectors. It can be effective only with sufficient information about skill requirements and skill transferability. It also involves succession planning at all organizational levels, as organizations or sectors engage in HR planning or recruiting. For job seekers, career management means providing the necessary support and guidance so that the pursuit of a career remains unimpeded or capable of adapting.

Beyond providing access to occupational and skill information, career counselling is a critical component in enabling all workers to make effective career management choices (occupation, employer, career mobility, training, compensation, etc.). Feedback from phase II of *Ottawa Works* clearly indicates the need for a reinvestment in career counselling for secondary students, post-secondary students, working adults, and job seekers, with particular attention being paid to impacts on transferability across sectors.

11. Performance Management

Performance management has to do with, among other things, properly aligning skills and requirements within an organization or sector. The WAO and its stakeholders should look at this from multiple levels to ensure that Ottawa is benefiting optimally from its talent resources. Among other initiatives, a concerted effort could be made to seriously examine the underutilization of foreign-trained professionals, who are likely to be underemployed and not performing at their maximum capacity in their areas of expertise. Ultimately, good performance management requires having in place mechanisms to assess progress.

12. Employee Relations

All those in the local labour force are “employees” or potential employees within Ottawa, whether they are employed, self-employed or unemployed. Every stakeholder has an interest in the stability of employment for those who are working, regardless of who their employer is. That kind of “job security” is found in the lifelong learning that ensures some form of work in the community.

Providing the necessary support to ease job transitions (including skill upgrading; child care; access for people with disabilities, immigrants and newcomers to Ottawa, aboriginals, and women in distress) involves different functions within the WAO and a variety of stakeholders.

13. Information System

Individual organizations commonly have human resource information systems (HRIS) to support their HR functions. The same should be true of the WAO. Many Ottawa stakeholders collect HR information through their own HRIS but as yet there is no equivalent at a regional level. The WAO must take the initiative to coordinate these monitoring and intelligence-gathering services and provide a "one-stop shop" for timely, clear, user-friendly, comprehensive, accessible information for its various stakeholders to empower them to plan, analyze and take action on regional HR challenges and opportunities.

14. Evaluation and 18. Outcomes

Any good HR department will incorporate an evaluation system to gauge how efficient and effective the organization is in meeting its HR targets. Not only outputs should be assessed but outcomes and impacts that tell us whether the work of the WAO has made the community a better place to find work and to grow as individuals and organizations. WAO functions, activities and programs should be evaluated to see whether they have achieved the intended outcomes for stakeholders individually and as a whole community. To ensure proper evaluations, continuous information gathering is once again a requirement. Continuous evaluation facilitates continuous improvement of the system.

15. Compensation and Benefits, 16. Health and Safety, and 17. Labour Relations

These are other HR functions that are also important and, if we take our cue from HR management theory, should be carried out properly and effectively in order to attract, retain and support a happy, well-performing workforce. However, they are not discussed at length in this report because they were not identified in our consultations in the second phase of our study or reported on in *Profiling Ottawa's Workforce*.

Decision Model Summary

The above implementation recommendations can be further summarized as a choice between two options:

Option 1 TalentWorks moves directly to a regional HR authority model.

Option 2 TalentWorks adopts an incremental change model to become TalentWorks Plus.

Each of these options will change the status quo.

Option 1 Directly Create a Regional HR Agency

Description	<ul style="list-style-type: none"> Creates new regional structure Perceived as a formalized institution from pooled mandates Entails a reallocation of existing resources Emphasizes action Provides for long-term planning
Benefits	<ul style="list-style-type: none"> Recognizes centrality of city-region Generates collaborative community capacity-building Increases ability to integrate many initiatives at once Institutionalizes cross-sector skill development, worker mobility and policy development Negotiates large, stable commitments Increases transparency and accountability Increases quality of service Increases scale advantages and cost savings potential Increases proactiveness Increases responsiveness to stakeholders
Risks	<ul style="list-style-type: none"> Commitments may be frustrating due to difficulty of implementing Increases management complexity Delays addressing of priority issues

Option 2
Incremental “Bricolage” Model: TalentWorks Plus

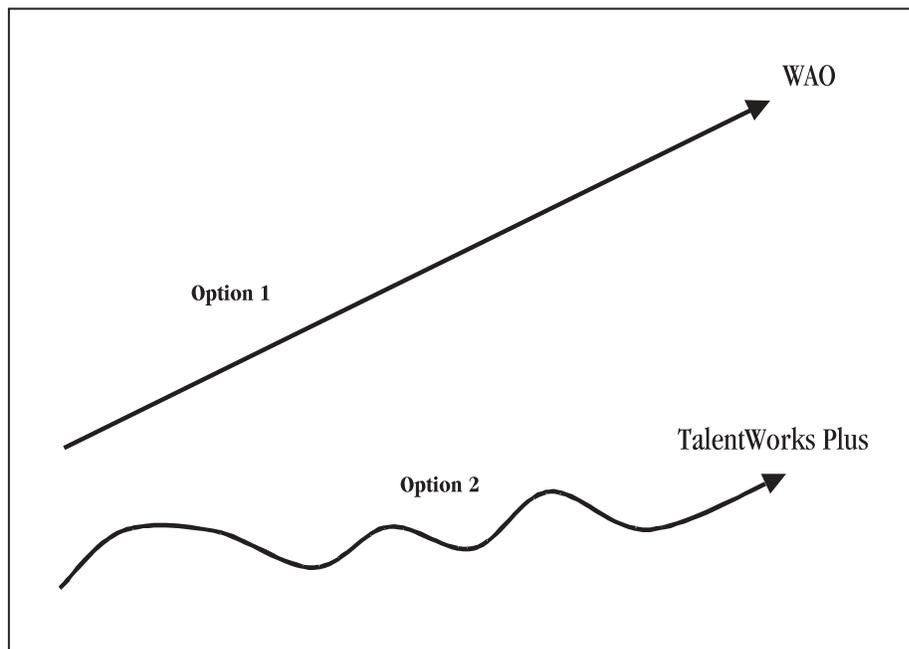
Description Uses existing structures
 Leverages existing resources
 Creates informal networks
 Emphasizes better information
 Generates short-term results, issue by issue

Benefits Creates functional fluidity and flexibility
 Creates small, manageable project teams
 Requires only limited commitments
 Requires only targeted community engagement
 Addresses issues in the near term
 Increases responsiveness to stakeholders

Risks Requires a constant and costly search for resources
 Reduces the likelihood of stable commitments
 Reduces transparency and accountability of partners
 Generates a “one-off” mentality
 Reduces proactiveness
 Limits scale advantage and potential cost savings
 Limits comprehensiveness

The Centre on Governance supports Option 1 because its ongoing benefits are offset only by the risks associated with setting it up, whereas the benefits of Option 2 are offset by the risks associated with ongoing outcomes. Discounting the difficulty of setting up the WAO, Option 1 is the better choice because it does not have the shortcomings that Option 2, even when implemented, possesses. Our conclusion, therefore, is that creating a Workforce Agency of Ottawa is what is required to address Ottawa's workforce and training issues.

Figure 4 WAO Options



CONCLUSIONS

The literature on workforce development strategies tells us two things. First, most of the municipality-centred workforce programs have a “single issue” focus such as “improving literacy levels.” They do not tend to address the multi-layered systemic reality of a community workforce or the interconnectedness of its actors and resources. Single-issue strategies can be very successful in dealing with symptoms of misalignment, but they have only a brief and modest impact on the community workforce system in the long run because of the brief attention they receive. Therefore, a succession of single-issue resolutions or sector-specific activities is unlikely by itself to add significantly to the overall quality or flexibility of Ottawa's workforce.

Second, the literature indicates that different results should not be expected if one continues doing the same things. Only a new seed produces a new crop. As we have repeatedly stated, there is a need for a more comprehensive approach for dealing with the diverse, interrelated community workforce issues as they arise. This approach needs a structure with a mandate to monitor, plan and act on workforce concerns. The structure should be funded, managed and staffed in a manner that makes its action effective and timely. Our research indicates that the only city that employs this type of comprehensive strategy is Singapore, which also holds the status of a nation-state. Indeed, Singapore's dual status as both city and state

allows it the unique freedom to develop a comprehensive approach and then apply it to a narrowly defined locality, unlike most states, which attempt to apply a homogeneous strategy imperfectly to a variety of regional conditions. While Ottawa will never have the dual status Singapore has, it is still possible to create similar conditions by combining comprehensive mandate and resources with a narrowly defined regional focus. This is in essence the foundation of our strategy recommendation for a Workforce Agency in Ottawa.

An obvious shortcoming of this report is the scarcity of references to Gatineau. We have discussed the importance of dealing with workforce issues systemically, and for any casual observer of Ottawa's economy the natural economic system spans the Ottawa River. This fact was documented in the first *Ottawa Works* report, *Ottawa's Workforce Environment*, where it was noted in particular that 60,000 people, roughly equivalent to 10 percent of Ottawa's workforce, cross the bridges every day for work. Policy changes on either side of the river can augment or discourage this movement of workers and the movement of investment that often goes along with it. The two cities are inextricably linked, in fact if not in official status. Therefore, the question remains: what about the inclusion of Gatineau in Ottawa's workforce strategy? The short answer to this is that Gatineau should be included. However, the more considered answer is that, as complex as an Ottawa-based

strategy might appear to some – the creation of a Workforce Agency, for example – the inclusion of Gatineau in the equation increases the complexity by many orders of magnitude.

At the outset, the scope of the *Ottawa Works* project was confined to Ottawa. While some data on issues related to Gatineau were inevitably collected, it would be presumptuous of us to make proposals about Gatineau without undertaking additional direct research. Therefore, we recommend that stakeholders in Gatineau undertake a workforce assessment project similar to *Ottawa Works* and then work with Ottawa stakeholders to find common ground.

Defining Ottawa's natural economic region has not been limited to a two-way discussion about Ottawa and Gatineau; it has also included discussions involving Pembroke, Kingston, Cornwall, and all the communities in between, because of their ability to contribute productive capacity, knowledge and talent to the economic dynamic centred in Ottawa. There are some who believe that a discussion involving other Eastern Ontario communities is not necessary because workers will not drive two hours to work. We would remind those people to look at Toronto or San Jose, where two-hour commutes are commonplace. If we want to think proactively, then the time for this discussion is now, not when the workforce has become so distributed, and when commitments to a patchwork of competitive local workforce arrangements have become so established, that they seem to be written in stone.

