

Working Together to Build a Better Labour Market Information System for Canada

Final Report



ADVISORY PANEL ON LABOUR MARKET INFORMATION

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May 20, 2009

Advisory Panel on Labour Market Information

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Minister of Human Resources and Skills Development, and
The Honourable Donald Arseneault,
Minister for Post-Secondary Education, Training and Labour
Co-chairs of the Forum of Labour Market Ministers (FLMM)

Dear Ministers:

We, the undersigned members of the Advisory Panel on Labour Market Information (LMI), are pleased to submit our report to you and your colleagues on the FLMM. It was both an honour and a learning experience to serve on the FLMM's Panel. We are firm believers in the centrality of labour markets to the efficient functioning of our modern economy. Indeed, we regard the quality and efficiency of our labour force as the key determinant of our nation's wealth and well-being. And through our consultations we have come to better appreciate that this depends on the ready availability of all the LMI needed by labour market participants and policy makers.

In Canada we are fortunate to be blessed with a good LMI system to start with. But we have still been able to identify many ways that it can be improved. Our task has been influenced by the onset of the current recession. When we were set up, a main concern of policy makers was labour shortages. But over the course of our consultations rising unemployment and mass layoffs increasingly came to the fore. However, this has not made our task any less important as a good LMI system is not only one that can reduce labour shortages, but also one that can help cushion unemployment.

Over the course of our consultations, we have been very fortunate to meet a large number of Canadians concerned about LMI. And we were impressed with the interest and good will of all parties in government and outside – their interest in the matter, their commitment, openness to make improvements, and perhaps above all, their interest in working collaboratively to build a better LMI system for Canada.

In our consultations, we came across five recurring themes, which unify the substantive recommendations in our report. The first is the challenge of obtaining meaningful information for the labour market, which in many cases has become global even while many of its aspects remain local. The second is the existence of basic information gaps even at an aggregated level. The third is the existence of parallel, but separate universes, between the supply and demand for LMI in terms of the granularity of the information (suppliers largely providing aggregate information and demanders wanting detailed occupational and geographic information that can be used to match labour supply and demand). The fourth is the need to pull together LMI from many fragmented and disparate sources. And the fifth is the need to improve public awareness and the user friendliness of LMI.

The shared responsibility for LMI in our federation among FPT governments gives rise to quintessentially Canadian challenges and opportunities. But the political/governance/policy set up is still unique. All jurisdictions are involved in LMI but the responsibilities have devolved more to the provinces over time. While the Provinces and Territories are well placed to deliver the services their residents

require, there is also, in many cases, a simultaneous need for a national perspective. As a result, effective co-ordination mechanisms are absolutely essential. But there is even more than this at stake. We believe that the establishment of an effective LMI governance structure can serve as a model for other areas of shared jurisdictions with strong provincial responsibilities. This provides a real opportunity to build a stronger federation.

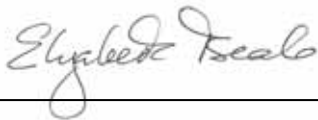
We are convinced that our recommendations are practical and can and should be implemented. Many of our recommendations are quite specific. However, in the realm of governance we have preferred to be directional. The direction that we recommend will require the FLMM to be much more pro-active in LMI. While many of our recommendations can be implemented by individual agents such as HRSDC, the provinces and territories, Statistics Canada, and the sector councils, change is usually more forthcoming when there is a catalyst and monitoring. The FLMM is a natural on both fronts. The most critical steps are to make the decision to go this route and then to adequately resource and staff the support required. The FLMM is in the best position to make many subsequent decisions on specifics.

We thus suggest that the FLMM establish a process to evaluate our recommendations. It could consider what is agreed to, what is not, and why. It could also examine if there are obstacles to implementation, how they could be removed. And in our view, it would be desirable if the FLMM would consider preparing a report in a year's time on what has been implemented and what could be done about obstacles.

In conclusion, we would like to thank the FLMM for choosing us to be members of the Advisory Panel on Labour Market Information. We are also indebted to the Panel's Secretariat, consultants, and all the many others who helped along the way. And we are especially grateful to all those who so generously gave their time to consult with us from both the public and private sectors. We learned so much by being exposed to the diverse knowledge of LMI and different perspectives of so many Canadians.



Don Drummond,
Chair of the Advisory Panel on Labour Market Information



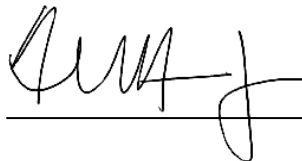
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Acknowledgements

The Advisory Panel on Labour Market Information would like to thank all those who contributed to the report and provided valuable assistance along the way. We benefited from extraordinary co-operation and support during our work. Extensive consultations were only possible because every group we contacted made the time to meet with us. This indicates the depth of interest in LMI and in advancing Canada's LMI system.

The Panel was expertly supported by a Secretariat (Kelly Bestland, Evelyn Mueller and Jeremy Neily) drawn from both federal and provincial/territorial governments under the leadership of Barbara Martin. This small but dedicated team worked hard to ensure the smooth running of Panel operations and the production of a quality report.

A special thanks to Patrick Grady, senior consultant on the project, for his extensive contribution to the research and drafting of the report. Additionally, the successful completion of the report and recommendations would not have been possible without the considerable contribution of research contractors Andrew Sharpe, Bob Baldwin, and Craig Mackay and without the valuable assistance provided by federal, provincial and territorial officials.

Acronyms

ABS	Australian Bureau of Statistics
ALMD	Ministry of Advanced Education and Labour Market Development (BC)
BLS	Bureau of Labor Statistics (U.S.)
CCL	Canadian Council on Learning
CIC	Citizenship and Immigration Canada
CETECH	Centre d'étude sur l'emploi et la technologie
DG	Director General
EI	Employment Insurance
FLMM	Forum of Labour Market Ministers
FPT	Federal/Provincial/Territorial
GSS	General Social Survey
HR	Human Resource
HRLE	Department of Human Resources, Labour and Employment (NF)
HRSDC	Human Resources and Skills Development Canada
INAC	Indian and Northern Affairs Canada
ISQ	Institute of Statistics of Québec
LEHD	Longitudinal Employer-Household Dynamics
LFS	Labour Force Survey
LMI	Labour Market Information
LMA	Labour Market Agreement
LMAB	Labour Market Analysis Branch of the PETL
LMDA	Labour Market Development Agreement
LMIR	Labour Market Information and Research unit of MTCU
LMIWG	FLMM Labour Market Information Working Group
LMO	Labour Market Opinion
LPI	Labour Price Index
LWD	Department of Labour and Workforce Development (NS)
MTCU	Ministry of Training, Colleges and Universities (ON)
NCSIS	Nunavut Community Skills Information System
NGS/FOG	National Graduate Survey/Follow-Up of Graduates
NLMIS	National LMI System
PCEIP	Pan Canadian Education Indicators Program
PETL	Department of Post-Secondary Education, Training and Labour (PEI)
PLAR	Prior Learning and Assessment Recognition
PSE	Post-Secondary Education
PT	provinces/territories
SEPH	Survey of Employment, Payrolls and Hours
SaskLMC	Saskatchewan Labour Market Commission
SLID	Survey of Labour and Income Dynamics
WES	Workplace and Employee Survey
WLKC	Work and Learning Knowledge Centre
YUWIN	Yukon's Work Information Network

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Executive Summary

The Advisory Panel on Labour Market Information (LMI) is an independent group established by the Forum of Labour Market Ministers (FLMM) to provide advice on how best to improve Canada's LMI system to make Canadian labour markets function better. And while we knew that, according to the Organisation for Economic Co-operation and Development (OECD), our LMI system is one of the best in the world, we eagerly took up our task knowing that we can always do better.

As we carried out our consultations, the nature of the challenges facing Canadian labour markets dramatically changed from labour shortages to rising unemployment across the country. But this did not fundamentally alter our task. A good LMI system will help to improve the matching of people and jobs both in times of labour shortages and high unemployment. And a good LMI system is always necessary to make sure that the right policy decisions are made to improve the economy's performance and lower unemployment.

In fact, the current recession has underlined the importance of good LMI. One of the inevitable consequences of a recession's economic churn is that more Canadians will be brought face-to-face with gut wrenching, life-changing decisions of where to seek and find work, what career to pursue and which skills to develop in order to pursue it. All of these decisions could be made with more confidence, less anxiety and more certainty with better, more accessible LMI.

Access to accurate, timely and comprehensive labour market information is critical for the development of economic and social policies which support Canadian workers in these perilous times.

Canadian Labour Congress

Similarly, policy decision-makers are also reliant on LMI to help inform public investment and spending decisions. For instance, intense pressure is being felt to get increasingly granular local labour market information so that scarce public monies are targeted to where the need is greatest. LMI also has an important role in informing approaches to the labour market integration of under-represented groups such as youth, immigrants, persons with disabilities, Aboriginal Canadians and older workers.

A major challenge faced by immigrants prior to arriving in Canada is knowing the kinds of occupations and skills that are needed in various cities and regions across the country, and the chances of finding employment in their field. If they had better information on current and future job opportunities before coming to Canada, it would help them to make more informed decisions.

COSTI Immigrant Services

A well functioning national labour market is an important source of competitive advantage for Canada. By many, if not most, measures Canada is well supported by its LMI system. That said, the current system's inability to chart work flows, job vacancies and labour costs may harm Canada's competitive position now and in the future. Factors such as globalization, urbanization and Canada's shift towards an increasingly knowledge-based economy are causing skills requirements and labour market conditions to change at unprecedented rates. If we do not develop and sharpen the tools to monitor and predict these changes, Canada will fall further behind better informed and more flexible economies. To this end, a job vacancy survey can be of direct aid to workers in acquiring appropriate skills or finding jobs in a new and unfamiliar labour market and to governments for skilled immigrant selection and skill development policies and education programs. Information on labour flows can also help governments better understand what is happening in the labour market (e.g. how many people are losing their jobs, how many are finding new ones and in what sectors and occupations). Similarly, a labour price index is important in helping monetary authorities assess underlying inflationary pressures and the state of the labour market and economy.

There is great interest in vacancy data to measure the extent of demand that exists in our labour market. Canadian statistical agencies currently don't have any surveys on this, therefore, CFIB has developed its own vacancy measures for the small and mid-size business sector. This is vital for planning. An additional comprehensive national vacancy survey would be of great benefit to businesses across Canada.

Canadian Federation of Independent Business

Canada also faces challenges in the collection of education data. In particular, we were struck by the fact that even relatively straightforward educational data on colleges and degree-granting institutions, as well as data on workplace skills use are unavailable or years out of date. The current gaps in education data collection resulted in Canada being unable to report on 73% of the data points in the recently released OECD *Education at a Glance* report. This result is starkly at odds with the aspirations of a knowledge-based economy and society.

Moving forward, Canadian society will be entering a period of transformation. Many elements of this demographic change, notably the wave of boomer retirements, the growing role of immigrants to the labour force and the Aboriginal baby boom have important labour market dimensions and would be more easily navigated with high quality and timely LMI.

Of course, LMI data collection, analysis and dissemination cost money. While expenditures on LMI are not large, amounting to not much more than a hundred million dollars across the whole country, they can have a significant impact on wages and salaries in Canada, which are currently around \$800 billion a year. Reducing unemployment or raising wages by a better matching of workers and jobs by as little as a tenth of a point would raise GDP by some \$800 million. This gives an idea of the

potential impact that LMI can have. It completely dwarfs spending on LMI. And that is why we need to spend more money on LMI and spend it smarter.

LMI's importance to employers, employees, job seekers and learners makes it relevant to the lives of all Canadians. Coordination of LMI collection at the national level ensures economies of scale and facilitates equal access to information for all jurisdictions. Improvement of the LMI system is therefore best understood as a national effort. It is the responsibility of both the federal and provincial/territorial governments to demonstrate that they appreciate the importance of LMI by making additional investments.

What We Heard

Canadians from coast to coast to coast told us of their LMI needs and provided many useful specific suggestions. They want more and better LMI to help them make labour market decisions. Specifically, they want more information on local labour markets. It is indeed ironic that very limited reliable information (other than the Census, which is not timely) is available even for fairly large cities and towns. This deficiency makes it difficult for provincial and Service Canada¹ regional offices to meet the information needs of their customers.

We also heard about important gaps in LMI with respect to the labour market performance or needs of certain groups, including women, younger workers, older workers, visible minorities, immigrants, Aboriginal peoples, and people with disabilities. And we learned of the gaps in education data.

People expressed their dissatisfaction with the bewildering array of LMI that is available and the difficulty of sorting through it all to find the information they need. Even sophisticated companies and organizations told us that they shy away from primary data sources. In particular, most people we talked to do not directly use Statistics Canada information or data, but instead get their information from secondary sources. This is an important message for everyone connected with LMI. Simply making the information available is not enough to ensure that people will use it, if they perceive it to be difficult to find and use. And, for the most part, they are right – it is. And this finding perplexed us since it should be possible to harness the power of the Internet to make data access fairly easy.

Finding inexpensive, relevant and timely LMI has always been an issue. At the provincial and federal levels of government, LMI is scattered across many different websites and is tabulated in ways where making comparisons is generally not easily achievable.

Ontario Local Board Network

¹ Service Canada is a special initiative within Human Resources and Skills Development Canada which focuses on service delivery.

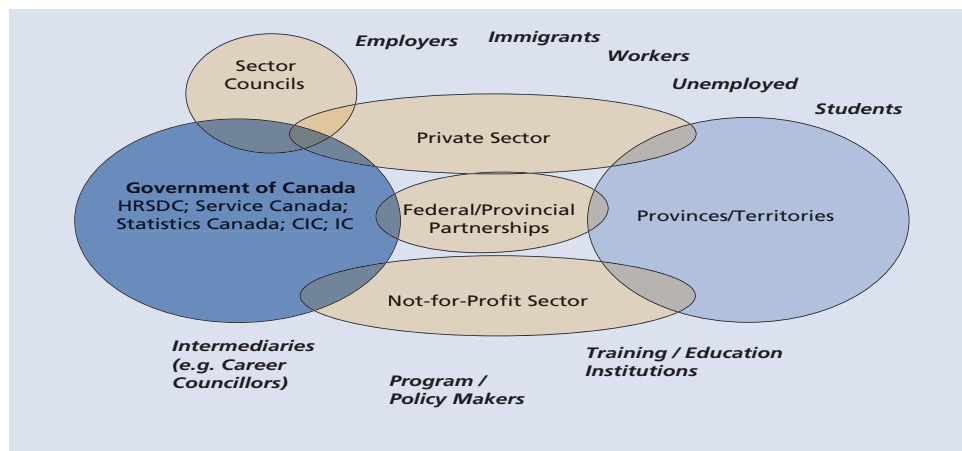
Macroeconomic policy makers and economists spoke of the need for vacancy rate data and a labour price index to help them steer the economy on a sustainable, non-inflationary growth track.

We listened carefully to what we heard and developed a long list of recommendations for the FLMM's consideration. These recommendations cover: governance; filling data gaps; education data; data analysis and interpretation; raising the awareness of LMI; data dissemination; funding; priorities; and implementation.

Governance

Our first, and in some sense most fundamental, recommendation concerns the governance of LMI. If an appropriate governance structure is not established, it is impossible to develop the kind of LMI system we need. The LMI system is big and complex. It has many providers and many more users. The parts are moving. But it will never be efficient unless some entity steps forward boldly and assumes the role of coordinating matters.

LMI-Key Players in Canada



The FLMM is the natural body to take up the task of coordinating our LMI system. Its LMI Working Group has already established a very good rapport among jurisdictions on LMI. We believe that the FLMM should be recognized by FPT governments and all Canadians as the Pan Canadian body responsible for the coordination of LMI and should proactively assume the leadership role and provide the broad strategic direction needed to manage and coordinate Canada's overall LMI policy. This means that it will have to develop a plan. Since it will have to rely on Statistics Canada to produce much of the required data that support the creation of LMI, the Chief Statistician should be made an ad hoc member of the Deputy Minister's Committee of the FLMM to ensure the necessary coordination that will be required at all levels. The FLMM also needs to coordinate with the Council of Ministers of Education of Canada to ensure that education data provide needed LMI and that LMI meets the needs of educators and learners.

By calling the FLMM to play this catalyst, coordinator and monitor role we are not suggesting that it usurp the roles and responsibilities of the other stakeholders in the LMI system. Indeed, much of what we recommend can be implemented by each stakeholder acting within their own area. But we believe that there is a much better chance of the whole system being improved in an efficient way if there is a recognized and accepted oversight function established under the FLMM.

We are mindful that there will be many challenges for the FLMM to play the kind of coordination role we recommend. It will need to add a core, secretariat capacity. It will need to carefully balance the needs of a national LMI system with the imperative of respecting the roles of each jurisdiction. Perhaps above all, the process will require abundant good will on the part of all parties. The provinces with the more advanced LMI systems will need to share the benefits of their experiences. Other jurisdictions will need to do what they can to advance the development of their LMI systems. But it will need to be recognized that there are considerable disparities in available resources across jurisdictions. Yet we believe that a collaborative approach across the federation will bestow benefits to the residents of all jurisdictions.

Filling Data Gaps

For LMI to effectively contribute to labour market efficiency and economic growth, relevant and reliable data are required. This is why we also need to fill in the main gaps in the national LMI system and work with the provinces/territories and other stakeholders to fill the gaps that are more unique to their particular circumstances. There is a need to expand coverage of LMI to include a job vacancy survey and an overall labour price index. Better data on wages and total compensation are needed to inform the labour market choices of employers and employees.

A richer understanding of the Canadian labour market is also required for more effective policy design. In order to better understand the dynamics of Canadian labour markets, Statistics Canada should produce data not just on net job changes as in the LFS and SEPH, but also on the gross flows between various labour market states such as employment, unemployment and not in the labour force, as is done in the United States. This will be particularly important if unemployment rises and it becomes necessary to analyze its source for policy purposes.

To shed light on the phenomenon of plant closures and layoffs, Statistics Canada should collect and publish the data on the number of employees laid off that employers are required to report by federal and provincial governments. If collected and regularly published on a timely basis, it can help provide advance warning of major employment pressure points, helping Canadians and governments plan accordingly by facilitating adjustment and effective policies and programs.

While women will benefit from overall improvements in LMI as almost all labour data is broken down by gender, they also have specific requirements for more information on the

conditions of work that go beyond compensation, including information on flexible time, and time off for family responsibilities such as child care and elder care.