With this report representing the culmination of significant community consultation, we feel that there is a momentum for change. The endorsement of the report's workforce strategy by the TalentWorks Steering Committee will add to that momentum. Sustaining this momentum over time is now the challenge of the Steering Committee, the City of Ottawa and the various other stakeholders in the community. Successfully addressing the many issues and concerns that have been raised over the course of the *Ottawa Works* project will require putting in place novel collective decision-making mechanisms, supported by the necessary community resources.

Motivation, too, is important to sustainability of any initiative, so the mechanisms established provide continuing community input towards the actions of the community.

To treat many of the issues that have been highlighted as static and of limited scope would suggest a belief that once they are resolved all workforce problems will be under control. This approach ignores the necessity for adaptability and renders the community unable to respond to emergent issues over time. Already, since our research was conducted, other issues have come to community attention. For example, we now observe an urgency for the recruitment strategies for health workers, such as radiologists; the need to deal with the growing nursing shortages; and the out-migration of physicians. The workforce issues treated in this report must be seen as the beginning of the resolution process, not the end of it.

Creating a sustainable setting in which workforce issues can be identified, prioritized and resolved raises the following questions. Where will the required WAO entity be housed? How will it be resourced in terms of money and people? Should it have a limited life span? In short, what form should it take?

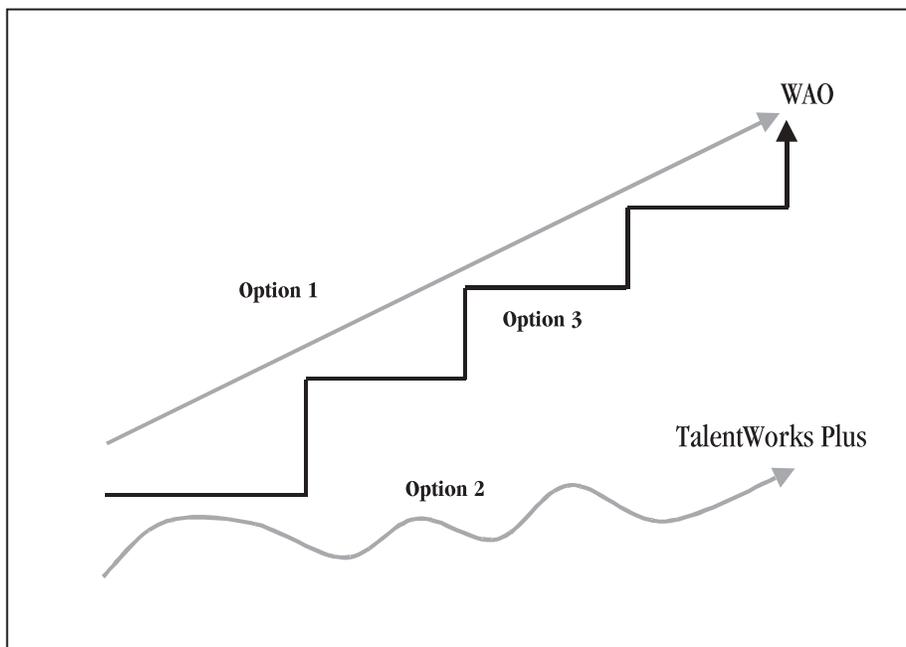
We have suggested a Workforce Agency for Ottawa as a mechanism to help deal with regional workforce issues on an ongoing basis. If Ottawa stakeholders can agree that the idea of a supra-regional agency like the WAO has merit, the next question is, how can it be achieved? How do we make the transition to a WAO and who should be involved in this transition? Our recommendation is that the TalentWorks Steering Committee should take the lead by determining feasibility and taking steps to establish the agency.

It is not necessary to take an all-at-once approach and create the WAO before any more issues get addressed. This would be self-defeating. Rather, the Steering Committee of TalentWorks should as a first step commit to the goal of the supra-regional organization and to make smaller decisions on specific initiatives that consciously advance the community in that direction. Additionally, it could form, from within its own ranks and/or expanded ranks, the various Working Groups. These groups could begin working on activities assigned to them in this report as a second step. Ongoing evaluation of the Working Groups' activities by the Steering Committee would help shape the WAO and establish operational protocols to facilitate the resolution of workforce issues. With this transitional approach, resourcing issues related to the establishment

and maintenance of the WAO could be worked out over time (perhaps 12 to 18 months) without halting effective operations.

We cannot overemphasize the importance of communications and of establishing a web site to facilitate the gathering and exchange of information. Knowledge empowers organizations to work effectively. At present, the City of Ottawa web site and the web sites of stakeholder agencies make available only limited workforce information and remain largely disconnected from each other. An effective web site would serve job seekers, employers, service providers and business investors alike. As well, it would assist in making effective linkages with the media.

We conclude that in the turbulent world of labour markets the autonomous roles of governments, industry, educational organizations and civic institutions are no longer acceptable. In Ottawa the existing relationships between the sectors have evolved into a complex set of social armistices where organizations of one stripe tend to agree not to tread on the turf of another. The uncertain and evolving realities of Ottawa's workforce demand something other than this status quo. They demand comprehensiveness. They demand timeliness. They demand 360-degree accountability to all stakeholders, not just a select group.



Finally, we would like to underscore once again the volatility of Ottawa's labour markets. Since the basic research for *Ottawa Works* was conducted in the spring and early summer of 2002, several reports on area workforce shortages and challenges have been published. At the outset we recognized that one of the risks in producing this report was that its conclusions would be outdated even as it was published, and consequently we have tried to focus on concerns and capacities that can have ongoing relevance to community leaders and citizens at large.

This suggests a need for social experimentation, learning and the ability to act, but foremost is the willingness to act: in the words of Heinz von Foerster, "si tu veux voir, apprends à agir" (if you want to know, take action).²⁸ Social learning can only occur in the context of social action, where it is used as a means of reframing the image of current reality into a more desirable form. Thus has this report presented not only recommendations actionable by individual organizations or sectors but also recommendations that demand collective action – action that will inevitably result in a reframing of stakeholders' roles and responsibilities. If we are truly committed to making Ottawa's workforce better, we must be prepared for this kind of action.

28. H. von Foerster, "La construction de la réalité," in P. Watzlawick (editor), *L'invention de la réalité* (Paris: Seuil, 1988), p. 69.

Appendix 1

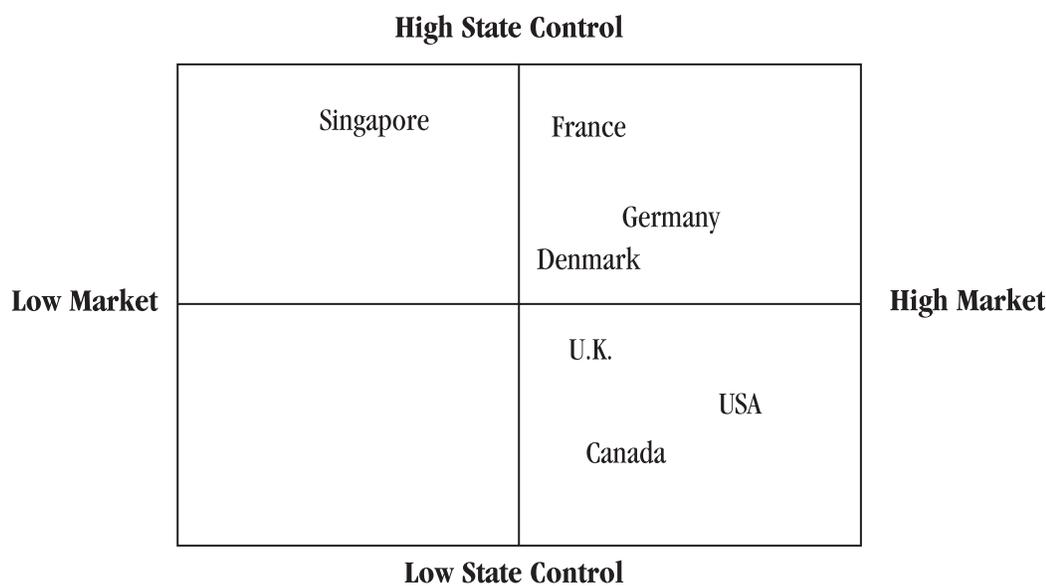
National Workforce Approaches

The purpose of this appendix is to juxtapose “national perspectives” on workforce development. Focus is placed on Canada, the United States and the United Kingdom. Similarities and differences between and amongst the various schemes are obvious. Although emphasis is placed on national perspectives, certain concepts may be used to inform the development and implementation of a municipal workforce development model.

The most comprehensive document on workforce development found by the research team in the Centre on Governance, University of Ottawa, is one prepared by the Performance and Innovation Unit (PIU) in the Cabinet Office of the United Kingdom (U.K.).²⁹ Elements of this document are extracted to present information on “best practices” found in various countries, with emphasis on the U.K. and the USA. The authors of the PIU report state, “It is simplistic but useful to think of the USA and

Singapore towards the extremes of a continuum ranging from market driven to state controlled [workforce development]. The other countries covered sit in between, with the U.K. closest to the U.S. model.” Canada was not covered by the PIU study but, owing to numerous governance similarities between Canada, the U.K. and the USA, it is safe to assume that Canada shares the same end of the continuum. A national perspective on Canada is drawn from a document recently released by Human Resources Development Canada (HRDC).

This review is focused on Canada, the USA and the U.K. because of their similarities. Information on Singapore, France, Germany and Denmark is included to provide a broader context in which to look at Canada’s approach and, more particularly, Ottawa’s Workforce Development Strategy.



29. www.cabinet-office.gov.uk/innovation/2001/workforce/report/1.html

Canada's Approach

Like the U.S. and the U.K., Canada has a high skills elite and polarized skills distribution. It is also characterized by conditions similar to the list in the U.K. summary.

The document produced by HRDC entitled "Knowledge Matters: Skills and Learning for Canadians" outlines Canada's vision for workforce development. Canada recognizes that its greatest competitive resource is people – "their skills, talents, knowledge and creativity are key to future success."³⁰ Therefore, it is essential that it place emphasis on developing a qualified, highly skilled workforce. The paper recognizes that a workforce development strategy is a way to achieve economic prosperity while including a commitment to social values. Developing a skilled national labour force will require many partnerships involving all levels of government, the private sector, education and training institutions . . . and the community.

Canada, like the U.S., relies on the market to drive much of its workforce development. The education system which is province-centred prepares students for a wide variety of careers, and they often make career decisions based on labour shortages.

Canada, like all nations, is feeling the challenges that come with globalization and the shift towards a knowledge economy. Certain skills have become out of date and new, more knowledge-intensive skills have emerged. This has led to shortages in a variety of sectors. In fact, "by 2004 70% of all new jobs created in Canada will require some form of post-secondary education and only 6% of new jobs will be held by those who have not finished high school."³¹

Canada's education and training system has strong supports and offers a high quality of education at all levels. This alone is not enough to ensure that Canada remains competitive. Currently:

- The system of supports and services for early childhood development does not reach as many young families as it should.³²

- "1 in 8 Canadians does not complete high school and 1 in 4 graduates lacks the literacy required for the knowledge-based economy."³³
- Canada must focus on the idea of continuous learning, as the knowledge-based economy requires that skills be continuously renewed and upgraded.³⁴
- There are currently not enough opportunities for Canadians to "learn while they earn."³⁵

Another challenge facing Canada is that of the looming "demographic crunch." This includes not only upcoming retirements, but also sub-par labour force participation rates. Given Canada's demographics, "By the year 2011, immigration will account for all net labour force growth in Canada."³⁶ Moreover, "there is a sharp divide in labour force participation rates for low-skilled and high-skilled Canadians (56% vs. 79%)."³⁷ Without continued attention to our education system this participation gap / income gap is sure to widen.

Lessons Learned from the Canadian Approach

- It is essential that employability skills be embedded in education/training and workforce transition in order to ensure maximum transferability of labour.
- A holistic approach to an individual's career development is a key to success.
- Continued support for participants in workforce transition programs is critical to ensuring their success.
- One-stop web sites and shops are an effective, efficient and barrier-reducing way to deliver services.
- Partnerships between and amongst training providers (public and private), municipalities and endorsing/funding agencies (e.g., government ministries) provide cost-effective program development and quality control through guidelines.
- Workforce development strategies should make effective use of existing programs from within municipalities and from other jurisdictions.
- Skills needs should be identified by industry sectors and government agencies to guide appropriate responses from training agencies, both public and private.

30. HRDC, "Knowledge Matters: Skills and Learning for Canadians" (February 12, 2002).

31. Ibid.

32. Ibid.

33. Ibid.

34. Ibid.

35. Ibid.

36. Ibid.

37. Ibid.

USA'S Approach

The U.S. approach is market driven. It is the market that adjusts the demand for certain skill sets and sends signals to the education/training sector to make adjustments. Families respond to demand changes by encouraging their children to follow appropriate training programs. This kind of market demand pressures the education/training sector to respond in appropriate ways. Those persons already in the labour market respond to change by investing in their own re-skilling, and employers may provide skill training for specific tasks.

“... the government restricts its interventions to instances of market failure such as the provision of training for the unemployed and disadvantaged minority groups through activation policies. These have in general been successful in facilitating the re-entry of the unemployed back into employment. ... In these circumstances, publicly funded training becomes associated with unemployment. Unions are weak at the political level and their influence in the workplace is confined to a limited number of industries.”³⁸

The federal government has been active in helping to increase the responsiveness of the tertiary sector, especially the community colleges, to meet the intermediate skill needs of local employers. Delays in responses to skill training demands have been avoided through partnerships between employers and training providers, by having them collaborate in designing the curriculum. This approach responds to the short-term needs of the employers and not the longer-term needs of the economy. Long-term needs tend to be ignored.

“Challenges of globalisation have been met by the government funding the community colleges to enhance the intermediate skills of the labour force and to help deliver the new skills required of the labour force. This has produced a number of very innovative schemes at the local level. The government has also sought to improve the operation of the market at the lower levels, first through the use of Private Industry Councils to deliver government funded programmes for the unemployed and disadvantaged and later through its latest attempt to integrate provision at the local level through the 1998 Workforce Investment Act.”³⁹

The two main areas where we can look to the U.S. for good practices are (1) the community colleges and business partnerships and (2) the development of information-sharing systems at the local level to facilitate the one-stop-shop idea.

Lessons Learned from the U.S. Approach

- Innovative practices in the community colleges work well at the local level when they are flexible and provide training geared to the requirements of employers and local labour markets.
- The private sector has little patience for the amount of process it takes to move the bureaucracy.
- The private sector has the influence to change the system; however, due to their lack of interest in the process, opportunities for them to speak out for change need to be designed separately from the initial board development processes. “Whether the new governance structure actually results in positive economic change for both businesses and residents depends on the level of private-sector involvement and the ability of these groups to identify and articulate their needs.”
- It is important to undergo a significant amount of process before the engagement of the private sector. Private sector time needs to be utilized strategically. Business outreach must be more creative and consistent.
- “Have your act together” before you invite the broader business community to the table.
- It is very important to define the problem with clarity. Define the problem in simple terms: “Our call-to-action is ‘to close the workforce gap.’”
- Select strategies that have measurable outcomes so that progress towards solving the problem can be illustrated. Establish short-term goals to build momentum and help people see that together we can make a difference.
- Utilize a baseline index of data to measure progress and focus on the goals; starting with data or evaluation measures to quantify and validate the problem definition will rally the key leadership and provide a call-to-action for stakeholders.

38. www.cabinet-office.gov.uk/innovation/2001/workforce/report/1.html

39. Ibid

- Put hard numbers for individuals and organizations to consider.
- For many people the term “Workforce Development” is too nebulous; it is difficult to get organizations to focus unless the “need” is quantified.
- It is vital to quantify the workforce development issues in a community and use this information to galvanize organizations, public and private, into action.
- Involve the appropriate stakeholders, including business and not just the service providers, so that the complexity of the problem can be addressed with multi-layered approaches regardless of geopolitical boundaries. (Be prepared for turf battles, frustrations, setbacks and doubts.)
- Initiatives created to address real regional problems will draw volunteer participation.
- Initiatives need their own mission statements and strategic plans, in addition to the organization's overall strategic plan.
- Workforce problems can be overwhelming, so we must break down the problems into manageable pieces (e.g., reform of public education).
- Businesses have considerable resources to contribute to improving education, yet most are not doing so strategically. Help businesses to develop a strategy to guide their involvement with education – focus on desired outcomes for improvement, share those outcomes with their local schools and their own employees, and design partnerships between the two to achieve measurable results.
- Search extensively for proven programs that may exist to address your problems rather than trying to start from scratch to develop your solutions. Recruiting volunteers to help implement a program that has already proven successful is easier. You can still tailor proven programs to meet your special needs.
- Embrace all stakeholders. Everyone has a role to play in the solution.
- When you are working with a diverse group, it takes more time to let people state their positions and build consensus.
- A few dedicated people are 10 times more effective than a lot of interested people. “You need long-distance runners to make this successful, not sprinters.” Involvement requires long-term commitment and faith.

U.K.'s Approach

Like the U.S., the U.K. has a high skills elite and polarized skills distribution. The school system creates a wide range of outcomes and post-secondary education/training is fragmented. The system is voluntary and is characterized by:

- Flexible labour markets.
- Informal partnerships and networks.
- Very few regulatory mechanisms.
- Limited licence to practice.
- No compulsory membership of chambers.
- Limited social partnership agreements on skills.
- No statutory requirements on employers to train.
- Few compulsory levies.
- Short-term finance⁴⁰.

Eight work streams were derived from key policy areas by Britain's Performance and Innovation Unit to focus the study of skills needs and programs:

1. Behaviour and motivation.
2. Qualifications and quality.
3. Basic skills and access.
4. The role and concerns of business.
5. Funding and incentives.
6. Information, advice and guidance.
7. Networks, groups and role models.
8. Flexibilities⁴¹.

40. Ibid

41. Ibid

In Part I of the *Ottawa Works* series attention was given to the City of Glasgow and its efforts to market itself on the strengths of its workforce and quality of life.⁴² The absence of a national, legislated scheme for workforce development allows cities and regions in the U.K. to generate their own schemes through both formal and informal partnerships. That being said, it is important to point out that although responsibility for skills development is devolved to Scotland, Wales and, to a certain extent, Northern Ireland, the central government does not absent itself from the area of skills development. The Department for Education and Skills and the Learning Skills Council provide guidelines and funding for various initiatives, which may or may not be adapted or adopted by the devolved regions.

Since skills development in the U.K. is devolved to the various municipalities and regions it is impossible to identify all the best examples in the areas of policy, practice and products. Most municipalities have well-developed web sites that reflect their priorities. The one thing they have in common is their emphasis on “doing business” in their respective communities, so information on quality of life, education/training and the cost advantages of locating there is present. Although skill development is polarized in some sectors (i.e., health), the competitiveness among communities and regions breeds diversity in strategies.

In the absence of a national scheme for workforce development, the U.K. is a breeding ground for a wide range of practices and products regarding workforce development. It is not unusual to find within the context of one municipality the production of policies and products that serve the development of that community while at the same time the community adopts programs and products from other jurisdictions, including the private sector.

Lessons Learned from the U.K. Approach

- This system suits knowledge-intensive industries, where high-level skills are essential.
- The current system has done little to drive up company performance and demand for skills despite these having been identified as problems for a considerable period. The system also tends to perpetuate skill divides, which are detrimental to social cohesion. (Both the U.K. and U.S. have significant “tails” of low-skilled adults).
- The skill-polarized model is less competitive in medium technology industries, such as high value-added manufacturing, which are based on intermediate skills.
- Polarization of skills development in industry sectors is cost-effective for those sectors.
- Polarization of skills development in industry sectors does not necessarily promote transfer between and amongst sectors.
- Polarization of skills development does not effectively address the needs of unemployed and low-skill workers.
- One-stop municipal web sites aimed at business investors, employers, employees, unemployed, parents and graduating students prove to be effective.
- One-stop municipal web sites should provide information about: investment opportunities, quality of life variables, training programs and locations, and financial assistance for training.
- Partnerships between and amongst training providers (public and private), municipalities and endorsing/funding agencies (e.g., government ministries) provide cost-effective program development and quality control through guidelines.
- Workforce development strategies should make effective use of existing programs from within municipalities and from other jurisdictions.
- Skill needs should be identified by industry sectors and government agencies to guide appropriate responses from training agencies, both public and private.
- Although competition amongst skills training providers may lead to continuous improvement it may also be seen as costly, unnecessary duplication.
- The eight work streams used by the PIU (see above) to guide examination of workforce development practices provide valuable criteria for a workforce development strategy.

42. www.Glasgow.gov.uk

Singapore's Approach

In Singapore, the operation of the labour market is influenced by government through its vision of where the country is heading, the type of industries it wants to attract and develop, and uses this vision, together with knowledge derived from employers about their immediate skill demands, to identify national skill needs. This speeds up the process of adjustment. The information on the country's skill needs is then fed into the Council for Professional and Technical Education (CPTe). "The CPTe also receives information from employers on their skill demands and from education and training institutions on the current supply of skills. Academics provide projections on future demand. All this is then used by them to inform decision making about the supply of skills, both for those entering the labour market and those already in the labour market. Any shortfall in supply that cannot be met from internal adjustments is filled by immigration. The whole process is overseen by the Ministry for Trade and Industry."⁴³

LeverS employed by the Singapore government to influence the process of skill formation:

- Through its vision it attempts to shape the cultural attitude towards training and workforce development. Training is all about human development; it is not associated with unemployment.
- Through its control over the education system, both academic and technical, it can influence the supply of skills flowing into the labour market.
- Through the Productivity and Standards Board (PSB) it influences the training of those workers already in the labour market.