Better information also needs to be collected and disseminated on disadvantaged participants in the labour market such as people with disabilities, Aboriginal peoples off and on reserves, youth, older workers, visible minorities, and immigrants in order to better target efforts to assist labour market integration. Since it is particularly important that better information be collected on the labour market performance of Aboriginal people, Statistics Canada should develop a plan to carry out the Labour Force Survey on reserves with funding from the federal government and the full cooperation of the reserve authorities who should recognize that Aboriginal people themselves are the main beneficiaries of better LMI on reserve.

Immigration policy makers and the immigrants, themselves, both need to have access to the best possible LMI. This means that the policy makers require the information to ensure that the appropriate number and class of immigrant are selected to give them the best chance of successfully integrating into the Canadian labour market. It also means that the immigrants, themselves, require the best LMI to help them perform well in the labour market, by finding jobs suitable for their qualifications that pay adequate wages. This is of particular importance given that in a few years the entire net² growth of the labour force is expected to result from immigration.

More and better data on labour mobility are required, including information on the increasingly important phenomenon of itinerant workers who work in one province, such as Alberta, and maintain a permanent residence in another, such as Newfoundland and Labrador.

Better information is required on “local labour markets” to help people find a job, themselves, in their own area, and to assist action committees charged with running adjustment programs to help displaced workers to become reemployed. In the context of the current economic downturn small area data therefore becomes increasingly valuable. Small area data should be considered to encompass entire provinces and territories with smaller populations.

We propose that the FLMM DM group, with the Chief Statistician as an ad hoc member, set as one of its first priority items of business to commission a study on meeting small domain data needs pertaining to jurisdictions with smaller populations, small geographic areas and detailed occupational groups - pulling together efforts to date on improving the collection of the data, identifying other possibilities for obtaining estimates to explore, creating the mechanism to implement the production of the required small domain data. Such a study may suggest that Statistics Canada may be able to efficiently probe further into local labour markets and provide more granular small domain data. That might involve extensions to the Labour Force Survey, more extensive and efficient use of administrative data and small area estimation techniques. We believe pushing further

² The net growth reflects newcomers (i.e. youth and immigrants) minus people who retire or exit the labour force.

with this top-down approach can improve small domain data. However, we are skeptical that this will provide the whole answer. We do not believe that Statistics Canada's statistical methodologies and principles will be sufficient to permit it to produce the small area data sought by many because of the inherent limitations of surveying small populations. And there will always be an inherent unease with the dependence on assumptions and model parameters necessary to make estimates that go beyond simply collecting and compiling data. Complementary information gathering will be needed from a more bottom-up approach, thoroughly grounded on an understanding of the diverse local labour market scenes.

If this is to be done through Service Canada (at least outside Québec), then the federal government will have to establish the guiding framework and to provide the required resources. On the other hand, if, consistent with the spirit of devolution, it is to be left to the provinces to assume a much greater role for providing small domain data, then the provinces will need to quickly mount the required efforts and coordinate their activities.

Education Data

The information that is currently available on our education systems is limited. The university data is too aggregated and we need to be able to track information at the discipline level.

Petroleum Human Resources Council of Canada

The fact that the data for colleges on student enrolment, graduates, costs, and staff is five years out of date was widely deplored. It came out loud and clear in our consultations on education data that the data collection mechanisms need to be modified to reflect the increased diversity of the postsecondary education system in Canada including private sector institutions and the emergence of polytechnics and baccalaureate-degree-granting colleges and institutions in order to better capture the inter-sector mobility and provide more comprehensive information. Data must also be available to assess the literacy, numeracy, sciences and problem solving skills of the adult population. In this regard, Canada falls behind many OECD countries. We obviously need better and more timely data designed to meet the LMI needs of all users including students, job seekers (current and future), educational institutions, educational career advisors, policy makers, employers, unions, and government agencies.

Data Analysis and Interpretation

The annual Canadian Occupational Projection System (COPS) exercise, which produces occupational projections used by the FPT governments and sector councils, is considered to be useful. These projections, their provincial counterparts and related publications provide valuable LMI that is used by policy-makers and analysts to identify trends in occupational and associated skill demand, notably for the attraction of skilled

immigrants. They are also used by postsecondary institutions in education planning and programming and by students, job seekers and career changers when making education and career decisions. However, there have been concerns expressed by provincial governments about its reliability and timeliness. A first step towards improving the system would be to carry out a user survey to determine COPS future directions/viability, and to provide specific ideas on how to fill in the information gaps that currently exist. The survey should address the national, provincial and occupational dimensions of COPS. A particular suggestion that could be considered is the utility of producing scenarios. In addition, the exercise itself and the references to it in other key documents such as *Job Futures* cannot be allowed to get out of date. Continuous efforts will be required to improve COPS and to make sure it meets the needs of users. More information needs to be released and with a shorter time delay. In particular, its labour supply projections should be made publicly available on a timely basis soon after they have been shared with provincial and territorial governments.

To ensure that the National Occupational Classification (NOC), which serves as the basis for analysis of the occupational composition of the labour force, keeps up with the fast-evolving labour market and is meaningful for users, additional efforts need to be made to periodically review jobs for the National Occupational Classification. This means that HRSDC and Statistics Canada should be willing to make major structural changes every five years when they revise the NOC, if required, to keep up with the more rapid change in the occupational structure of the Canadian labour market.

Raising Awareness of LMI

In many instances, the issue is not the existence of LMI, but rather users' lack of awareness of those LMI sources. Employers, particularly SMEs, often lack the time and resources to search extensively for information.

Canadian Manufacturers and Exporters

Once a better LMI system has been built, a major effort needs to be mounted to increase users' awareness of the available LMI and its uses. Canada can have the best LMI system in the world, but if users do not know about it, what is the point? The available LMI needs to be better publicized and users, particularly intermediaries, need to be offered LMI training.

Data Dissemination

The best way to end the confusion over the availability of LMI and to facilitate access for all Canadians is for the FLMM to make sure that a one-stop single portal entry for LMI is established. The site should, following the example of the workingincanada.ca website, be user friendly and have extensive links to pull in information from other LMI sites, but it would do it in a much more user friendly way that would provide customized LMI. But such a

portal cannot replace the Statistics Canada's website as the main source of basic data on the labour force. The portal should be flexible enough that it can be utilized seamlessly by the provinces and territories as part of their own LMI systems, if they so choose.

Jobbank.gc.ca, the website that provides a listing of jobs for jobseekers, needs to be improved to include a larger proportion of available jobs, including more highly-skilled jobs, and to develop more partnerships with private sector recruitment agencies to include their job postings as well.

Funding

Statistics Canada's practice of charging for data and holding proprietary rights against secondary distribution even when users have purchased the data is at the root of a lot of the frustrations we observed, such as users turned off seeking the data, and groups inhibited from accessing data they would have analyzed and interpreted for others. Charging for data is a key distinction between Canada and OECD countries we identified as having best practices. Even though they have made significant progress in recent years, we strongly believe that Statistics Canada should get on the international bandwagon and offer most of its LMI on its website to be downloaded for free. And it should only continue to charge on a cost recovery basis for specially requested additional tabulations or analysis.

It should go without saying that funding to Statistics Canada for the production of labour market statistics will need to be increased to cover all the costs of meeting our recommendations. This includes the costs of: the lost CANSIM revenue; the required improvements in labour market data; and the surveys currently funded on a year-to-year basis by HRSDC.

The Cost of Our Proposals

The cost of our proposals to improve Canada's LMI system is summarized in Table 1 under these broad headings: the establishment of an adequately-funded permanent secretariat for the FLMM; the general strengthening of Statistics Canada labour data program; establishing a new vacancy rate survey; establishing a new labour price survey; retaining and improving the Workplace and Employee Survey; the strengthening of the local labour market analysis function at Service Canada (this function seems to be already well-served in Québec by Emploi-Québec); retaining the National Survey of Graduates; securing funding for other education surveys; improving COPS and enhancing its provincial projection capabilities; raising the public awareness of LMI through advertising and outreach; the establishment of a state-of-the-art LMI portal; the modernization of the Job Bank and other HRSDC "national LMI foundational systems"³; and making Statistics Canada website data free. We estimate that an initial cost of \$21 million would be incurred to implement our proposals, and that the ongoing cost would be \$49.4 million per year. Of this additional money, \$41 million would go to Statistics Canada.

³ See page 24 for a description and explanation of these systems

Respecting sources of funding, the panel believes filling national data gaps and making improvements to existing federal products (e.g. Job Bank, COPS and other HRSDC national LMI foundational systems) is the financial responsibility of the federal government. However, we also recognize that all levels of government stand to benefit from improvements to the LMI system. It is therefore recommended that financial support for a permanent FLMM secretariat, as well as development of a single LMI portal, be cost shared between federal and provincial/territorial governments. Further, while not listed above, there is also a need to improve many aspects of provincial and territorial LMI. Funding for these improvements should come from the provinces and territories themselves.

Priorities

There is a danger in providing rankings of priorities. It gives governments and the other stakeholders an easy way to simply ignore recommendations below a certain cut-off. We have not put forward any recommendations we do not feel are important or could not fairly readily be implemented. The proposed costs of our recommendations are relatively modest in the scale of governments and compared to the benefits of a better LMI system. In short, we believe all the recommendations can and should be acted upon.

Our top priority must be to ensure the preservation of what we already have by way of an LMI system. And, let there be no doubt that it is under severe pressure. It is threatened by cutbacks at Statistics Canada and HRSDC that have led and may lead to the elimination of critical surveys and valuable programs and services. The two main surveys at issue are the Workplace and Employee Survey and the National Graduate Survey. But others including a whole range of education surveys are also at risk. In addition, the funds allocated to local labour market analysis in Service Canada offices across the country have been continually squeezed, undermining their ability to provide desired services.

In addition, the LMI system could be threatened by the very devolution of responsibilities that is ongoing. It does not need to be that way. We have made the case that provincial governments should be well suited to meet the labour market requirements of their provinces. But we have also warned that much will be lost if there is not effective national coordination. That is why we believe that having the FLMM stepping up to this role of catalyst, coordinator and monitor is a top priority. In our view, much else that we call for will fall into place if this is done.

In order to preserve the LMI system we have, and to support the policy devolution, a top priority must be to ensure we have good data at the national and provincial level, including for small provinces and territories. This should be as an integral part of the national statistical system. Some of the smaller provinces and the territories feel that they do not have access to reliable LMI even at the level of their entire jurisdiction. One option is to pay Statistics Canada for over-sampling on key surveys such as the Labour Force Survey. It is not right in a federation where the provinces and territories

increasingly have the labour market policy responsibilities that they should be charged extra for over-sampling to get the adequate, reliable coverage they need to do their job.

Provinces and territories are not the only ones who should not be charged for available publicly funded data. We attach a very high priority on making all the labour market data on CANSIM available free of charge. We believe that this is critical to ensure the greater and more efficient use of LMI by all players.

Beyond making the existing LMI system work as it should, we have provided a lot of suggestions for improvements. While we consider them all important, we attach different degrees of priority to them.

A high priority has to be closing obvious data gaps. Our suggested priorities can be viewed in blocks. In our first and highest priority, block would be vacancy rates, gross flows, Aboriginal peoples, immigrants, and educational data. In our second, and lower priority, block would fall the labour price index, layoff data, and working conditions.

The single highest priority identified by users was better small domain data. We thus think it is absolutely essential that Service Canada/local provincial offices get their act together and draw on Statistics Canada and their own local intelligence networks to produce and make available the small domain LMI products and services demanded by users.

Another priority should be making more analysis available at the provincial and local level. The COPS system has much to offer in terms of information on occupational demand. It should be a priority for HRSDC to make sure that the information provided to the provinces and other stakeholders is timely, up-to-date and meets their needs.

Finally we regard it to be a very high priority for governments to improve the dissemination and awareness of LMI. Our chief recommendation here is for the establishment of a single portal that provides seamless access to all the available LMI. This means that a greater degree of rationalization, integration and linkage has to be established for what has become to many users a bewildering array of government websites.

Implementation

To ensure that our recommendations are not simply forgotten as happens to all too many advisory reports, we encourage the FLMM to establish a formal process to review all the recommendations in our report. In our view, this should include the preparation in one year of a follow-up LMI implementation report indicating: which of our recommendations were implemented; which were not and why; and what could be done to remove any barriers to implementation that might have been encountered.

Table 1
Estimated Cost of Our Proposals to Improve LMI

	Initial	Ongoing
Permanent Secretariat for the FLMM		\$1.5 million
10% general increase in Statistics Canada funding for labour data		\$5 million
New Vacancy Survey		\$8 million*
Labour Price Index		\$5 million*
Retain and Improve Workplace and Employee Survey		\$5 million
Strengthening local labour market analysis by Service Canada		\$4.6 million
Retain National Graduate Survey		\$1.5 million
Secure Funding for Other Education Surveys***		\$13.5 million
Improve COPS and enhance its provincial projection capabilities		\$0.3 million
Raising public awareness of LMI		\$1 million
Establishment of an FLMM Portal	\$5 million	\$1 million
Modernization of Job Bank	\$7 million	\$0
Modernization of HRSDC national LMI foundational systems	\$9 million	\$0
Making Statistics Canada Web-site Data Free of Charge		\$3 million**
Total	\$21 million	\$49.4 million

Note: All federal, provincial, and territorial governments will need to increase funding for the proposed improvements to the LMI system. There will also be a need to improve many aspects of provincial and territorial LMI that are not listed but which will require additional provincial and territorial funding.

* Ramped up over 4 years to equal this amount when fully implemented.

** This pertains to making all data free on the website, not just LMI.

*** Existing educational surveys include: Programme for International Student Assessment (PISA), Youth in Transition Survey (YITS), Access and Support to Education and Training Survey (ASETS), Postsecondary Student Information System (PSIS), Registered Apprenticeship Information System (RAIS), National Apprenticeship Survey (NAS), and Survey of Earned Doctorates (SED) and Programme for the International Assessment of Adult Competencies (PIAAC).

Our Recommendations for Action

We first set out the general nature of our recommendations in seven areas. Then we provide the specific recommendations under the general subject matters. Finally, we bring together the funding estimates and key recommendations to explain what can be achieved from the modest investments called for.

1. **Governance:** The FLMM should assume the leadership role and provide the broad strategic direction needed to manage and coordinate Canada's overall LMI system.
2. **Data collection:** Statistics Canada should fill in the main gaps in the national LMI system and work with the provinces/territories to fill the gaps that are more specific to their circumstances.
3. **Data analysis and interpretation:** Governments should improve LMI-related data analysis and interpretation in order to make sure the information is relevant, well targeted to different types of users and easy to understand.
4. **Raising awareness of LMI:** Once a better LMI system has been built, a major effort needs to be mounted by the FLMM, Statistics Canada and FPT governments in order to ensure that Canadians are aware of the available LMI and its uses.
5. **Data dissemination:** The FLMM, Statistics Canada and FPT governments should improve the dissemination of LMI by making it more easily accessible, timely and user-friendly.
6. **Funding:** All FPT governments should contribute financially to the improved LMI system. Statistics Canada should provide all basic national labour market statistics free of charge on its website.
7. **Implementation:** The FLMM should produce a follow up implementation report in one year that will address the status of each recommendation.

1 Governance

- 1.1 The FLMM, whose LMI Working Group has already established a very good rapport among jurisdictions on LMI, should be recognized by FPT governments and all Canadians as the Pan Canadian body responsible for the coordination of LMI.
- 1.2 The FLMM should proactively assume the leadership role and provide the broad strategic direction needed to manage and coordinate Canada's overall LMI policy.
- 1.3 The FLMM should prepare a plan for an improved LMI system drawing on our report that should:
 - a. be based on meeting future needs as opposed to “recording history;”
 - b. identify the data needed to fulfill the policy responsibilities (that can realistically be collected at a “reasonable cost”);
 - c. establish priorities and trade-offs for LMI data;
 - d. specify adequate and certain funding for the LMI needs of their respective governments and the private sector;
 - e. provide for the interpretation and dissemination of the data to Canadians who can benefit from it; and
 - f. make sure that a single portal is established to provide all users with seamless access to all the available LMI regardless of source.
- 1.4 An essential first step in managing the LMI system and making sure that governments provide the LMI demanded by Canadians in a cost effective manner is to actually keep track of the total amount of money being expended in Canada on LMI and how it is being allocated.
- 1.5 The FLMM should serve as a clearinghouse for labour market research and should sponsor critical research needed to fill important information gaps.
- 1.6 FLMM will require a permanent secretariat to provide continuity in the exercise of its enhanced responsibilities for the coordination of LMI. Funding to support the secretariat should be cost shared among FPT jurisdictions, because it will help achieve the policy objectives of all governments.
- 1.7 The FPT governments should better coordinate their requests to Statistics Canada for labour market data so as to be able to get better and more cost-effective data.
- 1.8 To further coordination in the development and collection of labour market data, the Chief Statistician should be made an ad hoc member of the Deputy Minister's Committee of the Forum of Labour Market Ministers and be invited to regularly attend FLMM meetings at the ministerial level when LMI issues are discussed.

- 1.9 The FLMM should establish some kind of formal consultation mechanism with private sector organizations such as sector councils, organized labour, business, and equity groups to ascertain their views on the collection, analysis and dissemination of LMI in order to make sure that the LMI produced is better tailored to meet their needs.
- 1.10 The FLMM should explore the possibility of having a representative participate in Statistics Canada's Advisory Committee on Labour Statistics.
- 1.11 As part of the overall governance of LMI, the FLMM needs to coordinate with the Council of Ministers of Education of Canada to ensure that education data provide the needed LMI and that LMI meets the needs of educators and learners.
- 1.12 There is also a definite need to have the FLMM and CMEC work together to develop and effectively coordinate an educational LMI plan. This will involve getting the people on the ground together (universities, colleges, polytechnics, unions, high schools, researchers, employers, economic development) as well as the provincial and territorial ministries concerned to work out the broad directions and details of the plan.
- 1.13 The postsecondary education function in Statistics Canada needs to be realigned by "elevating it" and providing predictable funding in order to make it more accountable and ensure the data are provided in a more timely and relevant fashion.

2 Data Collection

- 2.1 Statistics Canada should fill in the main gaps in the national LMI system and work with the provinces/territories and other stakeholders to fill the gaps that are more unique to their circumstances. At a minimum, provinces/territories and others should have a choice of using the available Statistics Canada data at a "reasonable cost" without being forced into collecting their own duplicate data. The cost of filling national data gaps should be borne by the federal government.
- 2.2 The national statistical system should provide reliable labour market data for all provinces and territories, including the smallest jurisdictions, even if that means increases in sample size in the key surveys of the labour market, including the Labour Force Survey.
- 2.3 There is a need to expand coverage of Labour Market Information to include a national job vacancy survey, taking into consideration existing surveys at the provincial territorial level.
- 2.4 An overall labour price index, such as is produced in Australia, should be introduced in Canada, taking into consideration existing surveys at the provincial/territorial level.