All levers are used to ensure that the supply of skills not only matches current demand but also prepares for future demand. This has enabled them to avoid serious skill shortages and facilitated rapid economic growth over a period of thirty years. The market still operates but within a framework in which the government influences both the demand for skills and the supply of skills.⁴⁴

Through the use of these levers the government has been able to move the economy into higher value-added forms of production. It has encouraged firms to make better use of the workplace as a source of learning and introduced schemes designed to encourage employers to restructure the workforce and to develop the skills required of workers for the new industries. "It also has a series of programmes directed at the older worker to improve basic skills and enhance lifelong learning."⁴⁵

The levers available have enabled the government to generate training policy in a holistic manner. Initiatives complement one another, adding value to the total workforce development package.

France's Approach

"This approach also uses the market to deliver skills, but in the context of a highly centralized national education system and strong employer based internal labour markets. Workforce development is conditioned by a strong link between educational achievement, qualifications and level of entry to the labour market. Policy is also strongly influenced at the national level by the employers and the unions (in spite of the low level of unionization – 9%), with the state playing a subsidiary role. There is a strong cultural emphasis on the importance of qualifications.

There are two main policy approaches.

1. The first is to use the centralized education system to improve the overall level of general and vocational skills of those entering the labour market.
2. The second is to increase employer based training, achieved largely through the training tax or levy (currently 1.5% of payroll)."⁴⁶

France has been successful in producing a significant increase in the flow of young people with intermediate level skills into the labour force through the training tax system, which has succeeded in increasing investment in training. That being said, demand for new skills is not being met by either the education system or the training system. The most vulnerable groups, the low-skilled and unemployed, have little access to training and therefore are at risk.

43. Ibid

44. Ibid

45. Ibid

46. Ibid

There is agreement between the employers, unions and the state that the current system is no longer tenable. Currently, efforts are under way to agree on a system that will meet the unions' desire to see improved opportunities for individuals and the employers' need for a system that enhances work-based skills. "What is distinctive is that the government leaves it to the employers and unions to come up with a solution – which takes time."⁴⁷

Germany's Approach

"This approach uses the market to deliver skills but within the context of a highly regulated occupational labour market based on the apprenticeship system. The apprenticeship system has been established through the joint regulation of the state, employers and unions and is underpinned by the legal system. This provides a period of a three/four year apprenticeship for two thirds of young people."⁴⁸

Although the system produces high status for vocational qualifications, new occupations and the demand for new skills associated with emergent industries has presented a significant challenge to the apprenticeship system and its ability to respond in a timely manner.

"An apprenticeship remains the first choice for most of the school leavers. The combination of on-the-job practical training under a qualified Meister and off-the-job theoretical training in college has provided Germany with the highest level of intermediate skills in the advanced countries. Over half the working population in Germany (50.6% in 1997) had a level 3 qualification as their highest qualification compared with 18% in the U.K. and 9.2% in Singapore."⁴⁹

Denmark's Approach

"Denmark is characterized by high levels of training and workplace learning." The Danish approach to training is characterized by the use of the market within a framework structured by a fairly strong apprenticeship system organised by the employers and unions. One of the main reasons for the strong commitment of employers and trade unions to training is the unique characteristics of Danish enter-

prises. In Denmark, an enterprise consists of a number of mini-enterprises and within each of these mini-enterprises 'a skilled worker, with the support of semi-skilled workers, integrates, plans, programmes, sets operations, engages in maintenance and introduces innovations into the workplace.' These skilled workers have considerable power and autonomy over their workplace, which in contrast to many other countries, reduces the need for administrators and technicians. It is argued that this is one of the reasons why Danish enterprises are so competitive. Unlike Germany, the Danes also have a tradition of continuing adult and vocational training on which the government is building a national system of lifelong learning. Underpinning the Danish system is a high degree of trust between unions and employers."⁵⁰

The Danish apprenticeship system is a combination of school and workplace training. The system is learner-centred and interdisciplinary. It makes the best use of workplace learning. Competence and not qualifications, learning and not teaching are characteristics of the system.

Workplace development plans, negotiated between the union and the employer for each employee, form another element of the system. (These cover 80% of large establishments and 50% of small establishments.)⁵¹ Workers have access to a range of Short Courses from colleges, and Labour Market Training Centres provide workers with skill development in areas like IT. "They also have access to longer courses which can be up to two years in length. Employees are also entitled to a one-year sabbatical provided that they are replaced by an unemployed person."⁵²

Although the involvement of the social partners at the planning level makes it responsive to changes in work organizations, and although the workers are quick to respond to the training needs required for new technology and working practices, the influence of skilled workers in the system makes it difficult to further improve the system by opening up opportunities for the unskilled and semi-skilled. "Any attempt to certify work-based competencies threatens the dominance of the skilled workers by providing access to their ranks for the unskilled and semi-skilled."⁵³

47. Ibid

48. Ibid

49. Ibid

50. Ibid

51. Ibid

52. Ibid

53. Ibid

Appendix 2

Current and Best Practices

Recommendation 1

*The Humboldt County California Workforce Development Partnership*⁵⁴ is a workforce development system that is both coordinated and responsive to the needs to its customers, businesses, and those seeking work. The structured system plays a vital role in the economic development of the region by developing a workforce that enhances the global competitiveness of local industry clusters.

The strategy focuses on retention and growth of existing businesses and the expansion of several small business clusters. (In the past, millions of dollars have been spent in education, training, and economic development that have not resulted in increased success of local businesses.) The aim here is to create a greater level of collaboration between economic development efforts and systems that can enhance the global competitiveness of those industries.

The Partnership is a collaboration of diverse organizations and agencies, and works to develop a shared vision for the delivery of workforce preparation, education, and training services that links with economic development efforts for the region.

The envisioned workforce development system consists of three networks:

- North Coast School-to-Career Consortium (education/training).
- Industry Development Network (Economic development, business/industry and labour).
- One-Stop Delivery System (labour support services).

The three networks are likened to a three-legged stool. For the stool to be stable, all legs have to have structural

integrity and contribute support. If one or more legs are weak, the stool is worthless. The networks are the “legs” of the workforce development system.

*The Workforce Partnership Initiative*⁵⁵ of the Joint Venture: Silicon Valley Network involves key stakeholders: high-tech firms, industry associations, educators from the K-12 and community college systems, representatives of employment and training organizations and other community-based organizations, and government. Its aims are:

- To address the Valley's need to develop the region's workforce (there is a critical skilled workforce gap, with enormous cost for employers and residents, threatening the sustainability of the region) (employment has been growing much faster than the local labor force).
- To assure that the supply of skilled workers matches the available opportunities.
- To analyze underlying causes and identification of potential strategies for a collaborative, integrated approach.
- To ensure attraction to and retention of businesses in the region via access to a diverse and skilled talent pool.

During the early stages of the Workforce Partnership Initiative, the loudest collective voice on the workforce shortage came from the semiconductor manufacturing industry, which had developed a nationwide model for workforce development.

An industry cluster advisory team was formed to guide and direct the development of the strategies related to this need based on this national model. Data that could quantify the incremental cost of the workforce gap to the high-tech industry in the Valley were collected. Employers

54. www.calregions.org/publications.html

55. www.calregions.org/publications.html

sought to understand the total employment lifecycle cost perspective in order to recognize the need for cultural change to “grow the pie” of Silicon Valley labour.

The research highlighted by the Workforce Partnership Initiative:

- The incremental cost of the workforce gap to the high-tech industry in the Valley is estimated to be \$3-4 billion annually, and significantly higher when considering the impact on community and quality of life. As employers, educators, trainers, government and other partners understand this challenge, they can collaboratively and holistically allocate the appropriate level of resources to address this workforce shortage.
- Student familiarity with high-tech careers does not necessarily lead to their pursuit of majors related to high tech in college (university).

A call for action went out for community groups in regionalizing efforts related to career awareness, career planning, and business/education linkages to “excite” the youth about knowledge worker and manufacturing industry careers.

Rather than individual efforts (by local education institutions, community groups, industry associations and employers), an important step was to create a process that resulted in collaboration and participation among all stakeholders to address the workforce gap issue regionally, systemically, and with an eye on lasting improvement.

There are several British networks that have emerged for the study of skills, which are collectively known as the *Workforce Development Confederations*. The confederation for the National Health Service, as an example, is a highly developed yet polarized approach to workforce development in one sector of the economy. This and other confederations work alongside more broadly based initiatives within municipalities. For example, the City of Manchester provides a wide range of skills programs that are more generic while at the same time a Workforce Development Confederation for health-care professionals operates in the Greater Manchester area. The confederation works closely with health care providers, health care employers and trainers/educators for the health care sector.⁵⁶

*Careers Scotland Sector Profiles*⁵⁷ present how 31 industry sectors are performing – whether they are expanding or declining and the effect on demand for workers. At a local level, this translates into how companies are doing, whether they are hiring staff and how much they are paying for different jobs. Underlying all of this will be national and international economic trends like inflation or downturns and interest rates.

Three of the most frequently cited examples of partnerships during the interview process of *Ottawa Works* were the Master's Program in Aerospace Engineering (MPAE) in Montreal, the Canadian Microelectronics Corporation (CMC), and *Vitesse*, a program developed at the National Research Council. The MPAE presents a widely regarded model of business/post-secondary partnership. The program is co-sponsored by Bombardier, Spar Aerospace and other industry partners. Its key element is getting industry professionals into classrooms, teaching alongside regular academics. The combination of a traditional educational program with teaching and curriculum input from industry helps to close the time gap for students between having an academic background and having a fully marketable skill.

The business–education partnerships forged by the Kingston-based CMC presents another form of collaboration emphasizing shared resources among industry and academe. CMC provides university researchers and students with the best available tools for the design, manufacture and testing of microchips. CMC's integration of industrial technologies and government resources helps place Canadian university professors at the forefront of global research. As the key provider of tools and technology for researchers in microelectronics and related technologies at Canadian universities, CMC ultimately benefits Canadian companies across many sectors.

Begun in Ottawa, *Vitesse* was designed for fast-tracking the retraining of telecommunications engineers from other disciplines. *Vitesse (Re-Skilling) Canada Inc.* retrains and re-skills science and engineering graduates to take advantage of current and emerging opportunities in advanced technology and related fields. An independent not-for-profit organization, *Vitesse* was created in 1996 through a partnership between the National Research

56. www.doh.gov.uk/workdevcon/guidance

57. <http://www.careers-scotland.org.uk/careersscot/web/site/Work/AboutWork/sectorprofiles.asp>

Council, the University of Ottawa, Carleton University and knowledge-sector employers to address critical human resource shortages.

The success of the Vitesse model lies in its ability to bring career-oriented professionals, educators, and industry partners together and collaboratively shape individualized training solutions – providing new and relevant skills for the knowledge-based economy.

In Ottawa, a similar sharing of industry and academic resources is being done through the *National Capital Institute of Telecommunications*. NCIT's key theme has been its focus on shared pre-competitive telecommunications research. The Institute provides a leading-edge research and training environment for industry and government researchers and post-graduate students. NCIT has a virtual campus in the Ottawa region, created by linking our four laboratories with NCIT*net, a state-of-the-art optical IP network. NCIT's partners include Bell, Alcatel, Nortel and QNX; Carleton University, the University of Ottawa and Algonquin College; CRC and NRC; and OCRI.

OCRI's *Teacher and Educational Leadership Internship Program* has provided for several years an opportunity for interested teachers to work in the advanced technology sector. The program has received high praise from teacher participants, firms and area schools. The program could be expanded to other industry sectors but needs more fundamental recognition from the province as a valid professional development avenue that teachers may pursue.

Recommendation 2

One-Stop Delivery System (California)

Labour support services. Development of a “no wrong door” delivery system that services job seekers, those looking to upgrade their skills, and employers looking for employees.

The City of Cardiff, in Wales, has established a one-stop web site that allows end users to find details about 1,200 courses made available in the city for both job seekers and employees.⁵⁸ The home page allows one to link with the *Local Training & Enterprise* home page where one can

find: “Into Work Advice,” “Recruitment Service for Employers,” information on “Training,” information for “Returners to Work,” and “Workshops.” As well, a link to the “Business in the Community” (BITC) site puts the user in touch with a number of case studies of programs endorsed by the BITC. Business in the Community is a “business-led organization providing advice, networking and leadership opportunities, offering specific programs to meet the needs of business and the community.”⁵⁹

*Careers Scotland*⁶⁰ is a new Scottish organization that gives guidance to anyone in Scotland about work or learning. Its aim is to give people what they need in order to make the most of their working life. To increase their job prospects, the organization connects people with up-to-the-minute information and support to develop skills, whenever and wherever the people are.

Careers Scotland provides assistance in the following areas:

- Advice and guidance on individual career plans.
- Information about the labour market.
- Learning and training opportunities.
- Job vacancies.
- Links to other agencies.
- Navigational help to find a person's school or college career counsellor.

*Tillsonburg's Livingston Centre*⁶¹ provides a one-stop shop of services focusing on customer needs. This eliminates barriers that are encountered when one is forced to access all players (often different levels of government) in the system separately. Services are grouped in suites – for example, “the employment suite brings together, under one roof, Ontario Works, Job Connect, Veterans Affairs, students Services, etc.”. In this way they service a wide variety of clients (not only Employment Insurance recipients).⁶²

This also shows the benefits of partnerships and taking a holistic approach to workforce development. Individuals are able to use the system during all stages of their lives, which allows continued support and relationship building. Moreover, all solutions are tailored to the individual.

58. www.cardiff.gov.uk

59. www.bitc.org.uk/wales/

60. <http://www.careers-scotland.org.uk>

61. The Conference Board of Canada, *Labour Market Transitions Models That Work* (November 2001).

62. Ibid

This holistic approach has proven effective in Ontario urban centres as well, as demonstrated by *London's Skill Centre*,⁶³ which offers a one-stop shop of labour market transition services. It houses the following:

- Women Immigrants in London Counselling Training for Employment – services to all new immigrants (not just women).
- London Adult Learners' Children's Centre – care and education services for the children of job seekers.
- Youth Opportunities Unlimited – focuses on youth employment strategies.
- Accommodation, Training and Networking for Persons with Disabilities – employment services for disabled clients.
- Fanshawe College – job placement service.
- London Interfaith Counselling Centre – “personal counselling to address employment challenges and personal issues simultaneously”⁶⁴.

Recommendation 4

A critical review needs to be undertaken of the practices followed in other jurisdictions that have had to cope with “population bulges” coming through the system. The U.K., for example, responded to the increased demand for university places in the 1980s by conversion of some polytechnics to university status and through aggressive funding programs. Ontarians can look to their own track record of the late 1960s and early 1970s when a network of community colleges was established to respond to the growing demand for post-secondary training.

Year-round school operations and co-op programs such as that established at the University of Waterloo (and now followed by other universities) should be used more extensively.

The new Bachelor of Information Technology program established jointly by Algonquin College and Carleton University is an exemplary response to staffing needs and emergent technologies. Prior to this, schools of nursing within some Ontario Colleges of Applied Arts and Technology were able to forge links with universities in order to put nurses' training on a continuum.

Partnerships between and amongst universities have provided best practice models that allow students to link professional programs with their academic undergraduate studies. Examples of this are the Queen's–Trent Concurrent Teacher Education Program, the Waterloo–Queen's program to bring science and mathematics students into teaching, the Waterloo–Brock program and the Ph.D. program in education that is shared by a number of Ontario universities.

Recommendation 6

The *Skills Development Fund* (SDF) was established in Singapore in October 1979 with the institution of the Skills Development Levy (SDL) Act with the primary objective of encouraging employers to invest in skills upgrading for the workforce. The SDF does this by offering assistance as an incentive to companies to mount training programs for employees. The SDF is financed by collections from the Skills Development Levy imposed on employers of workers earning \$1,500 or less a month. The current levy rate is 1 percent of the monthly remuneration. Incentives are offered on the basis of a cost-sharing principle and the training must be relevant to the economic development of Singapore. The amount of incentives that a company can obtain is not tied to the levy contribution. Since 1979 the SDF has supported about 8 million training places amounting to a total value of \$1.6 billion.

In August 2000 Singapore created a \$5 billion Lifelong Learning Fund. This fund will provide significant resources to support training programs for workers. It will create more learning opportunities for individuals, particularly in courses that certify workers for enhanced employability. Among the schemes that the Lifelong Learning Fund supports are localized initiatives by community groups. In addition, Singapore is broadening the existing criteria for courses eligible for income tax relief to include courses that may not be directly related to an individual's existing business, profession and employment but serve to enhance his or her employability. The tax relief ceiling is being reviewed regularly to keep pace with the cost increases of courses.

63. Ibid

64. Ibid

Recommendation 7

The *Glasgow Adult Guidance Network* (GAGN) of Glasgow, Scotland, deals with the statutory provision of guidance services and career advice to adults in the Glasgow area. The provision of guidance services is strictly legislated under centralized policy developed and paid for by the Scottish parliament. In order to meet the needs of each local Scottish community, a patchwork of program services developed, delivered by a variety of agencies and private organizations that competed with one another. This was further complicated by funding from the European Union for socially oriented projects which required adherence to strictly defined terms of what services communities delivered, how they delivered them, or to whom they delivered them. The situation resembled somewhat the lack of policy congruence between provincial and federal levels in Canada.

Since 1996 Scottish Enterprise Glasgow, the region's economic development agency, has clearly come to understand that effective guidance and career advice had significant economic spin-offs. The cost of a non-effective guidance system for Scotland was estimated at over \$CDN8 billion (£3.3 billion), with Glasgow's proportional share estimated at \$100 million. It was estimated that when students or job seekers make choices regarding their future careers one-third choose the wrong opportunity. Therefore, from a purely economic development perspective, Scottish Enterprise Glasgow determined that career decision-making support was an essential component of Glasgow's economy.

The GAGN took about a year to develop because no quality standards existed among the guidance providers in the area nor did there exist standardized training for guidance counsellors. Communication between the guidance suppliers was poor and there was poor profiling and marketing of guidance services. The Glasgow Adult Guidance Network brought under a single umbrella the many private sector suppliers of guidance services so that a client could enter from any point and be properly directed to the supplier who services were most relevant to them. This meant that suppliers needed to become more cooperative and share information about their relative strengths and weaknesses. Initially most suppliers wanted

to leave the partnership activity to the agents of the network. The senior people from the different organizations drew up a code of practice amongst themselves and tried to impose it on their employees and individual guidance counsellors. They also created a computer system to manage client referrals based upon what seemed to be best for everyone.

A year later, after significant financial investment, it was clear that the computer tool failed in practice because it did not meet the needs of guidance counsellors in real life as they dealt with their clients. In the end the attempt to accommodate everyone's need accomplished no one's need. In practice the computer tool was too time-consuming for a counsellor who could simply pick up the phone and call someone they knew.

According to GAGN president John Gilchrist, "I decided to take a lesson from one of my father's gardening tips, specifically that primroses thrive on neglect. We try to over-specify and over-organize to create the best system. In attempting to do so we failed to create a system that worked in practice." The natural system for the guidance counsellors was relationship-based, not computer-based.

Today Glasgow's Adult Guidance Network organizes four network meetings per month for area guidance counsellors. They also provide staff training for 350 people each year. Together these forms help counsellors to get to know one another, to share best practices and build relationships that will subsequently help their clients. Further, when the GAGN lists counsellors on the Internet it always displays their photographs to trigger recognition by their colleagues. The "duty of care" to clients is underwritten by the reputation maintained and enriched by each and every individual guidance counsellor.

The adult guidance network is a member network, that is, the members own it. Essentially the GAGN is a virtual organization that is not formally constructed. It is hosted by Glasgow City Council through a formal contract with the city's employment services and City Council. It is in fact a profit-generating centre for the city.

The members of the network are all private suppliers who collectively agree to the standard fees that will be charged clients and then they compete on the quality of their delivery. The network conducts a quarterly review of each

provider in terms of client feedback, successful placement and administrative support. If a provider fails to meet a minimum standard of quality as determined by the network members, the network can suspend their contract. This method of self-regulation helps to avoid the monopoly problem of service deterioration as firms attempt to cut costs. Generally speaking, GAGN has found that smaller firms provide the best quality of service while the larger firms provide the broadest range of services.