- 2.5 Better data on wages and total compensation are needed to inform the labour market choices of employers and employees.
- 2.6 The Workplace and Employment Survey needs to be reinstated and should be reviewed to see if it could be usefully expanded to include additional information on working conditions such as that contained in the EU Working Conditions Survey.
- 2.7 Women will benefit from overall improvements in LMI as almost all labour market data are broken down by gender. But many women have specific interests in more information on the conditions of work that go beyond straight compensation, including information on flexible time, career paths and the availability of arrangements for child and elder care. This broader perspective on work conditions should be addressed in any new surveys.
- 2.8 Data on purchasing-power-adjusted wage levels by province and Census Metropolitan Areas are required to make more informed decisions on the desirability of interprovincial migration as a way to find more remunerative jobs.
- 2.9 In order to better understand the dynamics of Canadian labour markets, Statistics Canada should produce data not just on net job changes as in the LFS and SEPH, but also on the gross flows as is done in the United States. This will require Statistics Canada to overcome the estimation problem that caused it to previously halt production of gross flows data.
- 2.10 To shed light on the phenomenon of plant closures and layoffs, Statistics Canada should collect and publish the data on the number of employees laid off that employers are required to report by federal and provincial governments.
- 2.11 The broader measures of joblessness and underemployment, which provide a better picture of slack in labour markets, and which are already produced by Statistics Canada, should be featured prominently in the LFS release since unemployment is climbing and likely to become a major issue.
- 2.12 Better information needs to be collected and disseminated on disadvantaged participants in the labour market such as people with disabilities, Aboriginal peoples off and on reserves, youth, older workers, visible minorities, and immigrants.
- 2.13 Since it is particularly important that better information be collected on the labour market performance of Aboriginal people, Statistics Canada should develop a plan to carry out the Labour Force Survey on reserves with funding from the federal government and the full cooperation of the reserve authorities who should recognize that Aboriginal people themselves are the main beneficiaries of better LMI on reserve. A number of avenues should be explored to improve labour market data of Aboriginal people, particularly those on reserve. Effective use of the First Nation Aboriginal Human Resources Development Agreements (AHRDA) will be critical. Labour market questions could possibly be added to other surveys

now being done on reserves. Collaborative efforts with entities such as the sector councils, academic researchers and labour organizations could be enhanced.

- 2.14 Immigration policy makers and the immigrants themselves both need to have access to the best possible LMI.
 - a. The policy makers require the information to identify immediate and medium-term labour market pressures in order to ensure Canadian employers get the skills they need, faster and to make the immigration system more efficient and competitive.
 - b. LMI may also be helpful for immigrants themselves as they seek information along their path to putting their skills to work in Canada.
- 2.15 The Maytree Foundation proposal to establish a searchable database of future Permanent Residents that will allow employers to view the resumes of future immigrants (with the permission of the applicant) has merit and deserves serious consideration.
- 2.16 The Immigration Data Base (IMDB) compiled by CIC which contains information on all immigrants landing since 1980 and the Longitudinal Administrative Database (LAD) containing a 20 per cent sample of all T1 tax returns filed should be used along with the Labour Force Survey (LFS) to monitor and report annually on the performance of immigrants in the labour market. In order to monitor and report annually on the labour market performance of immigrants, the IMDB would need to be updated in a more timely fashion (currently there is a three year lag in the data).
- 2.17 More and better data on labour mobility are required, including information on the increasing importance of itinerant workers who work in one province such as Alberta and maintain a permanent residence in another such as Newfoundland and Labrador.
- 2.18 Better information is required on “local labour markets” to help people find a job themselves in their own area, and to assist action committees charged with running adjustment programs to help displaced workers to become reemployed.
- 2.19 Specifically, we propose that the FLMM DM group with the Chief Statistician as an ad hoc member (recommendation 1.8 above) should set as one of its first priority items of business to commission a study on meeting small domain data needs pertaining to jurisdictions with smaller population, small geographic areas and detailed occupational groups - pulling together efforts to date on improving the collection of the data, identifying other possibilities for obtaining estimates to explore, creating the mechanism to implement the production of the required small domain data.

- 2.20 If Service Canada is to be the chosen instrument to fulfill the demand for more small domain data (at least outside Québec), then the federal government will have to take the necessary steps to ensure that this is done and that the necessary resources are provided.
- 2.21 On the other hand, if provinces are going to assume a much greater role under devolution for providing small domain data, then they will need to quickly mount the required efforts.
- 2.22 While Small Area Estimation techniques are unlikely to satisfy much of the needs for information on local labour markets, Statistics Canada should continue to explore the methodologies and possibilities of these techniques.
- 2.23 More work needs to be done exploring the feasibility of using administrative data files to produce useful and reliable LMI.
- 2.24 As LMI needs are constantly changing, there needs to be a capacity to conduct special surveys/studies on major emerging phenomena in the labour market.

Education Data Collection

- 2.25 All LMI data collection mechanisms need to be modified to reflect the increased diversity of the postsecondary education system in Canada including private sector institutions and the emergence of polytechnics and baccalaureate-degree-granting colleges and institutions in order to better capture the inter-sector mobility and provide more comprehensive information.
- 2.26 There should be an education section in the main LMI portal with data/information links provided for specific types of users such as students, job seekers (current and future), educational institutions, educational career advisors, policy makers, employers, unions, and government agencies.
- 2.27 Special effort needs to be made in this section to link educational training opportunities to careers.
- 2.28 The provincial and federal governments need to collect educational LMI in a way that allows for the reporting of and comparison to OECD data, which is not currently the case.
- 2.29 Education-related institutional data should be complete and comparable covering employees (full-time and part-time), students (full-time and part-time), programs (degrees, diplomas, certificates, and apprenticeships), fields of study of students and graduates, across all types of institutions (public, private, universities, colleges, polytechnics, and institutes), budgets and expenditures.

- 2.30 Educational outcome measures (employment, income, credential completion, employer satisfaction, graduate satisfaction, etc.) need to be routinely collected and disseminated.
- 2.31 Agreement across the provinces and territories needs to be reached on the creation of an educational identification number (EIN) that would allow for a better tracking of Canada's intellectual and skills capacity and the contributions being made by all postsecondary education sectors.
- 2.32 Data collecting on continuing education/lifelong learning needs to be enhanced with attention to the role and contribution of the private sector.

3 Data Analysis and Interpretation

- 3.1 The annual COPS exercise, which produces occupational projections used by the FPT governments and sector councils, is very useful and should be continued. Its methodology needs to be continuously updated and improved to maintain the usefulness of the projection.
- 3.2 A first step towards improving the system would be to carry out a user survey to determine COPS future directions/viability, and to provide specific ideas on how to fill in the information gaps that currently exist such as by producing scenarios to better inform users of the range of likely outcomes.
- 3.3 Since there is a need for labour supply projections, those prepared by HRSDC as part of the annual COPS exercise should be made publicly available on a timely basis soon after they have been shared with provincial and territorial governments.
- 3.4 Recognizing the trade-offs between consistency over time and relevance, efforts need to be strengthened to periodically review jobs for the National Occupational Classification to ensure the NOC keeps up with the fast-evolving labour market and are meaningful for users.
- 3.5 HRSDC and Statistics Canada should be willing to make major structural changes every five years when they revise the NOC, if required, to keep up with the more rapid change in the occupational structure of the Canadian labour market.
- 3.6 More research and analysis of the impact of LMI on employment and productivity is needed. There is an opportunity for research departments in government, universities, think tanks or the private sector to contribute to this as well as to addressing more general data analysis and interpretation needs for a better LMI system.
- 3.7 The sector councils play a vital role in data collection, analysis, interpretation and dissemination but consideration should be given by the FLMM and the federal government, in consultation with the councils, on how they could be even more effective. For example, the short-term aspect of their funding impedes building ongoing capacities.

4 Raising Awareness of LMI

- 4.1 Once a better LMI system has been built, building on what is already working well in different jurisdictions, a major effort needs to be mounted to make users aware of the available LMI and its uses.
- 4.2 As principal generators of LMI, Statistics Canada and HRSDC and provincial/territorial governments should:
 - a. Update or prepare user guides to LMI;
 - b. Expand their outreach to publicize their LMI products;
 - c. Improve their search engines so that LMI can be more easily found by users;
 - d. Make more LMI available on their websites; and
 - e. Make the information provided by COPS more user-friendly.
- 4.3 Statistics Canada should make sure that LMI is not only available on their system but thoroughly covered in their releases in The Daily and in special analysis in the monthly Canadian Economic Observer, both of which receive widespread media coverage.
- 4.4 In order to make sure that users find the LMI they need and use it appropriately, there is a need for more publicity and training on accessing and using LMI. This includes media advertisements about Jobbank, high school guidance courses to teach how to access and use LMI, and Statistics Canada out-reach programs. For youth in particular, we will have to use the new media effectively to get them to the sites offering the information they need. Intermediaries, such as career counsellors, and more formally the FLMM Career Development Services Working Group, can play a key role here.
- 4.5 The HRSDC Regional LMI Network should once again play a key role in facilitating a raised awareness, provide training, and access to LMI.

5 Data Dissemination

- 5.1 The FLMM should establish a one-stop, single portal entry for LMI with a users guide up-front differentiated by type of user (business, workers, newcomers, students) and with extensive links to pull in information from other LMI sites. Funding for the portal should be cost shared among FPT jurisdictions, because it will help achieve the policy objectives of all governments.
- 5.2 The portal should provide information in a way that recognizes the need for users to have data provided in both a qualitative and quantitative fashion as well as providing alternative points of view.

- 5.3 If the FLMM is unable or unwilling to assume responsibility for establishing this single portal, HRSDC should take responsibility for the execution of this important task.
- 5.4 Statistics Canada's website will continue to be the main source of basic data on the labour market and will also need to be linked using an intelligent interface.
- 5.5 The portal should be flexible enough that it can be utilized seamlessly by the provinces and territories as part of their own LMI systems with the same look and feel as is currently being done with the workingincanada.ca website, but should not seek to replace existing provincial systems, such as that in Québec, which are already working well.
- 5.6 Jobbank.gc.ca, the website that provides a bilingual labour exchange free of charge for jobseekers and employers, needs to be improved to include a larger proportion of available jobs, including more highly-skilled jobs, and to develop more partnerships with private sector recruitment agencies to include their job postings as well.
- 5.7 Job Futures, which is produced by HRSDC using COPS, needs to be improved by keeping it more up to date and by making sure that its coverage of occupations stays abreast of the fast evolving labour market.
- 5.8 Information on the labour market performance of immigrants should be added to the workingincanada.ca website to enable immigrants to more realistically assess their prospects of working in their preferred occupation in Canada.

6 Funding

- 6.1 Statistics Canada should follow the practice in all other OECD countries that provide basic labour market time series free of charge on their websites and should also provide all of its LMI on its website for free download, only continuing to charge on a cost recovery basis for specially requested additional work.
- 6.2 Funding to Statistics Canada for the production of labour market statistics needs to be increased to cover the costs of labour data surveys without secure funding, recommended improvements in labour market data, and the lost CANSIM revenue from making data available free.
- 6.3 Statistics Canada's funding should be core funding that is sufficient to finance the production and dissemination of the existing range of labour market data and not provided on a year-to-year basis as is currently done by HRSDC for many of the surveys that supply the required data.

7 Implementation

- 7.1 The FLMM should establish a process to review our report and become a catalyst for change, which in our view would include the preparation in one year of a follow-up LMI implementation report indicating: which of our recommendations were implemented; which were not, and why; and what could be done to remove any barriers to implementation that might have been encountered.

Benefits from Making the Modest Investments to Act Upon Our Recommendations

GOVERNANCE – is essential to the development of an effective LMI system	
Proposal/Purpose/Projected Cost	Rationale
<p>Proposal: Permanent Secretariat for the FLMM</p> <p>Purpose: To ensure continuity, F/PT coordination and follow through for LMI enhancements</p> <p>Projected Cost: \$1.5 million ongoing</p>	<p>Numerous jurisdictions are responsible for and benefit from LMI. The FLMM represents an ideal forum to play an oversight function because of its experience with FPT coordination and its established rapport among jurisdictions on LMI via the LMI working group.</p>
DATA COLLECTION – contributes to efficiency and economic growth	
Proposal/Purpose/Projected Cost	Rationale
<p>Proposal: 10% General Increase in Statistics Canada Funding for Labour Data</p> <p>Purpose: To fill LMI information gaps</p> <p>Projected Cost: \$5 million ongoing</p>	<p>The current data portfolio is being eroded and is under significant budgetary stress.</p> <p>Current recessionary pressures mean that more Canadians will need access to LMI. By filling gaps in the system, additional LMI can ensure Canadians can face the current economic climate with more confidence, less anxiety and a greater understanding of available options. Further, during economic recovery better data will also be needed to cope with the anticipated skilled labour shortage.</p> <p>Funding would seek to improve LMI and its multiple uses by better examining important issues such as:</p> <ul style="list-style-type: none"> • Gross Labour Flows, by providing a more accurate picture of labour market conditions than do currently available net labour flows, can help labour market policy planning in order to mitigate the effects of economic shocks; • The performance of underrepresented groups such as Aboriginal Peoples, people with disabilities, visible minorities, youth and older workers; • The labour force performance of immigrants; and • Labour mobility
<p>Proposal: Create a Vacancy Survey</p> <p>Purpose: To provide information about the distribution of present employment opportunities and insight into the supply of labour</p> <p>Projected Cost: \$8 million ongoing⁴</p>	<p>A vacancy survey would help improve the efficiency of the Canadian labour market by providing comprehensive information on available jobs and skills.</p> <p>Vacancy information is critical in minimizing the time and effort of recruitment and job search as well as identifying structural sources of unemployment that result from a mismatch of skills with jobs. It would also serve to inform policies and programs respecting education, training, skilled immigrants and temporary foreign workers.</p>

⁴ Ramped up over 4 years to equal this amount when fully implemented

<p>Proposal: Create an overall labour price index (LPI) such as is produced in Australia</p> <p>Purpose: To measure change in the total cost of labour</p> <p>Projected Cost: \$5 million ongoing*</p>	<p>Data on total compensation provided by an LPI would serve a variety of uses. It could lessen conflict and ensure appropriate compensation coming out of collective agreement negotiations; give the Bank of Canada additional data to inform inflation policy; offer valuable insight on the state of the current social safety net; and shed light on the relationship between total labour cost and productivity.</p>
<p>Proposal: Retain and Improve Workplace and Employee Survey (WES)</p> <p>Purpose: To provide reliable information on labour market issues as they pertain to both employers and employees</p> <p>Projected Cost: \$5 million ongoing</p>	<p>By providing a comprehensive picture of current labour market conditions as they pertain to education, training innovation, labour adjustment, workplace practices, industrial relations and industry development, a modernized WES would be useful in the analysis of long-term labour market trends and to inform professional decisions.</p> <p>Could also inform a number of other proposed LMI initiatives (e.g. vacancy survey and labour price index).</p>
<p>Proposal: Strengthen Local Labour Market Analysis</p> <p>Purpose: To provide an enhanced knowledge of labour market conditions at the local level</p> <p>Projected Cost: \$4.6 million ongoing</p>	<p>Understanding local labour market conditions is essential to the better matching of workers and employers. Local labour market analysis can support the needs of:</p> <ul style="list-style-type: none"> • Laid-off workers and employers struggling to make business decisions. • Local governments concerned with community investments <p>Availability of local labour market data could also better inform localized policy decisions and has thus been a major concern of PT governments and many stakeholders.</p>
<p>EDUCATION DATA COLLECTION – is necessary to remain competitive now and in the future (i.e. we are not particularly competitive now)</p>	
Proposal/Purpose/Projected Cost	Rationale
<p>Proposal: Retain National Graduate Survey (NGS)</p> <p>Purpose: To ensure we continue to have reliable information on the labour market experience/outcomes of graduates of postsecondary education programs</p> <p>Projected Cost: \$1.5 million ongoing</p>	<p>The NGS enhances the ability of institutions to develop labour demand driven programs. It also ensures students get timely and relevant information about the influence of postsecondary education on occupational achievement; the relationship between programs of study and employment subsequently obtained; graduate job and career satisfaction; and the type of employment obtained related to career expectations and qualification requirements.</p> <p>These data also underpin the Canadian Occupational Projections System.</p>

<p>Proposal: Secure funding for other education surveys</p> <p>Purpose: To give a better picture of the education and training system</p> <p>Projected Cost: \$13.5 million ongoing</p>	<p>The movement towards more complex and non-linear paths through postsecondary education (including life long learning, apprenticeship and continuing or workplace education) makes the tracking of educational attainment difficult. By providing more complete information on skills, training and education in Canada, these surveys will help ensure education decisions, curriculum development and government programs will best reflect the needs of a competitive knowledge based economy.</p>
DATA ANALYSIS AND INTERPRETATION – can make sense of available information	
Proposal/Purpose/Projected Cost	Rationale
<p>Proposal: Improve COPS and enhance its provincial projection capabilities</p> <p>Purpose: To enhance the reliability and coverage of medium-term labour market projections across industries and occupations</p> <p>Projected Cost: \$300 thousand ongoing</p>	<p>Reliable labour market projections are required to inform policies aimed at addressing future skills demand; ensure our education system is able to reflect changing educational requirements in a timely manner; and create a globally competitive workforce by providing students and career changers with the information necessary to make positive education and career decisions.</p>
RAISING AWARENESS OF LMI – will increase the information's use	
Proposal/Purpose/Projected Cost	Rationale
<p>Proposal: Raising Public Awareness of LMI</p> <p>Purpose: To allow Canadians to take advantage of available LMI through better marketing, search engines and user friendly websites</p> <p>Projected Cost: \$1 million ongoing</p>	<p>LMI can only be useful if it is known and used. The current system is poorly understood. The proposal would create a more level playing field for small to medium sized enterprises (SMEs) which have historically been less active in using LMI than larger, better funded organizations.</p> <p>The proposal could also improve the productivity of the Canadian labour force by ensuring more students, employers and jobseekers are aware of and know how to use available LMI. And would prevent missed opportunities arising from a lack of basic information on labour market prospects.</p>
DATA DISSEMINATION – will improve access and hence use of LMI	
Proposal/Purpose/Projected Cost	Rationale
<p>Proposal: Establishment of a Portal</p> <p>Purpose: To provide seamless links to multiple sources of LMI</p> <p>Projected Cost: \$5 million initial, \$1 million ongoing</p>	<p>A portal would improve the dissemination of LMI by making LMI easier to access and understand.</p> <p>The establishment of a portal would also enhance the compatibility, consistency and quality of LMI.</p>