The U.S. *Gateway Cities Workforce Partnership Initiative* was established to accomplish the following:

- To bring 15,000 non-college-bound youth into high-paying manufacturing employment over the next 10 years (less than 30% of high school graduates go on to a four-year college program. Many believe that their only option is “flipping hamburgers”).
- To expand the region's precision machining sector, to create a technological and training edge for the industry (the manufacturing industry, particularly the aerospace-related machining industry has been and continues to be the economic backbone of the region. There is a critical shortage of skilled machinists and tool and die makers).
- To bring the two constituencies together and match the need of employers for skilled workers with the need of the youth for family-wage jobs (“to leverage existing resources to meet an existing and future need”).
- To knit together the partners who will be involved in solving the problem: the community, business, and educational institutions. The crucial role of the Partnership was to identify and quantify the specific need and facilitate the bridge between the three entities.
- To focus on reaching out to the minority communities – many parents in the region are non-English speaking, hourly-paid workers who do not have experience with skilled career paths; even with English-speaking families, there is multi-generational unemployment.

- To attract young people into manufacturing employment. This requires an outreach/marketing program that will:
 - Inform them about career choices.
 - Attract them into the manufacturing field.
 - Encourage them to focus on completing their basic education with a strong emphasis on English, science and math – to serve as a foundation for further career opportunities.

The *Workforce Partnership Initiative* was established in response. Separate committees were created to work on various aspects of the Initiative. The groups included:

- Representatives of the minority communities in the region.
- Small and medium-sized businesses (region is not home to many large corporations).
- High school teachers and administrators.
- Community colleges in the region.

Results from the *Workforce Partnership Initiative*:

- There was an immediate increase in training opportunities in the region. The four community colleges responded by placing a greater emphasis on training for the precision machining industry. New fast-track curricula have been developed.
- Small and medium-sized companies were engaged, albeit with great difficulty.

Wales, like Scotland, has created bodies to direct and oversee skills development programs – the *Training Skills and Careers Policy Division* and the *National Council for Education*. Various information and guidance schemes already in existence have been amalgamated into one all-age careers service called *Careers Wales*. The web site for *Careers Wales* is very easy to use and caters to a wide range of end users, including parents.⁶⁵

*Dufferin-Peel Catholic District School Board's Tulip Tree*⁶⁶ transitions model “focuses on developing people to their full potential by providing the tools and processes individuals need to build effective networks.”⁶⁷ It follows them through the different stages of their transition, offering

65. www.careerswales.com

66. The Conference Board of Canada, *Labour Market Transitions Models That Work* (November 2001).

67. *Ibid.*

support as needed. The support comes from institutions, families, schools, employers and community organizations. In this way one sees that workforce development truly is founded on partnerships.

Some of their unique programs are online tools such as "Career Contractor" and "Tracking No limit Tomorrow's Career Data Base" (TNT) for career exploration, and 71 "Career Connections" for counselling services. TNT is especially useful as it offers a one-stop database with detailed information (e.g., job descriptions, salaries, job requirements) about thousands of careers. Much of the career information is garnered from local businesses, which enables them to highlight local labour shortages, emerging careers and their expectations of the labour force.

*Saskatchewan Indian Institute of Technologies' Construction Development Project*⁶⁸ focuses on placing Aboriginal Youth in the labour market. Youth are interviewed by employment counsellors to assess their skills (Prior Learning Assessment and Recognition) and to determine what they want to do. The program then matches interested youths with jobs in the construction sector (even at the most junior level), works with them and their employers to maintain their jobs, and trains them for better jobs over the winter.⁶⁹ The training they receive is certified and may be transferred towards apprenticeships.

This program takes a look at the barriers faced by some of these youth (e.g., no high school diploma, lack of skills, lack of training, lack of work experience) and essentially ignores them. "If you want to move people into the labour force, you do not start by looking for reasons why they cannot work."⁷⁰ This allows them to offer technical and employability skills training within the context of a work environment immediately.

Recommendation 9

OCRI maintains a number of programs that foster the development of employability skills among school students and encourage linkages between schools and employers. The *Tech Coaches Program* places key people in schools, both elementary and secondary, to assist teachers and students in the development and use of IT

skills. *Passport to Prosperity* gives students an opportunity to engage in on-the-job activities in local businesses and provides a myriad of opportunities for business to engage with youth through a series of targeted activities. The *Partners in Education Showcase* consists of an annual workshop/showcase for schools, post-secondary education institutions and businesses to explore ways in which they can work together. Students are able to communicate and showcase their work to business people through the *Young Entrepreneurs Showcase*. Teachers have the opportunity to explore first-hand different workplace settings through the *Teacher Internship Program*. *Ottawa Reads*, *Volunteers in Education* and the *School Breakfast Program* are initiatives that bring business and industry people to the schools to work with students. (These last three programs help with the understanding of the culture of schools.)

Almost 10 years ago, a National Employability Skills Summer Institute for Teachers was established at Queen's University to bring grass-roots curriculum leaders together to study the skills, examine and share best practices, and network. This program was funded through donations from the business community. (Lack of funding limited this program to a two-year life span.) Conference Board member organizations have adopted the profile and embedded the skills in staff development programs. An early leader in this movement was the Royal Bank.

*The Capitol Region Business Education Partnership*⁷¹ of the Sacramento Region Action Network (California) is an industry/education partnership for K-16 education to support the needs of both business and education. Its goals are:

- To support schools and educators: increase student attendance; increase proficiency standards in reading, mathematics and English; increase graduation rate; and increase success rates of graduates beyond graduation.
- To have businesses provide opportunities for students and teachers to work in the businesses, and for employees to spend time in the classroom.
- To increase the pool of qualified job applicants by 15% to meet employer needs and to interest other companies to locate in the region.

68. Ibid.

69. Ibid.

70. Ibid.

71. www.calregions.org/publications.html

CRBEP Implementation

- Begin with a model as a pilot with a specific school district (the Sacramento Unified School District).
- Market plan to hundreds of companies asking for their commitment in providing opportunities for student interns, mentors from their staff, speakers for the classroom, and opportunities for teachers to see what is needed in the work sites.
- Include as core partners members of the local school districts, local business representatives, and local community support groups (work with them instead of competing with them).
- Take more time on the front-end to discuss options, to debate possible actions, and to build support and understanding.
- Create a board comprising 50% business leaders and 50% school and community support representatives.
- Have a marketing plan and build a web site to facilitate communications.

*New Brunswick Youth Apprenticeship Program*⁷² focuses on facilitating school-to-work and/or school-to-postsecondary transitions. The program offers a supplement to the regular high school program by offering employability and occupational skills training, throughout the year, outside of school hours, and paid work experience during the summer. Because this program supplements the curriculum it is open to any student. (Note: this program is similar to the “Job Connect Program” found in Ottawa.)

Recommendation 10

The *Software Human Resource Council* (SHRC), a non-profit HRDC Sector Council established in 1992 to address the human resource needs of the Canadian software sector, has done a good job in clarifying job definitions for software workers and the skills requirements for the jobs in the software industry. It has created the Occupational Skills Profile Model (OSPM),⁷³ designed as a reference tool for Canadians interested in IT. It describes the broad spectrum of software work in Canada for the benefit of a wide variety of professionals, employers and educators, including

profile builders, people thinking about a career change or training needs, professionals concerned with the supply of and demand for software workers, managers responsible for hiring and developing staff, educators in career planning and curriculum development, and students exploring their career options and developmental needs.

The OPSM is the first Canadian model to lay out national occupation profiles for employment in the IT sector. It was developed by SHRC in consultation with the Canadian Information Processing Society and a broad range of stakeholders including government and industry representatives, as well as individual IT professionals.

The OSPM is a dictionary that captures skills and accountabilities for 24 IT job streams. Each of these streams can be accessed in a variety of ways, ranging from the broad grouping of similar occupations, through job titles, down to the granularity of specific and detailed definitions of skills and accountabilities. It allows users to build job profiles from skill sets, identify skills gaps, and establish training needs.

The OSPM is a basic yet versatile HR tool for employers, educators, recruiters, researchers and IT professionals seeking a basis for defining job titles, seniority levels and salaries. It defines the skills needed by IT professionals as well as the responsibilities that go with those skills. It is, in many ways, a new universal language for the software sector. It provides a baseline to which future pictures of the industry can be compared. For industry, government and individuals, such a comparison offers the opportunity to highlight knowledge gaps and identify emerging trends in the sector. It also allows occupations to be compared across industries and time.

The OSPM has been accepted and endorsed by the federal government through their use of OSPM streams in the revised National Occupation Codes and by Statistics Canada in the 2001 National Census. Hard copies of the OSPM are available to SHRC members, who can also access online the interactive searchable OSPM database.

The *Industry Development Network* in California is another example of skill mapping in aid of economic development through business, industry and labour cooperation.

72. Conference Board of Canada, *New Brunswick Youth Apprenticeship Program* (August 1998).

73. <http://www.shrc.ca/ospm/ospm.html>

It aims at developing a broadly adopted economic development strategy, using as its core the industry cluster model. The strategy will include:

- An analysis of current workforce and infrastructure needs.
- Opportunities for the growth of those industries.
- Creating more formalized linkages within industry clusters as well as between industry clusters and education and training.

Northern Ireland has developed a scheme for the identification of current and future skills needs, through a program of research commissioned by the *Northern Ireland Skills Task Force*. "The NI Skills Task Force was established in response to our economic development strategy to advise on the demand and supply of skills in the priority areas of IT, Electronic Engineering, Mechanical Engineering, Construction and Tourism and Hospitality, where a shortage of skills has the potential to impede the growth of our economy."⁷⁴

"The Department for Employment and Learning (DEL) plays a major role in addressing the skills, productivity and competitiveness challenge, and in ensuring a more inclusive society, it has used the research findings from the Skills Task Force work to inform local policies and to target education and training resources to raise skills levels and enhance the quality of education and training in Northern Ireland."⁷⁵

"Alongside its mainstream provision DEL has developed a number of innovative policies and programs to match skills with the needs of industry and to ensure sustainable growth in the Northern Ireland economy."⁷⁶ Activities in particular municipalities, such as Belfast, are closely allied with a network of *Training and Employment Agency Training Centres* that are linked to the Colleges of Further Education. This comprehensive network is designed to eliminate unnecessary duplication and overlap between and among skills training programs.⁷⁷

Recommendation 11

The *Community Accounts*⁷⁸ web site translates the vision, values and goals of the Strategic Social Plan of the Province of Newfoundland and Labrador into measurable indicators

that provide quantitative evidence for identifying social development needs and opportunities, tracking social well-being, and evaluating specific programs. The *Community Accounts* web site is a community-based information system that enables citizens to retrieve and analyze data for communities and regions of Newfoundland and Labrador. As the graphic below depicts, the fulfilment of the fourth goal of Newfoundland's Strategic Social Plan is contributed to through the exchange of common information between government, citizens and communities. Unique among web providers of community information, this site allows users to drill down to a neighbourhood level – the equivalent of collecting economic and social information on the Glebe neighbourhood in Ottawa.

The information included on the web site includes:

- Provincial, regional and community information.
- Data for 11 domains of interest: health, education, social, income, labour market, demographics, resource/wealth, production, consumption, environmental and well-being.
- Over 50,000 tables and illustrative graphics organized by topic and geographic region.
- Relative measures of well-being for ease of comparison.
- Analysis tools to help you summarize and interpret data.
- Community and regional profiles based on your input.

Potential uses:

- Government departments and regional boards can access solid, relevant, quantitative data for economic and social planning purposes.
- Communities can monitor the social and economic landscape and easily compare themselves with other communities, other regions, the province and the nation.
- Citizens can make informed decisions about the success or failure of public policies.
- Community Accounts provides data that help citizens and organizations to manage their lives in their communities by identifying social and economic needs

74. www.delni.gov.uk

75. Ibid.

76. Ibid.

77. www.delni.gov.uk

78. www.communityaccounts.ca

and other forces (including government programs) that contribute to social progress. The goal of this program is to improve the quality of life for people living in Newfoundland and Labrador by helping them to know themselves and their communities better. A template of this web site's functionality could be made available for use in Ottawa.

In addition to Community Accounts, another Canadian example of intelligence gathering and dissemination at a local level is the *Neighbourhood Pilot Program* of Statistics Canada, which presents social and economic data it collects in a form that is aggregated at a local level. Statistics Canada should be encouraged to pilot this effort in the Ottawa community.

Joint Venture: Silicon Valley network, a non-profit community partnership for regional rejuvenation, created the annual *Index of Silicon Valley*⁷⁹ in order to provide a reliable source of information on the economy and quality of life in Silicon Valley, California. In addition to helping foster a sense of regional identity, the Index provides a sound basis for proactive, coordinated efforts to make Silicon Valley a better place to live, work and do business.

Using a variety of regional indicators, the Index measures progress towards the goals of *Silicon Valley 2010: A Regional Framework for Growing Together*, published by Joint Venture in 1998. The 17 goals of Silicon Valley 2010 were developed based on the input and perspectives of more than 2,000 Silicon Valley residents. These goals have four main areas of focus:

- How innovative economy increases productivity and broadens prosperity.
- How communities protect the natural environment and promote livability.
- How inclusive society connects people to opportunities.
- How regional stewardship develops shared solutions.

The *Metropolitan New Economy Index*⁸⁰ developed by the Progressive Policy Institute builds on work begun with their earlier indexes: *The New Economy Index* and *The State New Economy Index*. The PPI uses a new set of economic indicators to illustrate the structural foundations of what has been called the "New Economy." In the first

report, the transformation of the U.S. economy was tracked along four main lines: the industrial and occupational mix, globalization, entrepreneurial dynamism and competition, and the IT revolution. In the second report, PPI applied a similar set of indicators to the 50 states. In the *Metropolitan New Economy Index* PPI looks at the top 50 U.S. metropolitan regions in terms of their adaptiveness to the "New Economy." To look at the 50 most populated U.S. metro areas, PPI uses 16 indicators divided into five categories that best capture what is new about the New Economy:

Those categories include:

1. **Knowledge jobs.** Indicator measures jobs held by managers, professionals and technicians, as well as the educational attainment of the workforce.
2. **Globalization.** Indicator measures the export orientation of manufacturing.
3. **Economic dynamism and competition.** Indicators in this category measure the number of fast-growing "gazelle" companies (companies with sales growth of 20 percent or more for four straight years); the rate of economic "churn" (which is a product of new business start-ups and existing business failures); and the number of initial public stock offerings (IPOs) by companies in each metro area.
4. **The transformation to a digital economy.** Indicators measure the percentage of adults on line, the number of ".com" domain-name registrations, the share of students using computers in schools, Internet backbone capacity, and the number of providers of broadband telecommunications services.
5. **Technological innovation capacity.** Indicators measure the number of high-tech jobs, the number of science and engineering graduates from area colleges and universities, the number of patents issued, expenditures on research and development at colleges and universities, and venture capital investments.

79. www.jointventure.org/resources/2002Index/index.html

80. www.neweconomyindex.org/metro/index.html

Recommendation 12

The Ottawa Technical Learning Centre (OTLC), formerly McArthur High School in the Ottawa-Carleton District School Board, has been identified as exemplary, and its replication in other geographic settings within that board and sister boards is recommended. It has also set a new standard for responsiveness – being able to respond with ministry approved training within as little as a week of the identification of a need.⁸¹ Employability skills are developed throughout the curriculum and the students see themselves as prepared to continue their skill development in the workforce and/or through post-secondary education.

Similarly, La Cité Collégiale and le Conseil des écoles catholiques de langue française du Centre-Est (CECLFCE) have partnered in the construction of the *École secondaire catholique de formation professionnelle et technique* on the campus of La Cité Collégiale. This school will be offering trades-related education and training in a unique paperless format.

Both these examples offer a broad range of technical skills programs with strong connections to the world of work. The schools have elevated the perception of technical education to its rightful place in the general scheme of secondary school education, and will continue to do so; they are also elevating the self-confidence of the students who choose the trades as a destination occupation.

California's North Coast School-to-Career Consortium (education/training) has:

- Increased integration of academic subjects and created new opportunities to apply classroom learning to real life and workplace situations.
- Created a transparent system of skills development and upgrading for key industry clusters in the region. This includes local high schools, the Community College and Humboldt State University jointly developing marketing materials, additional short-term, skill-based training opportunities and articulated curricula where appropriate.

*Hampton High School and Irving Pulp & Paper Partnership in Education*⁸² – focuses on adding relevancy to secondary school technical training programs. So far, this has helped to raise awareness about technical education opportunities and about career opportunities and to develop employability skills. The students participated in three major activities:

1. *Original Mill Model* – involved building a scale model of a mill and constructing operational models of mill processes.
2. *Job Fest '97* – focused on job readiness training (e.g., résumé writing, interview preparation).
3. *Digester Project* – involved forming project management teams and completing a project.

81. This was done recently with respect to the City's identification of a need for additional stonemasons and the OTLC creating and staffing the training program within a week.

82. Conference Board of Canada, *Hampton High School and Irving Pulp & Paper Partnership in Education* (August 1998).

Appendix 3

Listing of Workforce Issues from Ottawa WORKS II

1. Linkages

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 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. 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 work 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 to youth only but 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 than journeymen and do not require certification. 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 in providing 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. This imbalance, combined with the inadequate career counselling available to students, may result in students failing to develop 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 Education/Training Information

Information about area education/training programs 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 begun 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, our failure to recognize immigrant qualifications, and the insufficient resources allotted to immigrant skills 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 effec-

tiveness 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 spillovers 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 and Funding Support

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 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. And, often where there are programs available, there is not enough funding support through Ontario Works or Employment Insurance to meet the demand from low income participants. 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. What organization(s) should do it? What resources are required, and where will they be found? The City has its needs for information, and employers, workers, educators/trainers and prospective workers have their own information needs. All tend to agree that a single-window approach is desirable and has considerable value. This raises a series of questions.

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 or poaching of employees, shortages of engineers, shortages

of professors and trainers, shortages of tradespeople, over-extended infrastructures, will likely reappear. In addition, nothing has been done to avoid the type of lay-off 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 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 that there will be fewer people, particularly at the post-secondary level, to provide the training that is currently needed. Second, the next big wave of students, the children of the baby boomers, is currently moving through the post-secondary 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 the same year), 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. Last, the talent demand of the next wave of advanced technology growth will probably begin in the next two to three years. 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 lay-offs of 2001, 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

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 lay-off 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

Feedback from Ontario Works focus group participants clearly indicated that high caseworker loads diminished their capacity to deliver individualized service. 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 many public service jurisdictions in Canada are embracing the concept of client-centred service, the feedback from the Ontario Works and Employment Insurance focus group participants is that 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. It appears to be the belief of those participants that support 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.

Appendix 4

Sector Profile Samples⁸³

Industry Profiles: Construction

A graphic titled 'Key Facts' with a dark background and light text. It contains a list of seven bullet points.

Key Facts

- Employs 132,000 people in Scotland
- Generates £10 billion in sales and turnover for Scotland
- Slower growth in Scotland than in the rest of Great Britain
- 33,000 new employees required in Scotland between 2001 and 2006
- Average annual salary is £21,362
- Average weekly wage is £413
- Construction employees work long hours – on average, 44 hours per week, including 4 hours of overtime

The Construction Industry

The construction industry covers a wide range of activities and trades, including:

- Demolition and wrecking.
- Test drilling and boring.
- Construction, maintenance and repair of buildings and large projects (including roads, sewerage, water).
- Renting of construction equipment.
- Work using skilled trades, including plumbing, insulation, electrical work, plastering, flooring, joinery, bricklaying, painting and decorating, glazing, and roofing.

Note that architecture and engineering are included in a separate sector profile.

Employment in Great Britain

The U.K. construction industry contributes around 8% of GDP and employs about 1.1 million people.

The U.K. construction industry is one of the strongest in the world, ranked in the global top 10. It is an extremely diverse industry, composed of contractors, consultants and product producers. It is dominated by small companies, with a relatively small number of large companies.

Employment in Scotland

In Scotland, the construction industry employs 132,000 people and generates over £10 billion in sales and turnover. It accounts for 6% of all employees.

Between 1995 and 2000, the number of construction employees working in Scotland did not grow as quickly as the rest of Great Britain, growing by only 2% in terms of total employees as compared to 25% for the whole of Great Britain. However, construction workers often move around to work on construction sites, and it is likely that a large number of Scottish workers moved to work in England during this period.

Key Features of the Industry

More males than females work in the industry than on average – 87% of employees are men.

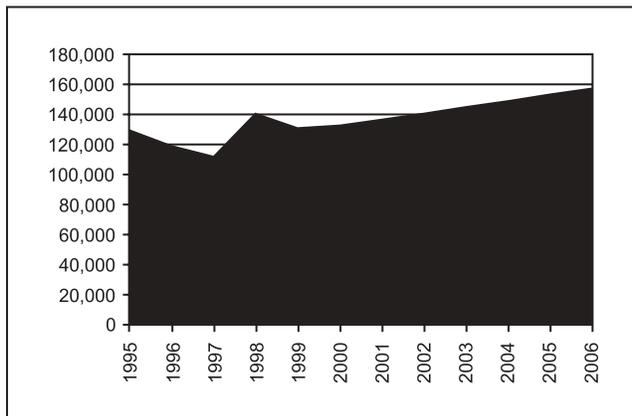
Most people work full-time – 93% of all employees in construction work full-time.