<p>Proposal: Modernizing of Job Bank</p> <p>Purpose: To enhance Job Bank’s ability to serve as an informational forum for jobseekers and employers</p> <p>Projected Cost: \$7 million initial, \$0 ongoing</p>	<p>Job Bank is already a well known and highly used tool. By making it more user-friendly and attractive to both P/T governments and the general public, Job Bank has the potential to serve as an important source of LMI.</p> <p>An important improvement will be to make sure that Job Bank has more complete representation of the “better” jobs. At present, it seems skewed toward lower-paying jobs.</p> <p>Modernizing Job Bank can also support SMEs by providing an effective and low cost avenue for recruitment.</p>
<p>Proposal: Modernization of HRSDC national LMI foundational systems</p> <p>Purpose: To bring key national LMI foundational systems up to date</p> <p>Projected Cost: \$9 million initial, \$0 ongoing</p>	<p>The information generated by these systems include the basic building blocks for labour market information used by business, government and the public at large.</p> <p>These foundational systems have not seen any investment in their technology infrastructure for many years and badly need modernization.</p> <p>Without fixes to these systems, the success of other LMI investment (e.g.. a single LMI Portal, changes to the NOC, better local LMI) will also be challenged.</p>
<p>Proposal: Making Statistics Canada Website Data Free of Charge</p> <p>Purpose: To improve access to important sources of LMI</p> <p>Projected Cost: \$3 million ongoing</p>	<p>By requiring users to provide billing information each time they wish to acquire new data, Statistics Canada’s current cost recovery approach creates disproportionate frictional costs for acquiring data. In relation to the revenues it generates for Statistics Canada, the current system is unnecessarily complex, time consuming and results in considerable inconvenience for users. It is also at odds with the practice of most OECD countries, including the United States.</p> <p>The current system has also resulted in uneven information availability across jurisdictions and groups of users depending on capacity to pay.</p>
FUNDING – can make recommendations a reality	
Total Projected Cost	Rationale
<p>Total Projected Cost of LMI Proposals:</p> <p><i>Initial:</i> \$21 million</p> <p><i>Ongoing:</i> \$49.4 million</p>	<p>Canadian society is entering a period of transformation. The wave of boomer retirements, the growing role of immigrants and the Aboriginal baby boom have important labour market dimensions more easily navigated with relevant and timely LMI.</p> <p>The current recessionary climate will increase demand for LMI as people are faced with decisions of where to seek and find work, what career to pursue and which skills to develop in order to pursue it. An improved LMI system can help people make these decisions with less anxiety and more certainty.</p> <p>Funding requirements are relatively modest when compared to the size of LMI based economic decisions and activities undertaken by workers, firms, learners, immigrants and governments.</p>

1. Introduction

1.1 Who We Are

We are the Advisory Panel on Labour Market Information (LMI): an independent group established by the Forum of Labour Market Ministers (FLMM) on July 24, 2008 to provide advice on Canada's LMI system. The FLMM is a body that promotes discussion and cooperation on labour market matters among the responsible federal, provincial and territorial (FPT) ministers. The Panel, which has five members, is chaired by Don Drummond, Senior Vice President and Chief Economist of the TD Bank Financial Group, and former Associate Deputy Minister of Finance Canada, and includes: Elizabeth Beale, President and CEO of the Atlantic Provinces Economic Council; Ken Kobly, President and CEO of the Alberta Chamber of Commerce; Marjolaine Loiselle, President of the Commission des partenaires du marché du travail, and former Assistant Deputy Minister at the Québec Ministère de l'Emploi et de la Solidarité sociale; and Dr. Rick Miner, President of Seneca College and former Vice-President of the University of New Brunswick.

1.2 Our Job

Put simply, our job is to advise the FLMM on how best to improve the Canadian LMI system to make Canadian labour markets work better. The combined forces of globalization, the growth of the knowledge economy, the financial crisis and the worldwide slowdown, the aging of Canada's population, our increasing dependence on immigrants for net labour force growth has put unprecedented strains on Canada's economy. And it is testing the ability of Canada's labour markets to adjust and make sure that everyone who wants a job has one and every employer who needs a worker can find one. In such a challenging environment, it is absolutely essential that Canada have the most efficient labour markets in the world to respond to the challenge. If we are going to create the best-educated, most skilled and most flexible workforce in the world, we also have to have the best LMI in the world. Anything less would just not be good enough.

The FLMM recognized that something different needed to be done to make sure that Canada's LMI system was upgraded to meet the needs of Canada's new 21st century economy. It had already sponsored internal studies of LMI needs and knew that something more needed to be done. It thus tasked our Panel to work together with Canadians from coast-to-coast-to-coast to recommend how to build a better LMI system for Canada. To this end, we have consulted with business, labour, the education sector, FPT government organizations, Canadian and international experts, as well as other interested Canadians. Our consultations took many forms – face-to-face dialogues, round tables, teleconferences. This report presents our conclusions and recommendations on what needs to be done to improve LMI based on our research and analysis and on what we learned through our consultations.

1.3 Earlier Contributions to Improving LMI Lead to our Panel

Our work builds on the earlier contributions of work primarily done for the FLMM and HRSDC. A brief review of these efforts is provided.

Following up on the government's commitment made in its *Advantage Canada* economic plan to enhance labour market information available to Canadians, two research papers on LMI were commissioned:

“Conceptual Framework for an Optimal Labour Market Information System” by J.F. Wood and Chris O’Leary of the Upjohn Institute (Woods and O’Leary, 2006). This paper considers the key elements of an optimal LMI System, including issues related to the importance of effective governance; timely, accurate and relevant data; and service delivery that makes LMI easily accessible for users.

“The Role of Labour Market Information for Adjustment: International Comparisons” by Andrew Sharpe and Sharon Qiao of the Centre for the Study of Living Standards (Sharpe and Qiao, 2006). This paper, which was part of the Skills Research Initiative sponsored by Industry Canada, HRSDC and the Social Sciences and Humanities Research Council, addresses important characteristics of LMI in facilitating adjustments for labour market participants with particular emphasis on skilled workers by comparing LMI systems in five selected OECD countries. It also provides policy recommendations for the development of a more effective LMI system in Canada.

At the same time, HRSDC did additional work on the development and delivery of LMI. This included several surveys: a 2004 Createc survey on the actual needs and uses of LMI for individuals; a 2006 EKOS survey on the business use of LMI by small- medium sized employers; and a 2007 EKOS (2007a) survey on business use of LMI of medium-large sized employers.

Other projects underway and/or near completion by HRSDC and/or the FLMM, include:

- “Environmental Scan of LMI data, products and services available from FPT jurisdictions across Canada” that will assist governments in identifying gaps, best practices and future directions in LMI, including the delivery of LMI over the Internet;
- “Review of Current Standards and Frameworks in LMI Products and Service Delivery,” which includes recommendations to guide the development of guidelines for LMI product development and service delivery in Canada;
- “Evaluating the Impacts of LMI,” a report from an LMIWG workshop that recommends five broad research questions to further the understanding of both the requirements for LMI and its effects.

In May 2007, FLMM Deputy Ministers (DMs) commissioned a report, overseen by an *ad hoc* group of FPT senior officials, to examine options for enhancing LMI in Canada. The objective of this report was to foster national consensus on what needed to be done to

enhance Canada's current LMI system. The report, which was released in the fall 2007, provided options for improving LMI service delivery, data and governance (FLMM, 2007). The report was developed, with the intent to lead to an FPT agreement on LMI priorities/options for moving forward and to foster efforts to secure LMI funding in Budget 2008.

In parallel, at the request of FLMM DMs, former Ontario Deputy Minister Bryne Purchase consulted with the FPT Deputy Ministers and a Deputy Governor of the Bank of Canada to discuss LMI issues. His report recommended that high-level, credible individual(s) be appointed to examine LMI needs, standards, and infrastructure. This led to the establishment of our Panel.

1.4 What is LMI and Why is it Important

Labour markets are central to our economy and society. And information is their life blood. LMI is knowledge, facts, data, and relevant institutional information on the supply and demand of labour. There are two main types of decisions that rely on LMI: decisions by governments, businesses and other institutions on policy, and decisions by labour market participants regarding individual transactions in the labour market.

Labour markets are the institutions where workers and employers interact for the sale and purchase of labour services. They determine wages and allocate labour among competing uses. The most productive users of the labour seek to attract the workers they need. This determines the economy's overall production. The more efficiently that labour markets function, the greater the economy is able to produce and the more productive and competitive it can be. In addition, by enticing workers to take the most productive and hence best paying jobs, employers enable workers to earn the most and enjoy the highest incomes. This process, if it is working properly, allows everybody to be better off and improves social welfare. Labour markets are not only important for productivity, but also for income distribution.

Like all markets, labour markets run on information. And to function really well, they absolutely must have accurate and timely information. Labour markets transform the individual decisions about labour supply and demand into price signals that allocate labour and determine income. And the better the information that all the participants have in making their decisions, the better they work.

People need to realize the importance of LMI. While expenditures on LMI are not large, amounting to not much more than a hundred million dollars, they can have a significant impact on wages and salaries in Canada, which are currently around \$800 billion a year. Reducing unemployment or raising wages by a better matching of workers and jobs by as little as a tenth of a point would raise GDP by some \$800 million. This gives an idea of the potential impact that LMI can have. It completely dwarfs spending on LMI. And that is why we need to spend more money on LMI and spend it smarter.

During these times of economic uncertainty and government infrastructure stimulus measures, labour market information is critically important for planning and decision making. It provides industry and governments with a comprehensive picture of labour markets at a national, provincial and regional level. With this information, they are able to understand the regional capacity of construction and can put in place the appropriate human resource plans, programs, and policies to meet demands of the economy. Labour market information will improve our ability to respond not only to the recent stimulus measures but to all demands that impact the construction workforce in the short, medium, and long term.

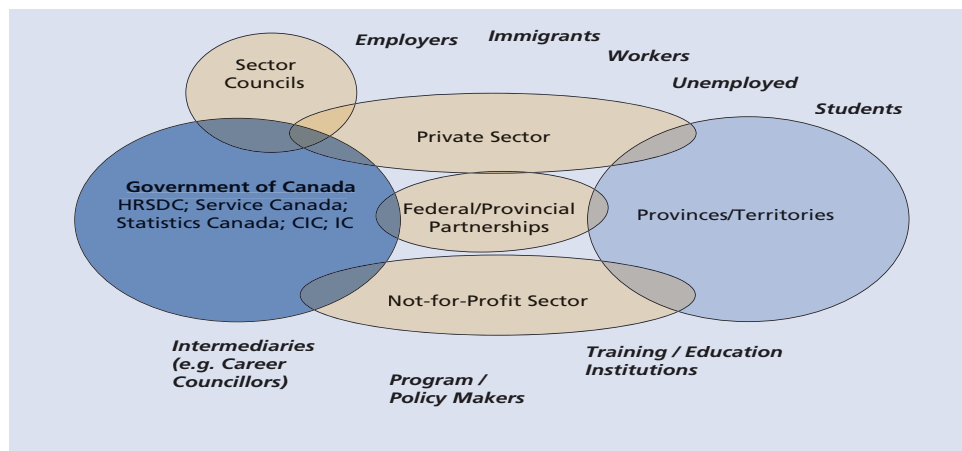
Construction Sector Council

The mining industry utilizes LMI to make decisions regarding the development and execution of policies, programs and strategies to enhance the capacity of its workforce. This information provides mining companies with the foresight to allocate resources efficiently and equips them to respond appropriately to various challenges, such as recruitment, training and worker retention. Appropriate use of LMI can also help mining sector employers to better anticipate fluctuations in labour demand and supply so that they can respond properly to economic, regulatory and other developments.

Mining Association of Canada (MAC) and the Mining Industry Human Resources Council (MiHR)

To maximize the general economic and social welfare of Canadians, it is important that we do all we can to make labour markets work as well as possible. In general, well-functioning labour markets will lead to a higher level of output, employment and incomes. On the other hand, inadequate or inaccurate information will lead to the many bad decisions that characterize poorly functioning labour markets and undermine productivity and welfare. If people are unaware of the availability of the best jobs or the prevailing wage rate, they will settle for worse jobs. By the same token, employers can be unfamiliar with the availability of workers and the wages paid by competing employers,

LMI-Key Players in Canada



and end up with less productive and overpaid employees or come up short of the labour they require. Unemployment can result from the mismatching of workers and jobs. And productivity and output and hence incomes can be lowered.

While it is true that some LMI can be proprietary to particular employers and employees, LMI that is made publicly available has a public good character. That means that, unlike private goods like food that are used up in their consumption, once LMI is available, it can be freely distributed to all and can be of benefit to all the recipients. As a result, private markets tend to produce less than the optimal quantity of LMI, particularly given the key role of labour markets in the allocation of the economy's resources and the determination of incomes. This is why governments have come to play such a large role in the production of LMI, particularly of the sort that has the widest public benefits.

A key element in the federal government's strategy to build a stronger economy for Canadians is its commitment made in *Advantage Canada* "to engage with the provinces and territories to enhance....labour mobility" (Finance Canada, 2006, p.49). Specifically, it proposed to enhance the available LMI in order to create a more efficient national labour market (*Ibid*, p.54). Our Panel agrees with this 100 per cent. This is exactly what needs to be done. LMI can be made a shining example of how Canadian governments can work together to make the Canadian economic union function better to the benefit of all Canadians. The field of LMI is already characterized by good co-operation. But this is not enough. It must be made even better. But first, it is critical to ensure that all stakeholders in the public and private sectors are made fully aware of the critical importance of LMI to their missions.

One of the most important tasks of governments is economic stabilization. The recent financial crisis and economic slowdown have reminded us of this all too painfully. Economic stabilization entails utilizing the big levers of fiscal and monetary policy to ensure that the economy operates at as high of a sustainable level as possible of output and employment. It also involves actions to counter shocks to the economy like the current situation.

The federal and provincial governments, which are responsible for fiscal policy, and the Bank of Canada, which is responsible for monetary policy, require accurate measures of labour market tightness and labour cost pressures to guide their stabilization policies. Fiscal and monetary policies are set to steer the economy on a non-inflationary growth path. This is determined by the potential growth of the economy, which reflects increases in productivity, labour and capital. Governments need to know when they can stimulate the economy by increasing spending and cutting taxes without producing inflation. The Bank of Canada needs to know if reductions in interest rates and increases in the money supply are required or if they will contribute to an upsurge of inflation.

If the government is successful in steering the economy on a non-inflationary growth path, then the remaining unemployment that occurs will be frictional/structural. This means that it results from the time taken for workers to move from one job to another and the mismatching of the skills of workers with those required by employers for the

available jobs. Economists are agreed that frictional/structural unemployment can be best dealt with through a better matching of labour supply and demand. And their policy prescription always includes readily available and high quality LMI. And when the economy departs from its growth path, as it is currently doing as a result of the global financial crisis, good LMI is necessary to gauge accurately the extent of the resulting cyclical unemployment, including the disguised unemployment or underemployment that results from discouraged workers leaving the labour force or accepting part-time jobs.

The Canadian labour force has been growing more slowly because of the aging of the baby boom population and low birth rates that fall below replacement levels. As the population ages and more and more baby boomers reach retirement age, there will be increasing labour market pressures for people to work longer. More information will be required on the labour force participation of older workers and its determining factors.

The new reality is that the net growth of the Canadian labour force will become increasingly dependent on immigration. Indeed in a few years the entire net growth of the labour force is expected to result from immigration. It should be obvious that the economic components of immigration need to be geared toward the Canadian labour market needs and immigrants need to understand those needs in order to successfully integrate economically.

Along with meeting its other objectives, Canada's immigration system is being altered to put a greater weight on occupational demand in selecting Federal Skilled Workers. Changes to the Federal Skilled Worker program include prioritizing skilled workers who have at least one year of experience under one or more of the 38 occupations identified as being in high demand nationally. Currently, the Temporary Foreign Worker Program is only available for certain jobs where there is determined to be a need for workers that cannot be met domestically. Provincial governments also have Provincial Nominee Programs that select immigrants at least partly based on occupational demand. Governments will need good LMI to make these decisions in the best interest of Canada.

Immigrants too require good LMI. It is a very risky decision for them to move from their familiar home country to a foreign land with a very different labour market. They need good, solid information to realistically assess their prospects. Doctors need to know that they have a reasonably good chance of practicing their profession and are not likely to end up working as an orderly in a hospital. Engineers need to know that their credentials will be recognized and that their skills will be in demand.

A major challenge faced by immigrants prior to arriving in Canada is knowing the kinds of occupations and skills that are needed in various cities and regions across the country, and the chances of finding employment in their field. If they had better information on current and future job opportunities before coming to Canada, it would help them to make more informed decisions. Labour market information is also critical for helping newly arrived immigrants to prepare for and successfully enter the Canadian job market. Many face barriers that prevent them from getting meaningful employment in their field of study or experience. For example, they may lack Canadian work experience or face challenges due to language skills. Often, they need information on how their foreign credentials can be recognized and the kinds of licenses are required in their professions in Canada.

COSTI Immigrant Services

But it would be a mistake to only focus on the projected net increase in the labour force in relation to the magnitude of expected immigration. The net increase in the labour force will actually be made up of large gross inflows from the schools system that will be increasingly offset by large gross outflows into retirement. And the Canadian education system will provide four out of every five new entrants to the labour market, with immigration only contributing the other fifth. Thus education will be much more important than immigration in meeting the demand for new workers.

With a slow-growing labour force, Canada will have to utilize its labour force more productively. This means that labour supply and demand must be viewed from a national perspective. And workers must be able to find the most suitable jobs, and employers the most appropriate workers, anywhere in the country. Information on job openings is the key to matching labour supply and demand.

Canada can no longer afford barriers to labour mobility. Provinces have reiterated their pledge under the Agreement on Internal Trade to achieve full labour market mobility by April 2009, but this is not enough. It will require good LMI to achieve a high level of labour mobility that will result in people moving to the areas where their skills can be put to best use. Workers will not move if they do not know about the jobs. And how will we know if we are getting the required degree of labour mobility if we do not have the LMI to measure it?

Labour unions are major users of LMI. They utilize it for three main purposes: public policy analysis; collective bargaining; and job search to assist members. The key public policy issues pursued by the unions are: macro economic policy and overall employment/unemployment conditions; wage and total compensation developments; benefits and pensions; qualitative aspects of work including hours, health and safety issues, training; worker displacement, entry, re-entry, labour force exit; the status of immigrants and equality seeking groups; and the status of unionized and non-unionized workers. The LMI of interest for collective bargaining is: general labour market information appropriately organized by geography, sector and occupation; and specific collective agreement information. The LMI information of interest for job seekers concerns information on: the existence of job openings; and wages and salaries and conditions of work organized appropriately by geography, sector and organization.

Businesses rely on LMI to develop their human resource management, personnel policy, and compensation policy. In many cases, they negotiate collective bargaining agreements with unions based on shared LMI.

Lately businesses have become very concerned about remaining competitive when subject to demographic constraints on the supply of workers. The answer is, of course, that they need better LMI to plan to meet their labour requirements in such a tight labour environment. LMI enables them to relax the constraints they face by identifying underutilized sources of labour like older workers, Aboriginal Peoples, immigrants, and women in occupations where there is under-representation. In addition, there are large numbers of workers in between jobs, as a result of the tremendous amount of job churn

that occurs in a dynamic economy even when employment is steady. And this churn occurs across sectors and regions and has been running at an even faster pace until recently.

A good example of the way in which LMI can help to alleviate labour shortages is the recent energy-driven boom in Alberta. Workers were attracted from all across the country to Alberta by the prospects of high paying jobs. Construction workers from as far away as Newfoundland and Labrador converged on Alberta to take jobs in Fort McMurray and other cities. And the jobs were not only in construction and in mining, but also in the service sector. Using LMI provided by sectoral councils, companies, in many cases aided by head-hunters, recruited workers, including foreign workers, to work in the oil sands, and workers, including immigrants, went to Alberta to take advantage of job opportunities they learned about through LMI. It came from by a variety of sources -- some government job sites, some private like Monster.ca and Workopolis. Some people just saw reports of the jobs on TV or read about them in newspapers. Some of the articles were based on Statistics Canada reports. For others it was word of mouth, from the personal networks that we all rely on from time to time.

LMI is required to make sure that training meets the needs of the labour market. This is not usually a problem for corporate in-house training which is based on the firm's own assessment of its internal labour market needs. But institutional training by colleges, universities and other private providers depends on good LMI to make it relevant. For some occupations not requiring long formal education, workers can be quickly trained to fill gaps in the labour market.

It is not only in the short run that LMI is important in matching workers to jobs. Over the longer run, it provides the informational basis for the career decisions that determine the professional and occupational qualifications of the Canadian labour force that make up our human capital and will provide the lion's share of new entrants replacing retiring Canadians. Young people depend on formal and informal LMI to guide their career choices. And educators need LMI to shape their curriculum to respond to the demands of their students and to increase their employment prospects. The supply of highly skilled professional labour like doctors, nurses, teachers, engineers, and IT specialists largely comes from the graduates of our nation's universities, colleges and polytechnics. And since it takes four to ten years or more to produce a graduate, and even longer to establish appropriate educational programs and build the required infrastructure, it is critical that the decisions that must be made can draw on the best LMI possible.

The need for and use of information in decision making is self-evident. A labour market decision informed by accurate, current, objective information on careers, occupations, training, industries and communities would seem more likely to have a positive outcome for an individual or organization than a flip of a coin, or one informed by data that are incorrect or not relevant. Despite evidence that shows workers and employers use LMI and find it useful, there is limited evidence on the impact of LMI on their labour market decisions and outcomes. To fill this knowledge gap, HRSDC has embarked on a research program consisting of a set of controlled experiments. The set of experiments is required

to study the impacts across a range of products, services and users. We hope it will shed useful light on the impact of LMI on labour market outcomes.

Box 1
HRSDC measuring the impacts of LMI

In early 2008, HRSDC launched its first project to measure the impacts of LMI. "Navigating the Labour Market" worked with 18 to 30 year-olds in a laboratory setting and found a positive correlation between labour market knowledge and literacy level. The study also found that even a short LMI presentation in video format had an immediate positive impact on labour market knowledge, belief in ability to find work, and perception of the value of education/training.

A second controlled experiment called "Career Up" is underway. It is designed to study the impact of LMI on the labour market decisions of recent postsecondary graduates who are underemployed, overqualified or unemployed. Three options are being compared: a specially-designed electronic LMI package delivered in a laboratory setting; the same package with a counsellor present; and no specially designed package or counsellor present (in this case, participants have access to existing web-based information).

Additional projects will be carried out over the next two years. Taken together, this program of research will answer many of our questions about the impacts of LMI across different types of users in different circumstances.

1.5 Governance and Shared Responsibility for LMI

Canada has a distinct political structure of a federation where the provinces and territories have many responsibilities. And in the area of labour markets they have recently taken up more of the responsibility through Labor Market Development Agreements (LMDAs). It seems quite appropriate that the provinces assume much of the responsibility for labour matters within their jurisdictions. They are likely best positioned to provide the necessary services to their residents. Yet Canada is a huge country geographically with a relatively sparse population in many areas and increasingly its economy is subject to tremendous shifts in sector and regional activity. More generally, we truly are in a "knowledge-based era" and all aspects of labour market policy have to be improved to meet the challenges and realize Canada's potential. In order to exploit the full benefits of the economic union, certain aspects of the labour market must be approached from a national perspective, with appropriate links to the provincial context. The recent confirmation of the Premiers' commitment to labour mobility across Canada is a perfect example of this national perspective meshing with provincial interests.

The federal government and the provinces/territories share responsibility for LMI. In the recent devolution agreements with the provinces, the federal government retained responsibility for Pan-Canadian LMI and no resources were transferred for this purpose, although a greater degree of autonomy with respect to LMI is provided in Québec than in the other provinces. Simultaneously, the provincial governments quite rightly feel they need additional provincial and even local LMI to comply with their new, increased

responsibilities for program delivery and more generally to ensure an effective labour market.

The Forum of Labour Market Ministers is the Pan-Canadian ministerial level body charged with, among other things, coordinating Canada's LMI system. Its Labour Market Information Working Group was created in October 2000 to help ensure that FPT governments work together to create a more coherent, relevant, individualized, accessible and coordinated approach to the development and delivery of LMI at the local, provincial and national level. This group, co-chaired by HRSDC and a lead province (currently New Brunswick), is coordinated by a very small Secretariat and made up of representatives (at the director or senior analyst level) from provinces, territories and HRSDC. Statistics Canada also participates in its meetings. The existing LMI system does not have a strong coordinating mechanism and places a heavy onus on co-operation and collaboration across governments.

A strong governance structure is needed to facilitate the delivery of LMI. It must be one that not only is capable of addressing policy issues, but of making sure the critical underlying information needs are met. If information needs are not initially given their proper attention, the required information will not be produced. And policy cannot be sound unless it is informed by the appropriate information. The information is needed not only to inform the development of policy and also to measure progress toward various goals, such as free labour mobility.

The strong governance structure must be underpinned by an adequate level of funding to produce the needed LM data and to disseminate them and interpret them as required. And to facilitate planning and to make sure the funding is cost effective, it must be provided with some certainty. Otherwise much money will be wasted in costly *ad hoc* emergency efforts to produce LMI that should be routinely available.

1.6 Our Challenge: Building a Better LMI System

The stars are aligned for LMI. Not only is it greatly needed, given the recent evolution of the Canadian labour market, but the climate appears receptive for improvements. We have been impressed by the positive spirit of cooperation exhibited by all parties we engaged. Uniformly, they have expressed a high degree of interest and a readiness to pitch in and help to build the LMI system we need. Moreover, the LMI system itself is ripe for change as LMI programs are in flux because of devolution through the recent round of Labour Market Development Agreements, which transferred responsibility for labour market programs to the provinces. Yet the federal government did not devolve responsibility for the production of LMI and has thus retained a role in its provision. The new more cooperative and flexible arrangements for the provision of LMI provide an opportunity to build a unique LMI system that blends a solid national perspective with a complementary provincial/territorial understanding of their own labour markets. And the technology is now available to build the required LMI system. Technological changes such as the widespread use of the Internet make it possible to build a much better new

LMI system that takes full advantage of the new technology. Computerized job matching has been becoming increasingly prevalent and sophisticated. A beginning has already been made with the introduction of an ever-expanding web of Internet sites providing LMI in recent years. But much more can be done to tailor the information to the needs of the user and to make it more user friendly. There is also a need to find the best way to deliver LMI by balancing its provision over the Internet with persons-to-person services. LMI is so important, both from a national and individual point of view, that we have to make sure that it is provided to all on an equitable basis.

2. The Definition and Coverage of LMI

Labour Market Information is knowledge, facts, data, and relevant institutional information on the supply and demand of the various different types of labour services (employment), including prices such as wages and other forms of compensation as well as quantities, both at the detailed and aggregate levels, that is used for analysis and decision-making. This definition, which we developed for our consultation report and guided us in our consultations, emphasizes that LMI has both a supply and demand side as well as a price dimension. And it indicates the purpose of assembling the LMI – analysis and decision-making.

On the supply side, LMI covers:

- the availability of workers by region, occupation, industry, and firm;
- hours supplied;
- the skill and educational level of workers that comprise the economy's human capital;
- other characteristics of workers including age, sex, disabilities, group (aboriginal people, visible minorities) and immigrant status;
- demographic projections of the labour force showing young people entering the labour force, older people retiring, immigrants arriving from abroad, and emigrants;
- graduates from educational institutions and training programs; and
- investments in human capital.

On the demand side, it includes:

- employment by region, occupation, industry, and firm;
- hours demanded;
- the skill, educational and credentials requirements of various jobs;
- job vacancies or unfilled jobs also by region, occupation, industry and firm; and
- occupational projections.

Because of its social and institutional features, the labour market is not like other markets. It is influenced by equity considerations and characterized by explicit and implicit contractual behaviours that are embodied in wage agreements or personnel policies. Nevertheless, price is still the variable that helps to match supply and demand. In the case of labour markets, the prices are called wages or total compensation. Thus LMI also includes:

- wages;
- salaries;
- earnings;
- wage settlements;
- total compensation including fringe benefits like time off, pension plans, and various forms of insurance; and
- working conditions, which can also be considered part of total compensation.

Like the supply and demand data, this data can also be broken down by occupation, industry and region.

LMI can be historical (data) or prospective (projections or forecasts). Both types of LMI are important for the functioning of the labour market as they influence the behaviour of participants and other decision-makers.

LMI can also be broken down into three overarching categories; macro data; micro information; and cross-cutting or classificatory information. Macro data are produced mainly by Statistics Canada. It is mainly used for analysis and policy making by governments and business. It comes in time series or cross section form, which is most suitable for analysis. And it can include quantitative information on local labour markets, or micro data from surveys.

Micro information is not statistical in origin and pertains to specific jobs. It is mainly sought by labour market participants like workers and employers interested in making specific labour market transactions, and thus serves the labour exchange function. This includes: employees and the unemployed looking for jobs; and firms involved in career planning, and recruitment. Because micro information concerns prospective labour market transactions, it must be real time data on specific needs and opportunities from the point of view of employers and workers. Historical time series data are not useful for this purpose because the job must still be open and the worker seeking employment for the information to be useful.

Cross-cutting or classificatory information provides the overall organizing framework that is necessary for interpreting or taking advantage of macro and micro information. It includes: classification schemes such as the National Occupational Classification, which provides a standardized taxonomy for organizing a multiplicity of jobs into consistently defined occupations; and information on the credential, educational, skill and expertise requirement of jobs both in general and for particular jobs.

All the LMI taken together comprises the LMI system. It can be analyzed to reveal:

- Career opportunities;
- Job prospects;
- Labour market conditions and projections;
- Education and training opportunities;
- Human resources needs; and
- The impact of program or policy changes.

The decisions of labour market agents that are facilitated and supported by LMI relate to:

- Planning a career by students and workers;
- Finding a job by workers;
- Finding the skills and human resources needed by employers;
- Mobility;
- Immigration;

- Human resources management by businesses;
- Training and education (learning) decisions;
- Investment decisions by firms; and
- Labour market and economic policies.

A background study discussing the LMI needs of different users is available on our website (www.lmi-imt.ca). It provides a useful breakdown of information by the perspective of those interested in labour demand, labour supply, and policy planning and development.

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“Labour market information (LMI) is information concerning conditions in, or the operation of, the labour market. This information may be statistical or narrative. It may be related to historical, current or projected circumstances. Particular types of labour market information include data on employment and unemployment, job vacancies, qualifications, compensation and working conditions.”

Edwin L. Herr (O'Reilly, 2001).

3. Federal Government LMI Programs and Products

There are many producers of LMI in Canada at all levels of government and in the private sector. While responsibility for active employment measures and employment benefits programming has been transferred to the provinces as a result of the conclusion of Labour Market Development Agreements, the federal government retained responsibility for “national” labour market development. This includes: emergencies, interprovincial labour mobility, sector councils, labour exchange systems to match job seekers and vacancies, and most important from our point of view LMI. The federal government thus still plays a major role in the production and dissemination of LMI.

Four federal government departments and agencies are key LMI providers. They are: Statistics Canada, Human Resources and Skills Development Canada (HRSDC)/Service Canada, which work together; Citizenship and Immigration Canada (CIC); and Industry Canada.

3.1 Statistics Canada

Statistics Canada is the national central statistical agency that collects and produces data related to LMI. It conducts a Census every five years and hosts (or has hosted) many surveys that provide valuable labour market data. Some of the more important surveys providing LMI are: the Labour Force Survey (LFS); the Survey of Employment, Payrolls and Hours (SEPH); the discontinued Workplace and Employee Survey (WES); the Employment Insurance Statistics program; the Survey of Labour Income and Dynamics (SLID), which may be replaced by the upcoming Canadian Household Panel Survey (CHPS); the Youth in Transition Survey (YITS); the National Graduates Survey (NGS)/Follow-up of Graduates (FOG); Access and Support to Education and Training Survey (ASETS); the Survey of Earned Doctorates (SED); and the National Apprenticeship Survey (NAS).

Most Statistics Canada data and publications are available on its website (www.statcan.gc.ca). Much of the recent information can be accessed freely but some including most long historical time series have to be purchased from Statistics CANSIM service, which is also available on its website. Some data from special surveys or compilations of survey or Census data must be ordered directly from Statistics Canada, rather than purchased online.

3.1.1 The Census

The foundation of the LMI provided by Statistics Canada is the Census, which is carried out every 5 years. Every Canadian household is required by law to respond. In May 2006, when the last Census was taken, 13,576,855 households received a Census of Population questionnaire. The short form questionnaire, which was completed by four-

fifths of households had eight questions. The long questionnaire had 53 additional questions. One of the three new questions introduced in 2006 sought permission for Statistics Canada to use data from income tax records to lower respondent burden. This will also facilitate labour market analysis.

The Census is much more than just a head count. It provides the fullest and richest source of information on Canada's population. And this includes LMI. While its short form head count provides information on the whole population and not just a sample, it also provides a much more detailed profile of the labour market activity of Canadians, based on its long form, which is collected for a sample of 20 per cent of the population, and includes information on labour force population, participation, employment (full time/part time), unemployment, income and earnings. This information is broken down many different useful ways, including age, sex, ethnicity, visible minority status, education, occupation, and small areas. This makes it possible, for instance, to estimate the number of immigrant plumbers under 25 in Fort McMurray in 2006. Such detailed information is well beyond the capabilities of the Labour Force Survey, which relies on a much smaller sample survey.

The problem with Census data from an analytical basis is its lack of timeliness. The Census is only conducted every 5 years and it takes another 2 years to process the information and begin to disseminate it. This means that the data can be as much as 7 years or more out of date in the period just before a new Census is released.

3.1.2 The Labour Force Survey

The Labour Force Survey (LFS) is a very large sample survey of 53,000 representative households across the country carried out monthly by Statistics Canada (a detailed guide is provided in Statistics Canada, 2006). Excluded from the sample are: persons living on Indian reserves, full-time members of the armed forces and people living in institutions (for example, inmates of penal institutions and patients in hospitals or nursing homes who have resided in the institution for more than six months). The LFS is designed to provide descriptive and explanatory data on the working-age population divided into three categories: employed; unemployed; and not in the labour force.

One of Statistics Canada's most widely publicized and followed data announcements is the monthly LFS, which is released on a very timely basis three weeks after the end of the reference week (more precisely, it is always released on a Friday and it is the first Friday of the month if the preceding Monday was in the same month; if not it is the second Friday). It contains the well-known unemployment rate as well as other standard labour market indicators such as the employment rate and the participation rate, which provide the earliest indication of labour market developments in the previous month. The LFS data are the major monthly economic series that enable labour market analysts and policy makers to track the main trends in the Canadian labour market and economy.

Data from the survey can be broken down many ways to shed light on labour market developments and trends. The LFS shows different groups of the working-age population classified by their personal characteristics, including age, sex, marital status, educational attainment, and family characteristics. It also provides employment estimates that include detailed breakdowns by demographic characteristics (age/sex), industry (broad NAICS categories) and occupation (10 broad categories), job tenure (permanent/temporary), and usual and actual hours worked.

Unemployment estimates are also produced by demographic group, duration of unemployment, and activity before looking for work. Information on industry and occupation, and reason for leaving last job is also available for persons currently unemployed or not in the labour market with recent labour market involvement.

In addition to providing national, provincial and territorial estimates, the LFS also releases estimates of labour force status for sub-provincial areas such as Census Metropolitan Areas, Economic Regions and EI Regions and even for certain Census agglomerations, which are smaller than CMAs, economic Regions, and EI regions.

The LFS also has questions, such as on involuntary part-time employment, multiple job-holding, and absence from work. Since January 1997, it also provides monthly information on the wages and union status of employees, as well as the number of employees at their workplace and the temporary or permanent nature of their main job.

Two longstanding important gaps in the information provided by the LFS were on Aboriginal peoples and immigrants.

Concerning the labour market performance of Aboriginal Canadians, there have been limited data for three main reasons: many reserves have historically not participated in the Census; the LFS could not capture the labour market performance of the off-reserve Aboriginal population because of the absence of a question on Aboriginal identity and limited sample size; and the LFS excludes persons living on Indian reserves. The first two of these three limitations have now largely been overcome, and some progress is hoped to be made on the third.