83. From <http://www.careers-scotland.org.uk/careerscot/web/site/Work/AboutWork/sectorprofiles.asp>

Prospects for the Sector

The signs are that the construction industry will require 33,000 new workers over the period 2001 to 2006. Many employees in the construction workforce will retire in the next five years. This will provide new opportunities for those who wish to enter the industry.

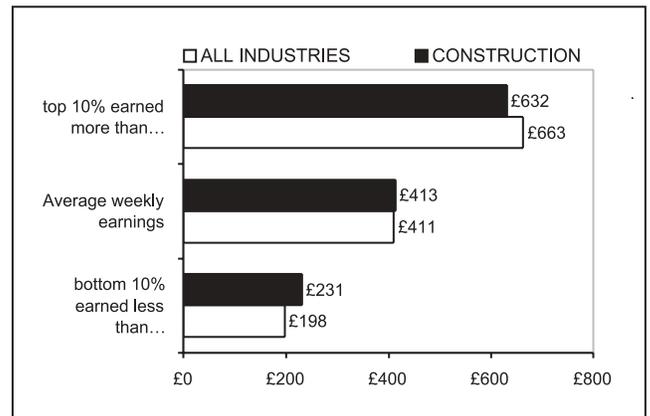
FIGURE A:
Total and projected employment 1995-2006



Working Hours

Employees in the construction industry work longer hours than average. On average, they work 44 hours per week, of which 4 hours are overtime.

FIGURE B: How earnings are distributed in the construction industry



Wages

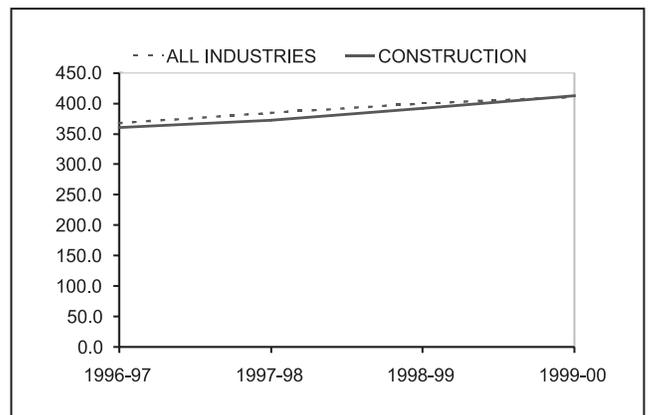
The average annual salary for a worker in the construction industry in Great Britain is £21,362. This is equivalent to £413 per week or £9.26 per hour.

Construction industry earnings are almost equal to the average for all industries – at £21,842 per year, £411 per week, or £10.28 per hour.

Employees in the construction industry can earn a range of salaries, as shown in Figure B below. The bottom 10% of earners earned less than £231 per week – which is above the average for all industries. The top 10% earned more than £632 per week, which also is ahead of the average for all industries.

Earnings have grown very well in the Construction industry, following the trend for all industries – as shown in Figure C below. The construction industry has enjoyed earnings growth near or above average in the most recent two years.

FIGURE C: Annual growth of earnings



Industry Profiles: Professional and Business Services

Key Facts

- Employs 266,000 people in Scotland
- Generates £19 billion in sales and turnover for Scotland
- Slower growth in Scotland than in the rest of Great Britain
- 88,000 new employees required in Scotland between 2001 and 2006
- Average annual salary is £25,566
- Average weekly wage is £464
- On average, full-time professional and business services employees work 39.5 hours per week, including 4 hours of overtime.

The Professional and Business Services Industry

The professional and business services industry covers a wide range of activities, including:

- Financial markets and fund management.
- Estate agents, property management and property development.
- Rental of cars, other vehicles and machinery.
- Market research, advertising, recruitment, security and secretarial services.
- Legal, accountancy and management consultancy.

Employment in Great Britain

Professional and business services is a significant industry in Great Britain, employing 3.6 million people in 2000, or 14% of all employees.

Employment in professional and business services grew by 22% between 1995 and 2000 in Great Britain.

Employment in Scotland

In Scotland, the professional and business services sector employs 226,000 people, and generates around £19 billion in sales and turnover. It accounts for 12% of all employees.

Between 1995 and 2000, the industry did not grow as quickly as the rest of Great Britain, growing by 11% in terms of total employees, compared with 22% for the whole of Great Britain.

Key features of the Industry

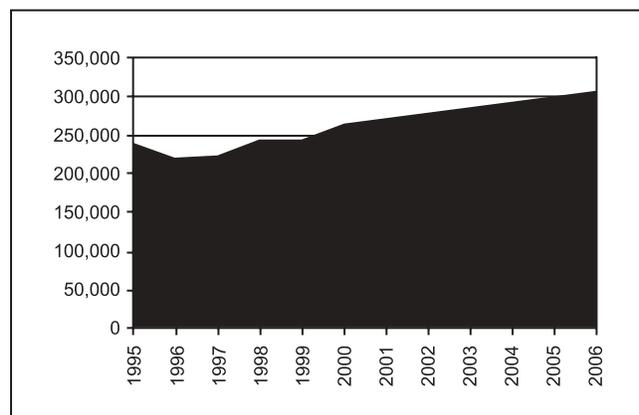
More males than females work in the industry than the average – 48% of employees are women.

There are slightly fewer part-time workers than the average – 27% of all employees in professional and business services work part-time

Prospects for the Sector

The signs are that the professional and business services industry will require 88,000 new workers over the period 2001 to 2006. The total number of employees in the sector will grow, and the high number of retiring workers will create opportunities for those who wish to enter the industry.

FIGURE D:
Total and projected employment 1995-2006



Wages

The average annual salary for a full-time worker in the professional and business services industry in Great Britain is £25,566. This is equivalent to £464 per week or £11.78 per hour.

This is above the average earnings for all industries at £21,842 per year, £411 per week, or £10.28 per hour.

Employees in the professional and business services industry earn a range of salaries. The bottom 10% of earners earned less than £197 per week – which is almost the same as the average for all industries. The top 10% earned more than £809 per week, which is significantly more than the average for all industries (see Figure E below).

Earnings have grown in professional and business services, following the trend for all industries (see Figure F below).

Working Hours

Full-time employees in the professional and business services industry on average work 39.5 hours per week, including 4 hours of overtime.

FIGURE E: How earnings are distributed in the professional & business services industry

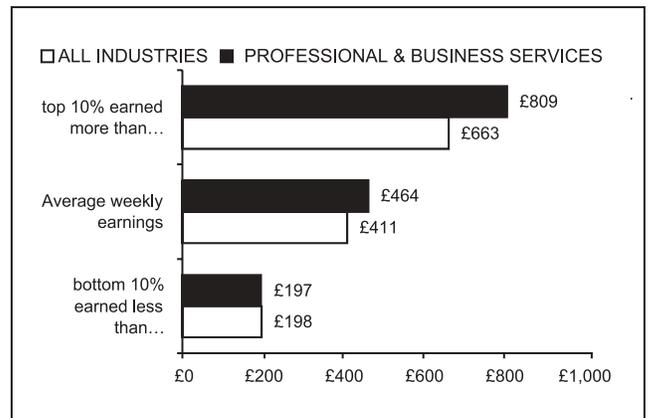
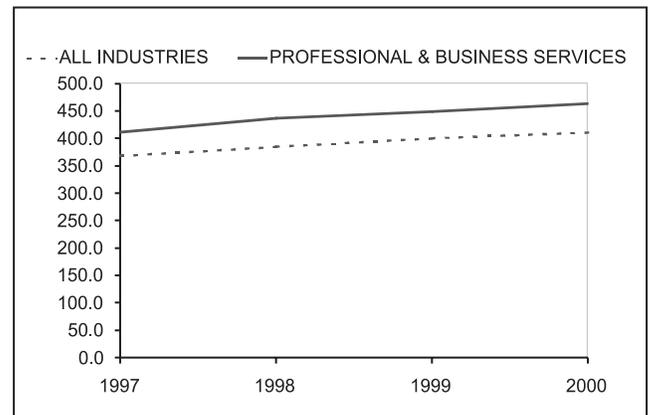


FIGURE F: Annual weekly earnings 1997-2000 (£)



Appendix 5

Glossary of terms

Workforce Development – The collective engagement of government, employers and education/training providers in the development of skills programs that provide sustainable economic achievement for all. In many jurisdictions it is closely tied to the concept of lifelong learning.

Training – The development of task-/job-/vocation-specific skills

Education – The provision of opportunities for individuals to acquire a broad base of knowledge, concepts and skills that will equip them to participate effectively in a society

Technical Skills – Skills required to perform a particular task

Employability Skills – “The skills you need to enter, to stay in, and progress in the world of work – whether you work on your own or as part of a team.” (Conference Board of Canada)

Organizing Centre – A concept around which a program can be developed. It provides a cohesive force for the various elements making up the program.

Regional HR Department – A Regional HR department would address issues of information gathering, recruitment, training, career development, counselling and support, policies and funding.

About TalentWorks

TalentWorks is a community-based initiative building Ottawa's talent pool by providing strategic and integrated support to targeted sectors. This program is managed by the Ottawa Centre for Research and Innovation (OCRI) and is funded and supported by the Government of Canada (HRDC), the Province of Ontario (Ministry of Training, Colleges and Universities), the City of Ottawa (People Services and Development Services) and The Ottawa Partnership, the city's economic development steward.

TalentWorks facilitates collaboration between business, government, education and community partners to:

- Develop, attract, and retain qualified workers for targeted sectors of the local economy to support identified needs of employers and job-seekers;
- Develop project plans and deliver specific, customized projects that are matched to economic development priorities;
- Integrate and disseminate relevant information to TalentWorks partners; and
- Influence and improve strategic planning and economic development.

TalentWorks is overseen by the Steering Committee which is made up of senior executives and managers from the funding organizations mentioned above as well as a wide range of organizations interested in Ottawa's workforce – private sector companies in the major export sectors; health; school boards, colleges and universities; agencies serving job-seekers; economic development agencies; the Greater Ottawa Chamber of Commerce and le Regroupement des gens d'affaires; and labour.

The Ottawa Centre for Research and Innovation (OCRI) is Ottawa's economic development corporation. OCRI is the rallying point for business, education and research organizations to create the winning economic conditions that allow Ottawa's companies to thrive locally and compete globally. More than 600 members support OCRI, from large corporations and research laboratories, to small and medium-sized technology companies, to local academic institutions. Working in collaboration with this

strong and innovative member base, OCRI builds on the strengths of Ottawa to advance economic development, entrepreneurship, research and development, lifelong learning, professional development and community infrastructure.

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About the Centre on Governance

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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