In the 2006 Census, only 22 reserves (out of a total of more than 600 bands) were not completely enumerated because of a failure to cooperate with Census takers, a major improvement from earlier Censuses (30 in 2001 and 77 in 1996). Since 2004, the LFS has included a question on Aboriginal identity in Alberta and British Columbia and since 2007 the question has been asked at the national level. More importantly, the off-reserve aboriginal population is now oversampled to increase the reliability of estimates. Because of these steps, detailed up-to-date information of the labour market performance of off-reserve Aboriginal Canadians is now available.

The major gap remaining in the collection of labour market information on Aboriginal Canadians required to make it comparable in scope to that of non-Aboriginal Canadians is the extension of the LFS to reserves. Statistics Canada plans to run the LFS on a

reserve (Siksika First Nation) on a pilot project basis. With results in hand for that community, it is hoped that it will serve as a proof of concept to other communities and government survey funders, encouraging an extension to other areas. Unfortunately, at the moment, Statistics Canada does not have a firm sponsor for the Siksika project despite its relatively low cost. First Nations Statistics, a statistical institute, which was recently established and has not yet become fully operational, may be able to play an important role in achieving this objective.

With respect to immigrants, Statistics Canada added in January 2006 five questions to the LFS, comparable to those used in the Census to collect information on the labour force performance of immigrants. They covered the country of birth of the respondent, whether or not the respondent was a “landed immigrant”, the month and year he/she became a landed immigrant, and the country where the respondent received his/her highest level of education. These data were first released in September 2007 and again in May 2008 (Statistics Canada, 2007b and 2008). It should be noted, however, that these data will not be completely comparable to those for the Canadian-born until Statistics Canada has at least three years of data on immigrants to be able to provide monthly seasonally adjusted figures. Finally, the addition of a question on field of study could significantly enhance the value of these data.

3.1.3 The Survey of Employment, Payrolls and Hours

The Survey of Employment, Payrolls and Hours (SEPH) is another monthly source of information on labour markets. It provides the only source of detailed monthly and annual information on the total number of paid employees, the value of payrolls, and the hours worked at detailed industrial, provincial and territorial levels. The industrial detail is provided at the 4 digit NAICS level. A further breakdown of the data is also provided by firm size.

The SEPH used to be the result of a monthly sample survey of 70,000 establishments. But over the last decade, its underlying methodology has been extensively modified to reduce respondent burden and improve the quality of the information. Now SEPH has been transformed into an administrative based survey relying on the PD7 payroll deductions records collected from employers by the Canadian Revenue Agency that is supplemented with a 15,000 monthly sample survey of establishments (Business Payrolls Survey {BPS}).

A major difference remains between the SEPH and the LFS in their coverage. The SEPH does not provide data on agriculture or fishing and trapping and as an establishment survey, rather than a household survey, it excludes the self-employed (except for the working owner). Its estimate for the total employment is thus about four-fifths that of the LFS.

The methodological changes made have eliminated most of the puzzling discrepancies between the movements in the SEPH and LFS employment estimates that used to

bewilder many analysts and call the reliability of SEPH into question. However, the SEPH data are still revised the month after it is published, which still can create confusion. But at least the large historical revisions resulting from the phase-in of the methodological changes are now behind.

The SEPH data are released two months after the end of the reference month, which means that they are not as timely as the LFS data and consequently receive less attention.

The SEPH data with its extensive industrial coverage are the most detailed up-to-date source of information on provincial labour markets. They hence are heavily utilized by provincial governments for purposes of labour market monitoring and analysis.

The SEPH data are often used by business and labour to determine wages and to formulate collective bargaining agreements. It is also used by labour market analysts to monitor and analyze provincial and industrial employment trends. And the employment and hours data are utilized by economists to estimate productivity by industry.

The SEPH could possibly be used to provide LMI for local labour markets. But there are methodological issues that would have to be addressed to allocate employment in multi-establishment firms that file their PD7 payroll deductions forms out of centralized offices.

3.1.4 Longitudinal Immigration Database (IMDB)

The Longitudinal Immigration Database (IMDB) is a database combining linked immigration and taxation records. The IMDB is a comprehensive source of data on the economic behaviour of the immigrant taxfiler population in Canada and is the only source of data that provides a direct link between immigration policy levers and the economic performance of immigrants. The database is managed by Statistics Canada on behalf of a federal-provincial consortium led by Citizenship & Immigration Canada. A person is included in the database only if he or she obtained their landed immigrant status since 1980 and filed at least one tax return after becoming a landed immigrant.

IMDB currently covers the period 1980-2006 and contains longitudinal information on the economic performance of immigrants for this period. IMDB contains data on over 3 million of the 5.1 million immigrants who landed in Canada from 1980-2006. This represents roughly 60% of the total number of immigrants landed during the period. But, if we look only at immigrants at working age, 20 – 64 years of age at landing, about 70% are included.

The IMDB was created to respond to the need for detailed and reliable data on the performance and impact of the Immigration Program. It allows the analysis of relative labour market behaviour of different categories of immigrants over a period long enough to assess the impact of immigrant characteristics, such as education and knowledge of French or English, to their settlement success. It also permits the investigation and measurement of different categories of immigrants on social assistance and allows the measurement and analysis of secondary inter-provincial and inter-urban migration.

3.1.5 Longitudinal Administrative Database (LAD)

The LAD is a longitudinal file which comprises a 20 percent sample of the annual T1 Family File (The T1 Family File is a yearly cross-sectional file of all tax filers and their families). The longitudinal file contains annual demographic variables about the individuals represented and annual labour market information for both the individual and their family in that year. The LAD currently covers the period 1982-2006.

The LAD_IMDB is a longitudinal file that links the information in LAD with the IMDB. Immigrants who landed in 1980 or later, are identified in the file and the corresponding landing characteristics of these immigrants are included in the file. Thus, allowing for a comparison of the labour market performance of the immigrant and non-immigrant populations.

3.1.6 Other Labour Market Surveys

The Employment Insurance Statistics Program is conducted to release the official statistics which report on the operation of the Employment Insurance Program and to provide complementary labour market statistics, for example, for detailed geographic areas.

The Employment Insurance Coverage Survey (EICS) is an annual survey which provides information on who does or does not have access to EI benefits among the jobless and those in a situation of underemployment. The EICS also covers access to maternity and parental benefits.

The survey was designed to produce a series of precise measures to identify groups with low probability of receiving benefits, for instance, the long-term jobless, labour market entrants and students, people becoming unemployed after uninsured employment, people who have left jobs voluntarily and individuals who are eligible, given their employment history, but do not claim or otherwise receive benefits. The survey provides a detailed description of the characteristics of the last job held as well as reasons for not receiving benefits or for not claiming.

The Workplace and Employee Survey (WES) provides information that sheds light on a number of issues relating to employers and their employees. A unique feature of this survey is that it links information at the micro data level on employees with that on their employers. This link between events occurring in workplaces and the outcomes for workers enables users to combine information from the supply and demand side of the labour market in their analysis. On the employer's side, the information provided permits analysis of the relationships among competitiveness, innovation, technology use and human resource management and policies. On the employee's side, the survey information concerns technology use, training, job stability and earnings. This survey is very useful in getting a better handle on education, training, innovation, labour

adjustment, workplace practices, industrial relations and industry development. This assists governments in their policy development as well as business and labour in making their labour market decisions. Another advantage of the WES was that it was longitudinal covering the years from 1999 to 2005. This facilitated analysis of changes over time. Unfortunately, this valuable survey has recently been suspended.

The Survey of Labour and Income Dynamics (SLID) is an annual longitudinal survey that combines information on labour markets and income and is the primary source of cross-section income estimates. Its large sample of 30,000 households comprised of two overlapping panels, each panel using two LFS rotation groups. The individuals in these panels are followed for a six-year period with a new SLID panel introduced every three years. The first SLID covered 1993 to 1998 period. The most recent SLID covers the 2004-to-2010 period. Like the LFS, population weights are used to estimate population characteristics from the sample.

In addition to providing identifying demographic information and answering questions on labour market activity, respondents are given the opportunity of providing access to their T1 tax information instead of providing the requested information on income. Four-fifths of respondents take this option. The SLID thus provides longitudinal information that links labour force activity to administrative tax data, for those respondents who gave permission to link the data.

Because of its unique design, the SLID provides valuable data on the changes in employment status and fluctuations in income that a typical family or individual experiences over time. This enables researchers to study a number of questions relating to people's work and financial situations running the gamut from static measures (cross-sectional) to the whole range of transitions, durations, and repeat occurrences (longitudinal). And given that family situation, education, and demographic background are all captured by the SLID, it is possible to study their relationship to such important labour market issues as the duration of spells of unemployment, the duration of non-standard employment (part-time or temporary), and other labour market transitions.

The Canadian Household Panel Survey (CHPS) is a pilot project that was launched in the fall of 2008. It aims at responding to some of the shortcomings identified with SLID, however CHPS would have a smaller sample size than SLID. The funding of CHPS is not currently secured. If the survey were to be funded, however, it would likely replace the majority of data needs currently fulfilled through SLID. With the elimination of SLID, there would still be the need for a survey to produce cross-sectional income estimates.

3.1.7 Education Data

Statistics Canada has a Centre for Education Statistics that is responsible for developing surveys, providing statistics and conducting research and analysis relevant to current issues in education, training and literacy. Its education statistics program is developed in consultation with the Canadian Education Statistics Council (a partnership of Statistics

Canada and the Council of Ministers of Education, Canada) and other education stakeholders. It covers elementary, secondary and postsecondary education.

The Centre conducts administrative surveys of provincial governments to gather information on education finances, the number of educators, enrolments, and graduates. Of most relevance from the point of view of LMI, is the Post-Secondary Student Information System (PSIS). It is the project that was started in 1999-2000 to collect and publish data on enrolments and graduates for postsecondary education institutions. It took a while to get off the ground and in 2004 a decision was made to focus on the data from universities, which was first published in 2005. The absence of data on enrolments and graduates for students of colleges and polytechnics was recognized to be a major gap, which the Centre worked hard to fill. In October 2008 data going back five years for students of colleges was released for the Atlantic provinces and in early 2009 the same data will be released for the rest of the provinces, providing a time series extending from 2000-01 to 2005-06. The plan is to continue to catch up for both universities and colleges and to be in a position to release the data for 2008-09 for all postsecondary institutions by September 2009. Efforts are also being made to capture the fact that students no longer all graduate in summer, but at other times during the year and to reflect the more complicated educational pathways pursued. An issue is the lack of a common student identification number a (CSIN) to facilitate tracking.

Another useful administrative survey is the Registered Apprenticeship Information System (RAIS). It provides information on registered apprenticeship training including data on enrollees, withdrawals, and certificates awarded for major trade groups.

The Centre also carries out household surveys to gather information on literacy, access to postsecondary education, transitions, and outputs/outcomes. The surveys that are most directly relevant as sources of LMI are: the Youth in Transition Survey (YITS); the National Graduates Survey (NGS)/ Follow-up of Graduates (FOG); Access and Support to Education and Training Survey (ASETS); the Survey of Earned Doctorates (SED); and the National Apprenticeship Survey (NAS).

The Youth in Transition Survey (YITS) a longitudinal survey designed to examine the major transitions in the lives of youths, particularly between education, training and work. YITS contacts the same respondents at two-year intervals to gather information on patterns of education and work activities over time for the same individuals.

In the first cycle of YITS in 2000, the youths in the survey were aged between 18 and 20 and their education and labour market status were assessed as of December 1999. The same youths were re-interviewed two, four, six, and eight years later, in 2002, 2004, 2006 and 2008 and their activities measured as of December 2001, 2003 and 2005. The YITS provides useful data on the relationship between demographic, family and school characteristics and participation in postsecondary education.

The National Graduates Survey (NGS)/ Follow-up of Graduates (FOG) is a longstanding survey that follows up on the labour market experience/outcomes of graduates of

postsecondary education programs. The NGS was designed to determine such factors as: the extent to which graduates of postsecondary programs had been successful in obtaining employment since graduation; the relationship between the graduates' programs of study and the employment subsequently obtained; the graduates' job and career satisfaction; the rates of under-employment and unemployment; the type of employment obtained related to career expectations and qualification requirements; and the influence of postsecondary education on occupational achievement.

The target population of the NGS is graduates from all Canadian public postsecondary education institutions including universities, colleges and trade schools, who graduated or completed the requirements for degrees, diplomas or certificates during the reference calendar year. The first group that was tracked was 1980 graduates. And every five years a new group of graduates is added, with the most recent being added in 2005.

The NGS involves a longitudinal design with graduates being interviewed at two different times: at two years and at five years after graduating from postsecondary institutions in Canada, called the Follow-Up of Survey of Graduates (FOG). The FOG sample in 2005 of 34,304 was comprised of all NGS respondents whose reported variable indicated that they earned a college diploma or certificate, a Bachelor's degree, a Master's degree or a Doctorate. This represented all of NGS respondents minus the trade/vocational graduates. There are nine categories of fields of study each for the college level and the three university level degrees (bachelor's, master's and doctorate). The information provided by the NGS can help educators and students make more informed educational choices. But the NGS has a major gap in that it does not cover trade/vocational college graduates.

The Access and Support to Education and Training Survey (ASETS) is a new survey launched in 2008 that combines questions from three previously conducted surveys: the Adult Education and Training Survey (AETS), the Post-secondary Education Participation Survey (PEPS) and the Survey of Approaches to Educational Planning (SAEP).

The AETS was the most comprehensive source of data on individual participation in formal adult education and training. It provided information on the main subject of training activities, their provider, duration and the sources and types of support for training. It revealed the socio-economic and demographic profiles of both training participants and non-participants. It also identified barriers faced by individuals who wanted to take training but could not.

The Programme for the International Assessment of Adult Competencies (PIAAC), coordinated by the OECD, builds on its predecessors, Canada's Adult Literacy and Lifeskills Surveys (IALS). It directly assesses the literacy, numeracy, sciences and problem solving skills of the adult population. It also measures skills use and allows for the examination of factors associated with skills acquisition and relates skills levels to economic and social outcomes.

Dynamic analysis of postsecondary and labour market participants is key to tracking the complex and non-linear path individuals take through postsecondary education (including apprenticeship and continuing or workplace education) and the workforce.

Colleges Ontario

3.2 HRSDC/Service Canada

Human Resources and Skills Development Canada (HRSDC) is the main federal department responsible for LMI. Its activities include producing and interpreting labour market data and providing key LMI resources at the national, regional and local levels. HRSDC also collaborates with other departments and provinces and territories on various LMI issues. At the core of data and information produced and disseminated by HRSDC are their national LMI foundational systems which include the National Occupational Classification (NOC), Canadian Occupational Projection System (COPS), National Job Futures, the National Labour Market Information System (NLMIS), Career Handbook, Essential Skills and the Job Bank. In addition, information on collective bargaining is distributed by Labour Canada, which is also part of HRSDC. Employment counselors and career development practitioners in Canada widely use these HRSDC LMI sources.

HRSDC and Service Canada work in close collaboration to collect, analyze and disseminate LMI products. As the key player in providing and disseminating LMI to the general public and targeted groups, it can be considered the public face of federal government LMI programs. It offers its services through more than 595 points of service located across the country, call centres, and the Internet. Its offices in larger centres have labour market analysts who monitor and provide intelligence on local labour markets. It also maintains a website called labourmarketinformation.ca that provides information to workers and employers about jobs, skills and the availability of workers in local areas across Canada.

As mentioned above, many key pieces of LMI are supported by national LMI foundational systems within HRSDC, unfortunately these systems have not seen any investment in their technology infrastructure for many years. This creates problems for LMI users (e.g. unstable service, outdated information and technical issues such as the inability to graph data and produce labour market reports) and has left a system badly in need of modernization. Apart from addressing these issues, investment in both Job Bank and other national LMI foundational systems is also required because these systems will constitute important building blocks for a single LMI portal. If federal and provincial/territorial governments are unable to collect adequate data, their contributions to any type of LMI portal will be compromised.

3.2.1 National Occupational Classification (NOC)

The National Occupational Classification (NOC) is the standard reference on occupations in Canada that was developed by HRSDC in partnership with Statistics Canada. The classification framework is revised every five years according to the Census cycle (HRSDC, 2006). The NOC provides the framework for understanding the “world of work” by organizing over 30,000 job titles into 520 occupational group descriptions. These are used to collect and organize occupational statistics and to provide labour market information. The structure and content of the NOC provides the foundation for a number of major LMI services and products throughout the private and public sectors. It is available on the HRSDC website (HRSDC, 2006). It describes duties, skills, education requirements and working settings for occupations in the Canadian labour market. Statisticians and labour market analysts use the NOC system to organize and interpret job statistics and other LMI.

A product based on the NOC that translates the results of the 2001 National Occupational Classification (NOC) system into useful material for people making career decisions and for their career counselors is the *Career Handbook* (HRSDC, 2008a), which is available on the HRSDC website. It contains 923 occupational profiles. These describe the particular occupation and its related duties, provide typical job titles, and list employment requirements like education and other certifications. They also can provide pertinent information on aptitudes, interests, involvement with data/people/things, physical activities, environmental conditions, education/training indicators, career progression and work settings.

Another NOC product is *Job Descriptions: An Employer's Handbook* (HRSDC, 2007), which is also available on the HRSDC website. It is designed to help small and medium-sized organizations with their human resources management activities, such as the development of job descriptions to hire employees, the evaluation of employee performance, and the identification of training needs.

3.2.2 Canadian Occupational Projection System

The Canadian Occupational Projection System (COPS) is a system of economic models that is used by HRSDC to forecast labour market conditions by industry and occupation. The system incorporates information on both the supply of, and the demand for, workers by industry and occupation. The projection is published on the HRSDC website (Lapointe, 2006 is the most recent).

Every year, starting with “consensus” national and provincial forecasts prepared especially for COPS by The Conference Board of Canada, HRSDC prepares ten-year projections of employment for Canada and each of the provinces. These projections constrain aggregate demand from exceeding aggregate supply as determined by productivity and labour supply growth. This means that total demand for goods and services can not exceed supply as calculated by multiplying productivity by the potential

labour supply based on the underlying demographics. The projections are broken down for 33 industries as defined in the North American Industrial Classification System (NAICS). The industry employment forecasts then in turn are used in the COPS employment demand model to project occupational employment growth and employment openings due to attrition. Within COPS, demand for an individual occupation is influenced by both the expected growth in the industries where the occupation is found and by the projected change over time in its employment share within the industries. The employment attrition component in the COPS employment demand model calculates employment openings due to retirements and deaths within particular occupations utilizing information on the age distribution and typical age ranges of retirements within particular occupations. This is important as in the next decade three out of every four new labour force entrants (school leavers plus immigrants) will be required to replace retirees, leaving only one in four available to “grow the economy.”

The COPS model also has a detailed labour supply side, which projects available labour supply by occupation based on existing supply and the demographic and educational factors that will cause the supply to increase. An important part of the COPS projections is matching labour demand by occupation with supply in order to provide estimates of prospective shortages and surpluses.

The COPS exercise is carried out annually in the spring. The projections are shared with the provinces around June. An annual COPS conference is usually held in the winter. And the projection is supposed to be released. However, the latest release of a COPS projection was in May 2007, and it was the projection completed in October 2006. In addition, every two years a 10-Year Outlook report on the projection is supposed to be prepared and released for the benefit of the broader community interested in labour market developments and policy.

The COPS projections and their provincial counterparts and related publications provide valuable LMI that are used by: policy-makers and analysts to identify trends in occupational and associated skill demand; planners for postsecondary education planning and programming; human resource specialists in industry; and students, job seekers and career changers to assist in making their education and career decisions. They also provide the basis for other LMI and career products, produced by the provincial/territorial governments and for *National Job Futures*, which is produced and distributed by HRSDC/Service Canada (2007).

The Committee recommends that Human Resources and Social Development Canada improve the quality and timeliness of labour market information and provide more detailed skills-based demand and supply forecasts for regional and local labour markets.

Report by the Standing Committee on Human Resources, Social Development and the Status of Persons with Disabilities (HUMA), *Employability in Canada: Preparing for the Future*, presented to the House of Commons April 2, 2008

3.2.3 National Job Futures

National Job Futures is a publication and website that provides information on the job market to the broader public. Originating as a national product, it should be noted that there are now provincial/territorial versions of Job Futures. National Job Futures was developed by HRSDC in consultation with educational and professional organizations, sector councils and federal/provincial/territorial governments across Canada. Its purpose is to help Canadians to: determine the most promising jobs for themselves; assess their career options; find where the jobs are across Canada, and what they can expect to earn. It does this by providing LMI on: the latest labour market and economic trends, new industries, the jobs they offer and the skills required to get them; how education and skills development affect earnings; the jobs and skills in short supply across Canada; and the current and future labour market conditions for 265 occupational groups and 155 fields of study derived from COPS. A unique feature of National Job Futures is that it lists the most promising occupations both nationwide and by province. It also reveals the extent to which future job prospects depend on education and skills and prominently features the beneficial impact of education on earnings. The actual LMI supplied for 4-digit NOCs includes: average wages; unemployment rate; and 5-year outlook classified as limited, fair and good. The usefulness and relevance of this information was much reduced, however, as it was taken from the 2004 COPS exercise.

3.3 Citizenship and Immigration Canada

Citizenship and Immigration Canada (CIC) provides labour market information for potential immigrants, new arrivals, foreign students, temporary workers and refugees in order to help newcomers become established in Canada. As part of its settlement and adaptation programs for new immigrants, CIC provides a variety of services using LMI including employment counseling, job-search programs, foreign credentials recognition assistance, and prior learning assessment.

CIC also compiles information from its administrative data files, which are published in its annual immigration overview that is available on its website (CIC, 2008). This is the main sources of immigration statistics used by both the government and the private sector. It presents data on admissions to Canada broken down by immigrant class (economic/family/refugee), demographics (age/sex), education, source country and region.

The Foreign Credentials Referral Office is part of Citizenship and Immigration Canada. It provides information, path-finding and referral services to help foreign-trained workers succeed and put their skills to work in Canada more quickly. Its services are delivered in collaboration with HRSDC and Service Canada over the Internet, by telephone and in person. It maintains the credentials.gc.ca website that provides information and referrals and that is linked to the goingtocanada.gc.ca website. Both of these websites provide useful LMI to immigrants and prospective immigrants.

3.4 Industry Canada

Industry Canada's mission is to "foster a growing, competitive, knowledge-based Canadian economy." Its mandate encompasses three strategic objectives: "a fair, efficient and competitive marketplace; an innovative economy; and competitive industry and sustainable communities." Industry Canada has provided LMI to certain groups, including youth, Aboriginal people, and immigrants, to assist them in making labour market decisions. Industry Canada was involved in the establishment of two programs that provide LMI as one of their products. The first is the Post-Secondary Co-operative Education and Internship program, which provides information on co-op and internship opportunities in the federal government and is run by the Public Service Commission. The second is the Canadian Information Centre for International Credentials (CICIC), which collects, organizes, and distributes information, and acts as a national clearing house and referral service to support the recognition and portability of Canadian and international educational and occupational qualifications. The CICIC is a unit of the Council of Ministers of Education, Canada (CMEC).

Industry Canada was also involved in setting up SkillNET.ca, a network of online services for employers and job seekers that assists national associations, non-profit organizations, industry associations and sector councils in adapting their service delivery to the Internet. The success of Campus WorkLink, SkillNet.ca's flagship site, led to its transfer, first to the Canadian Association of Career Educators and Employers, and subsequently to the Workopolis Partnership, a private Canadian company.

4. Provincial and Territorial LMI Systems

4.1 The Development of PT LMI Systems

This chapter, which is based largely on information provided by individual jurisdictions, examines provincial/territorial LMI systems as they currently exist, and highlights some key features and “best practices.”

Both federal and provincial governments have been involved in Canada in developing active labour market policies and programs to help all participants in the Canadian labour market, actual and potential, to prepare for, find, and maintain employment, as well as, in providing LMI. In Québec, however, the situation has been somewhat different as the provincial government has long pursued its own unique partnership approach to labour markets. Reflecting Québec’s priorities, it has always guarded its constitutional jurisdiction over labour markets. This is why Québec opted out of the federal government’s Adult Occupation Training Act in 1967, which led to the Canada Manpower Training Program. Instead, Québec took additional tax points to compensate.

Prior to 1996 when the *Employment Insurance (EI) Act* was amended, the federal government played a lead role in LMI through its department, HRSDC, which developed a suite of Employment Benefits and Support Measures focusing on EI recipients, youths, persons with disabilities, Aboriginal people, visible minorities and immigrants. The federal government maintained a network of staff dedicated to LMI, including within regional offices and local communities.

To address local LMI needs, HRSDC developed the National LMI System (NLMIS) which is an internal web-based tool used by analysts and economists. The NLMIS contains very detailed career, occupational, and industrial information about local communities across Canada. It is maintained by field staff of the federal government (Service Canada/HRSDC) located in the various communities or regions. This system is the backend database which provides the content to the Labour Market Information web site, which is accessible by the general public.

At the same time, the provinces and territories provided their own additional labour market programs, including those designed to assist individuals on social assistance and other selected groups and to provide services for employers. They often developed specialized LMI units that focused mainly on addressing the internal policy, program, and evaluation requirements of their respective governments and worked collaboratively with regional HRSDC counterparts and their local Labour Market Information Analysts to address other needs.

In 1996, the federal government began negotiating Labour Market Development Agreements (LMDA) that transferred responsibility for the design and delivery of active measures for EI claimants to the provinces and territories. The first agreement, which did not deal specifically with LMI, was reached in 1997 and came into effect in 1998. This change in governance structure of labour market policy as it spread also affected LMI systems across Canada. Some provinces and territories began to assume greater responsibility for LMI either through partnerships co-managed or fully devolved agreements with the federal government. In some cases, the federal government maintained the lead responsibility for LMI. Most jurisdictions established formal federal-provincial working committees on LMI to plan, coordinate, and produce joint LMI products and research.

By 2002, agreements detailing how EI funds were to be used were negotiated and signed in every jurisdiction except Ontario. Ontario and the federal government eventually reached an agreement which was implemented on January 1, 2007.

More recently, the federal government and provinces/territories began negotiating new Labour Market Agreements (LMAs) that would provide additional resources aimed at unemployed individuals who are not eligible for EI and for employed individuals who have low levels of skills or who are working in low-skill jobs. But these discussions did not deal with LMI.

The changes, as well as internal restructuring within jurisdictions over the past decade, have contributed to an LMI system that has evolved in different ways across Canada. In general, the current system reflects the different producers of data, and lacks overall coordination.

4.2 Overview of Features and Themes

A summary of the key features of provincial and territorial LMI systems is provided in Table 4.1. While Service Canada has offices in all provinces with labour market analysts, the provinces differ substantially in the extent to which they rely on Service Canada for LMI. The partnerships with Service Canada are only noted in the table where they are most important.

Table 4.1
Summary of Key Features of Provincial and Territorial LMI Systems

Province/Territory	Some Key Features
British Columbia	<ul style="list-style-type: none"> • Comprehensive LMI products • Strong networks and well-coordinated system with multiple players and cross-Ministry LMI round table committee • User-friendly and innovative Internet dissemination systems; vision of developing a portal • Simplified access for potential immigrants to a variety of provincial LMI products through WelcomeBC.ca
Alberta	<ul style="list-style-type: none"> • A ten year Occupational Demand and Supply Outlook • Five year Regional (sub-provincial) Occupational Demand Outlook • Comprehensive user-friendly LMI products including reports on workplace injuries • A well coordinated system of networks with multiple stakeholders across government, educational institutions and industry to address labour force planning • An Internet gateway (Alberta Learning Information Service) to an online career, learning and employment information and services • A system of forty-five Labour Market Information Centres across Alberta
Saskatchewan	<ul style="list-style-type: none"> • Comprehensive core products • Saskatchewan Labour Market Commission (SaskLMC) coordinates planning of multiple contributors • FuturePaths pilot project for youths • Enhancing its COPS Demand Model, and exploring provincial labour supply forecasting models • 2009 wage survey
Manitoba	<ul style="list-style-type: none"> • Youth targeted LMI products advising on career and education paths based on local demand outlook • Tripartite Advisory Council on Workforce Development – active sector councils • Occupational profile inventory of immigrant provincial nominee newcomers • Cutting edge software to forecast health care workforce needs

Table 4.1
Summary of Key Features of Provincial and Territorial LMI Systems

Province/Territory	Some Key Features
Ontario	<ul style="list-style-type: none"> • LMI reports (based on customized data from the Labour Force Survey) for four Employment Ontario regions • Updating and expanding occupational coverage in Ontario Job Futures (2009) – demand outlooks to 2013 for 190 occupations • Exploring provincial supply models • Network of Local Boards facilitate planning and building community capacity with stakeholders; piloting Labour Market Planning Committees in some local communities including creating a base community profile with 10 socio-economic indicators • CareerCruising software with career information for students in K-12 schools
Québec	<ul style="list-style-type: none"> • LMI is an integral component of the public employment system and is relatively well resourced at all levels • Comprehensive LMI system with nine major categories of extensive products and services • An LMI website with links to the job matching site “placement en ligne” of Emploi-Québec et the training site "Inforoutept" of the Ministry of Education, Leisure and Sport • Produces 5-year occupational outlooks for the province and regions • A survey of total compensation carried out by the Institute of Statistics of Québec (ISQ) • A survey of hiring and employment in Québec conducted by the Centre d'étude sur l'emploi et la technologie (CETECH) in collaboration with the ISQ
New Brunswick	<ul style="list-style-type: none"> • To supplement main LMI data sources (e.g. from Statistics Canada), conducts additional research, such as wage surveys, employer surveys, and labour market studies of various regions • Federal-provincial partnership relying on Service Canada's regional offices
Prince Edward Island	<ul style="list-style-type: none"> • PEI Labour Market Information Network ensures an integrated, value added approach to LMI • CareerCruising software with career information for students in all schools • Federal-provincial partnership relying on Service Canada's regional offices

Table 4.1
Summary of Key Features of Provincial and Territorial LMI Systems

Province/Territory	Some Key Features
Nova Scotia	<ul style="list-style-type: none"> • Developing an LMI strategy that will explore ways to further strengthen linkages with many external partners • Provincial COPS group produces four annual reports • Innovative LMI initiatives for youths • Federal-provincial partnership relying on Service Canada's regional offices
Newfoundland and Labrador	<ul style="list-style-type: none"> • Dissemination system includes an LMI portal and local Employment Assistance Offices throughout the province • System has wide focus of users including research and analysis, career LMI, multiple LMI committees and partnerships, and policy • New Career Information positions within the secondary education system – partnerships with Education • Federal-provincial partnership relying on Service Canada's regional offices
Yukon	<ul style="list-style-type: none"> • Yukon Bureau of Statistics • Yukon's Work Information Network (YUWIN) that provides LMI links and has both a job and bulletin board. • Annual business survey funded by Indian and Northern Affairs Canada (INAC)
Northwest Territories	<ul style="list-style-type: none"> • NWT Bureau of Statistics • T-STAT, an online LMI data retrieval and dissemination tool • Regular 5-year surveys in addition to Statistics Canada Census, to produce community level LMI
Nunavut	<ul style="list-style-type: none"> • Administrative sources are used for LMI, e.g. Client tracking system and apprenticeship database that is under development • The Nunavut Bureau of Statistics reports Stats Canada reports • Nunavut Community Skills Information System (NCSIS) that has had funding support by Indian and Northern Affairs Canada (INAC) may become a valuable LMI tool

4.2.1 The Provinces

The provinces and territories face common challenges for developing and maintaining an effective LMI system. The biggest of these is perhaps meeting their almost insatiable need/desire for more LMI at a very highly disaggregated level of detail from an occupational, industrial and regional point of view. The provinces and territories deem this necessary to properly execute their responsibilities for labour market policy and programs. This is a problem that even the largest provinces face. The territories as well as some of the smaller provinces, particularly in Atlantic Canada, have the additional difficulty of obtaining detailed, accurate data even for their jurisdiction at large.

Other common challenges include maintaining an overall awareness of the numerous activities that are planned or underway, the regular and timely communications of activities, and avoiding potential duplication or overlap, and potential conflicts of interest. There are also gaps in the kinds of LMI needed to inform emerging policy issues. These include: supply-side data, wage data, information on mobility, and lack of local LMI statistics that are available. There is growing demand for LMI products designed with a specific end-user in mind, such as immigrants, Aboriginal people, and Francophones.

The major obstacle faced by provinces in developing robust LMI systems is the limitation on what data and statistics can reasonably be collected by statistical agencies. In Canada, Statistics Canada conducts nation-wide surveys and household surveys, such as the Labour Force Survey, that yield much of the labour market data used across the country. However, much of the very detailed data are not readily available for provinces with relatively small populations, or in the case of larger provinces, at their sub regional levels. It is often not feasible to increase the sample sizes to address wider needs due to the high costs involved, significant response burdens, and potential confidentiality issues. And it is not just the high costs of expanding the surveys but the general costs of maintaining the current data sources and ongoing issues around options for funding. Another limitation of traditional data sources is their responsiveness to today's rapidly changing labour markets and economy.

Provinces and Territories need to explore new, more responsive methods of data collection and dissemination. Thus, the LMI systems in such regions generally must include qualitative input from regional and/or local expertise (i.e. resources that are "close to the ground"). They generally require a coordinated, shared approach with contributors who provide the information needed externally by clients and employers for career planning and job matching, and internally by analysts for planning and policy and program development. This is particularly the case for the Atlantic Provinces.

A characteristic feature of the LMI systems of New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland and Labrador is that they have been built on strong, effective collaboration between the provincial governments and Service Canada's regional offices located in the provinces. Working in partnership, the two levels of

government have generally combined expertise and resources to ensure that the LMI systems are as comprehensive as possible, coordinated, and responsive to the needs of their many users.

In the Atlantic Provinces, there are also unique LMI needs. The most frequently mentioned issue is the limited LMI available on the new phenomena of interprovincial commuting to work in the West.

All ten provincial governments provide occupational employment forecasts for their province. But information varies greatly in terms of timeliness, number of occupations, time horizon of the forecasts, sub-provincial breakdowns, quantity and quality of background information, and descriptor of occupational prospects used.

The most detailed outlooks are provided by Alberta, Québec, and New Brunswick. Alberta offers year-by-year forecasts of employment from 2008 to 2012, by occupation and region for 140 occupations. Québec provides an online database of occupational outlooks, by region, from 2008-2012, with one-word outlook descriptors for 500 occupations. New Brunswick offers 3, 5, and 8-year projections for 500 occupations, but with no regional disaggregation.

In the Atlantic Provinces, the COPS model produces estimates of employment demand but the capacity generally does not exist in the provincial governments to conduct supply-demand imbalance estimations for all occupations in each of the Atlantic Provinces. The lack of provincial data on vacancies and wage inflation is also a barrier for analyzing skills and labour shortages. In general, the analytical capacity does not exist to assess educational system enrolment and graduate requirements by employers. In addition, there are challenges in accurately forecasting transitions, such as school leavers into the labour market. These gaps impact a wide range of LMI users, from government decision-makers to educational institutions to career planners.

It is important to coordinate efforts in developing provincial LMI systems that involve many stakeholders. From a system-level perspective, having multiple LMI contributors can create inefficiencies and reduce the effectiveness of other efforts. It gives rise to inefficiencies in procuring needed data from Statistics Canada. It can also result in overlap and the necessity of end users having to search for LMI on different websites. Quality and consistency can be lost if partners use different standards and methodologies in their LMI systems. Also, there are challenges in maintaining different systems that are useful when initially developed, but that may become out-of-date and irrelevant over time if they lack an ongoing commitment, funding, and resources for maintenance.

A major concern of many provinces is the non-permanent funding of critical data sources by Statistics Canada. An example is the long form of the Census, which includes the statistics on education and detailed labour market characteristics. Another is the National Graduate Survey, whose funding expires in 2008-09. If new funding is not provided, its demise will deprive users of data providing insight into postsecondary education outcomes. And the discontinuation of the Workplace and Employee Survey will also

eliminate information on key workplace issues such as employer investment in training, labour mobility within firms, and employee turnover and vacancy rates.

The ongoing uncertainty about the availability of these valuable data sources makes it difficult for provinces and territories to develop a strategy to meet LMI needs. The resulting gaps will also hinder their analysis and create the possibility of ill-informed decisions. Another obstacle is the decreasing response rates on surveys due to survey fatigue, which will undermine the quality of the data.

According to provincial and territorial governments, the main areas where LMI requires improvement include:

- LMI to support a labour supply and demand analysis to identify shortages and surpluses. This includes data on postsecondary students and graduates by program, data on interprovincial migration including by education and occupation of individuals, follow-up information on immigrants, inter-occupational mobility, and retirement trends.
- Reliable information on what employers need from current and potential employees. The identification of current and potential skills gaps would assist education and training institutions in planning activities.
- Employer information on job vacancies (number, duration), current and emerging education and skills requirements, turnovers, retirement trends, hiring practices and wages.
- Information on transitions (school-to-work, work-to-school, away from full-time work to partial retirement, re-skilling). This information would be useful in helping to identify supports that are needed and the transitions effects on the labour market.

And these areas are not limited to provincial and territorial data. Often the required national data is also lacking.

Another challenge to most provinces and territories is getting information into the hands of users and then having them understand and use the data for informed, evidence-based decision making.

Table 4.2
Government Occupational Forecasting

Province	Name	Comments	Source
Newfoundland and Labrador	LMI Works	While NL has its own website, the outlook is provided directly by the Service Canada site (www.labourmarketinformation.ca). One-word qualitative description "employment potential"	Government of Newfoundland & Labrador, Department of Human Resources, Labour and Employment
Prince Edward Island	Job Futures Prince Edward Island	Forecasts are out of date. Only go to 2009, like Ontario. One-word qualitative description employment outlook.	Service Canada/HRSDC, in cooperation with the PEI Labour Market Information Network (LMI Network)
Nova Scotia	Career Options Nova Scotia	Estimated change in employment from 2008 to 2013, one-word descriptor ("growing"), and estimated annual openings due to growth and retirements. 313 occupations. Forecast for province as a whole, no disaggregation.	Career Options Nova Scotia based on COPS. Nova Scotia Labour and Workforce Development.
New Brunswick	Labour Market Information Products	Extensive and up-to-date publications, 2, 5, and 8-year employment level forecasts from COPS. 500 occupations. For province as a whole, not disaggregated.	Labour Market Analysis Branch of the Department of Post Secondary Education, Training and Labour
Québec	LMI online Le marché du travail au Québec: Perspectives professionnelles 2008-2012 Le marché du travail au Québec – Perspectives à long terme 2008-2017.	Online database of occupational outlooks, by region, 2008-2012, one-word descriptors. 500 occupations. Publication also available for each region of Québec Employment Perspectives 2008-2017 for Québec by level and field of professional competence	Ministère de l'Emploi et de la Solidarité sociale
Ontario	Ontario Job Futures	Occupational outlooks are currently being updated, with an anticipated release in mid-2009, for the period 2009-2013. The number of occupations covered will increase from 163 to 190. Outlooks are developed for the province as a whole, with no regional disaggregation.	Labour Market Information and Research, Ministry of Training, Colleges and Universities and Research and Analysis Branch, Service Canada, Ontario Region

Table 4.2
Government Occupational Forecasting

Province	Name	Comments	Source
		One-word summary descriptor for employment demand outlook: Good, Average or Limited Under consideration is a change to: Better than average, Average, and Lower than average.	
Manitoba	Manitoba Job Futures	Occupation outlook for 2008-2012. Paragraph of qualitative description about occupational outlook. One-word summary descriptor. Outlook for province as a whole, no disaggregation. Over 200 occupations.	Competitiveness, Training and Trade Manitoba, and Service Canada
Saskatchewan	Saskatchewan Job Futures	One-word summary descriptor. Outlook for province as a whole, no disaggregation.	Saskatchewan Advanced Education and Employment and Service Canada
Alberta	Labour Market Forecasts	Year-by-year forecasts of employment from 2008 to 2012. By occupation and region for 140 occupations.	Alberta Employment and Immigration, Alberta Modified Canadian Occupational Projection System (COPS)
British Columbia	Work Futures: British Columbia Occupational Outlooks	Detailed qualitative analysis with some quantitative projections from COPS for the year 2011 only. For almost 200 occupations. For BC as a whole, no disaggregation. Baseline info is out of date, from 2001. Note that BC Work Futures website is currently being re-developed to provide improved content, including updated employment forecasts by industry and occupation (520 occupations).	Service Canada/HRSDC and BC Ministry of Advanced Education and Labour Market Development
British Columbia	Regional Employment Projection Model	Designed to project industrial and occupational employment in regions of the Province of British Columbia. The model projects employment at the Regional District level and then aggregates back up to the College (12 regions) or Development (7 regions) Region level for reporting purposes.	BC Statistics and BC Ministry of Advanced Education and Labour Market Development

Table 4.2 Government Occupational Forecasting			
Province	Name	Comments	Source
Government of Canada	National Job Futures	Occupational forecasts for 265 occupational groups, which aggregate all occupations in Canada, except military occupations. Forecast for 2009 only. One-word summary descriptor (Limited, Fair, and Good) with bullet-point supporting analysis. Also provide forecasts for 155 areas of study. No disaggregation below the national level.	HRSDC
Government of Canada	LMI	Occupational forecasts disaggregated by province and region, but for an unspecified time horizon. One-word descriptors with no supporting analysis or justification. Projections for the year 2015 through a 2005 report available on the HRSDC website.	Service Canada/HRSDC
Government of Canada	Job Futures - Québec only	For Québec only forecasts for growth and retirements from 2007 to 2011 for all 520 occupations in the National Occupation Classification. Significant analysis is provided to support the projection. This site is very difficult to find (no obvious links to the Service Canada homepage) and to navigate (no obvious way to compare prospects for the same occupation in multiple provinces, etc.)	Service Canada/HRSDC

4.2.2 The Territories

The development of LMI products is especially challenging in Canada's three northern territories where their sparse populations are concentrated in rural and remote communities as well as dispersed across a vast geographic area which is larger than Western Europe. As such, the LMI systems of Yukon, Northwest Territories, and Nunavut are characterized by strong partnerships with the federal government providing cooperation, support, and resources.

The territories face many challenges including data collection, data availability, and access. A fundamental problem is the feasibility of collecting data using samples when the population to be sampled is so small. This is reflected in the lack of LMI available

from key sources such as Statistics Canada. Despite the obvious challenges posed by the lack of economies of scale, the territories provide some good examples of innovative and integrated approaches as well as local partnerships between governments and stakeholders.

LMI dissemination is another definite challenge in the North. There is currently no central area within each territory where individuals can obtain LMI, although a number of websites exists. The Yukon Bureau of Statistics and NWT Bureau of Statistics serve as contact points in their jurisdictions. They generally post data from Statistics Canada and internal departments for access by government staff. Some systems are linked with one another, including to HRSDC. The infrastructure or distribution network (with limited bandwidth), however, presents additional challenges for Internet-based dissemination systems, placing some design restrictions on any LMI system in the North.

4.3 British Columbia

A distinguishing feature of British Columbia's LMI system is its extensive network. This diverse range of partnerships has led to the development of a comprehensive and rich LMI system. It also enables the province to be forward looking and anticipatory in providing LMI.

The Ministry of Advanced Education and BC Statistics have traditionally played a lead role in the development and distribution of labour market information in the province. In recognition of the critical importance of labour market issues, British Columbia recently expanded the mandate of the Ministry of Advanced Education explicitly to include Labour Market Development, forming the Ministry of Advanced Education and Labour Market Development (ALMD). A key component of the newly expanded mandate is the development of a comprehensive and coordinated BC Labour Market Information System for long-term commitment to LMI in British Columbia. ALMD's responsibility for labour market development also includes new immigrants and potential immigrant groups. More recently, ALMD has also formed a Cross-Ministry Labour Market Information round table committee, bringing together various ministries involved in LMI. This committee meets on a monthly basis and serves as a focal point for discussion of provincial labour market information requirements, gaps and strategic planning for the future of LMI in BC. As the new BC LMI system is developed, there will be a link to HRSDC's National LMI System which addresses the needs of local LMI and provides mainly occupational information for job seekers.

There are at least 10 ministries involved in LMI in British Columbia plus key external organizations such as BC Industry Training Authority, the University Presidents' Council of BC, and Western Economic Diversification Canada. The federal government is also a key partner in LMI through Service Canada which has a number of Labour Market Information Analysts located in various communities.

The partnership model in British Columbia has served as a “best practices” example in LMI making many activities possible that could not have occurred without the different partners involved.

In terms of LMI products, British Columbia has a rich and comprehensive base of information available to many audiences included targeted users. The province produces regular labour market reviews and provides information on work trends and careers and jobs. Key products include the reports: *Making Career Sense of LMI*, and *Guide to the BC Economy and Labour Market*, *B.C. Work Futures*; *B.C. Work Futures for Trades and Technical Occupations*; and *What’s Key in LMI*. Currently, the B.C. Work Futures website is being re-developed to provide improved content, functionality, navigation and look and feel. ALMD also develops “profiles” on new immigrants to BC – this includes community-level immigration and diversity statistical profiles and maps, annual trends reports, and profiles on youth, seniors, Asia-Pacific immigrants, and more. There is also an internal Central Data Warehouse with ALMD that contains data from public postsecondary institutions except universities.

ALMD also develops a list of high opportunity occupations, which is a joint product with Service Canada, and the Yukon. British Columbia develops provincial employment demand projections using the COPS partnership with additional “BC-specific” adjustments determined by the provincial/territorial partners. British Columbia is also working on developing a ‘Made-in-BC Labour Market Demand/Supply Model.’ Work has begun on developing a demand side model, as well as a school leavers supply model and an immigration supply model.

British Columbia also provides many good examples of well-established, user-friendly Internet-based dissemination tools with linkages to many other sites both within the provinces and across Canada. For example, *Work BC* is an online guide to employment resources; *B.C. Work Futures* offer linkages to other career planning websites; and *WelcomeBC.ca* is a site that provides online information about immigrating to British Columbia. Through *WelcomeBC.ca*, British Columbia is making it easier for potential newcomers to get the LMI that they need. Among other things, it provides links to a variety of provincial LMI products.

Specific state-of-the-art features on websites include the ability to manipulate and view data in a variety of different ways and technology that transforms data into a visually appealing and understandable format (e.g. maps and charts). A long-term project in British Columbia is to have website access initially through an LMI portal and then develop broader means of dissemination/access through a future service provider network.

4.4 Alberta

Alberta’s Labour Market Information system, which is one of the more advanced in Canada, is managed by the Data Development and Evaluation, Strategic Corporate

Services division of Employment and Immigration. Alberta's LMI system encourages open sharing of data and information to support evidence-based decision making; collaboration among government, educational institutions, and employers and industry; and, reporting and analysis at the national, provincial, regional, and local levels.

Alberta provides extensive LMI to a wide variety of end users. Its key products include:

- *Alberta Labour Market Outlook*: a power point presentation that provides a quick snapshot of Alberta's labour market conditions;
- *Annual Alberta Labour Market Review*: reports on Alberta's labour market activity over the previous year;
- *The Minimum Wage Profile*: current information on Alberta minimum wage earners;
- *Alberta Industry Profiles*: summaries of Alberta's industries; and
- *Alberta Labour Force Profiles*: profiles on Youth, Older Workers, Aboriginal People (off-reserve), Immigrants and Migrants, and Women.

Alberta produces a regional report, the *Annual Regional Labour Market Review*, which analyzes data from Statistics Canada's Labour Force Survey for Alberta's eight economic regions. Alberta also provides two unique reports in a Workplace Analysis series: the *Annual Occupational Injuries and Diseases in Alberta*, which examines lost-time claims, claim rates, and disability injury rates for all industries and for seven sub sectors, and the *Occupational Fatalities in Alberta*, which provides an analytical summary of occupational fatalities in Alberta over time. Alberta also conducts a regular wage survey.

One of the most distinguishing features of Alberta's LMI system is its *Occupational Demand and Supply Outlook*, the only one of its kind in North America. For many years, Alberta had developed the COPS-based *Occupational Demand Outlook Model*, which is able to predict occupational demand for 520 occupations for Alberta. In 2003, work began on a counterpart model, the *Alberta Occupational Supply Outlook Model*, which helps to provide insight into current labour market supply. Together, these two models form the *Alberta Occupational Demand and Supply Outlook* which is a sophisticated model that projects the demand and supply of 140 different occupations in Alberta over a 10-year forecast period. By calculating imbalances between demand and supply, the system can project future potential occupational shortages or surpluses. These results can assist users to make better decisions about developing and funding programs and policies as well as personal decisions about education, jobs and careers. Recently, an alternative retirements approach has been developed along with enhancements to the education sub-model. Employment & Immigration continues to enhance this model's precision and usefulness.

Users can access Alberta's LMI through the Internet or by visiting any one of the Labour Market Information Centres, Alberta Service Centres, Alberta Job Corps Offices, and government and public libraries. Alberta's WAGEinfo website has searchable features for users to select regional information on wage and salary information for occupations.

The Career and Workplace Resources (CWR) branch of Employment and Immigration manages the Alberta Learning Information Service (ALIS) website, which is an Internet gateway to online career, learning and employment information and services and is sponsored by AE&I and Alberta Learning Resources. The information that can be accessed on this website includes Occupational Profiles (OCCinfo), Education Programs (EDinfo), the e-Careershop Catalogue and the Wage and Salary Survey (WAGEinfo).

4.5 Saskatchewan

In Saskatchewan, the Ministry of Advanced Education, Employment and Labour, and the Saskatchewan Bureau of Statistics play key roles in collecting, analyzing, and providing labour market information on behalf of the provincial government. This information helps to inform decision making and contributes to developing flexibility in the labour market to meet the needs of the economy. As a result of the LMDA, the Ministry of Advanced Education, Employment and Labour also works with Service Canada to develop an annual work plan for joint activities related to LMI.

Core LMI products in Saskatchewan include:

- Demographic and Labour Force data releases;
- Population and labour force participation rate forecasts;
- Industrial and Occupational Employment Forecasts;
- Labour market conditions of the apprenticeship trades in Saskatchewan;
- Major Project Inventory Roll-up by region in the province;
- Provincial wage survey and wage rate analysis;
- Service Canada Labour Market Bulletins;
- Monthly Economic News;
- Target Group Profiles (immigration, inter-provincial and intra-provincial migration);
- Sub-provincial Regional Profiles
- the provincial job bank – www.SaskJobs.ca; and,
- the online source of Saskatchewan specific occupation information and personalized job charts –www.saskjobfutures.ca.

Saskatchewan disseminates LMI on the Internet, but also has Career Employment Service offices across the province with staff that can answer peoples' questions and provide them with related information.

Saskatchewan has multiple players who create LMI, and in 2007, the Saskatchewan Labour Market Commission (SaskLMC) was created. The Board of SaskLMC has representatives from labour, business, education and training institutions, governments, and other stakeholders. This group has an industry focus and provides strategic advice to government on Saskatchewan's key strategic labour market issues. The SaskLMC has begun to work in partnership with many of those in the province involved in LMI, including: the Ministry of Advanced Education, Employment and Labour; Service Canada; Enterprise Saskatchewan, the Saskatchewan Bureau of Statistics; sector groups;

and SaskTrends Monitor (a respected independent contractor in the province). Sector Councils such as the Construction Sector Council also provide valuable provincial-level LMI.

Saskatchewan is currently undertaking two major LMI projects. First, the province is enhancing its work on labour demand projections using a modified COPS Demand Model, and exploring labour supply forecasting models for the province.

Second, a wage survey will be designed to obtain accurate provincial and some sub-provincial wage information. In the past, wage information has been widely used by employers, employees, job seekers, career counsellors, immigration officers, and policy developers.

A new pilot project is also being launched in the Saskatoon area for the 2008-2009 school year that will focus directly on the communications gap between employers and the future workforce. The FuturePaths project (www.futurepaths.ca/index.php) will provide students, teachers, parents and career coaches with an understanding of what careers are available locally and the career learning opportunities that are available for youth. This information will be incorporated into existing career planning software already available in schools. Once a student has completed a self assessment and identified a specific career interest, they can get a list of companies in their area that offer this type of opportunity within their company. Taking it one step further, the student and teacher can then see what type of career learning opportunities the company offers. For example, the student may be able to job shadow someone currently doing the job they are interested in. In a real way, students can then explore different careers in the workplace to help them decide what career they really want to pursue.

4.6 Manitoba

In Manitoba, many provincial government departments are involved in LMI including: Competitiveness, Training and Trade; the Manitoba Bureau of Statistics; Manitoba Health and Healthy Living; Labour and Immigration; Advanced Education and Literacy, Education, Citizenship and Youth; Finance; and Aboriginal and Northern Affairs. LMI is coordinated by the LMI Unit in the Policy, Planning & Coordination Branch of the department of Competitiveness, Training & Trade.

Through a joint LMI committee, Manitoba works closely with Service Canada to provide labour market information to external users and conducts presentations to industry, sector councils, education stakeholders, and the general public. Joint products include *Manitoba Prospects and Career Planning Guide*, *Manitoba Job Futures*, and Manitoba produces an annual *High Demand Occupations Report*.

Internally, Manitoba develops LMI such as labour force statistics and economic indicators for provincial government decision makers. There are specific data collection mechanisms depending on the departmental requirements. For example, Manitoba

maintains an internal inventory of provincial nominee newcomers, immigrant landings profiles, and cutting edge software to anticipate health care workforce needs. Manitoba has also created Advisory Council on Workforce Development, a tripartite committee including government, labour and sector councils to provide information and advice to the Minister on workforce trends, initiatives, policies and strategies for developing Manitoba's workforce.

LMI for external users is provided to the general public through the Employment Manitoba Centres, public presentations at job fairs and other venues, and general enquiry lines. Publications are available online and in print, produced either in conjunction with or through assistance by Service Canada. The quality of products is strengthened through a collaborative federal-provincial working relationship facilitated by the Canada-Manitoba LMI Working Group. Other online linkages exist depending on the topic, including with Citizenship and Immigration Canada, the Council of Ministers of Education Canada, and industry sites.

Manitoba is proactive in meeting the needs of emerging labour market demand. For example, the province has developed educational and career path information specifically designed for young Manitobans on its extensive Manitoba Job Futures website, and relevant search tools for newcomer job seekers using the Working in Canada search tool.

A major challenge in addressing gaps in Manitoba's LMI system is the uncertain funding status of data sources by Statistics Canada. and therefore important data relevant to Manitoba including detailed labour market statistics and education outcomes is not always readily available. Current and analytical data and information is at times, difficult to find. The reliance on Census data must then be used as a baseline. Given Manitoba's growing labour force due to aggressive immigration policies, the data become dated and unreliable very quickly. Other gaps include data on skills, easy-to-understand LMI for immigrants and newcomers in Manitoba, LMI required by employers, accurate and up-to-date local, regional and provincial LMI, national surveys that include sufficient sample sizes for Manitoba communities or groups of interest such as Aboriginal people and immigrants, and projections of training-graduates/newcomers as new labour market entrants by occupational category.

4.7 Ontario

The Ministry of Training, Colleges and Universities (MTCU) has the lead responsibility for LMI in the Ontario provincial government. Historically, resources within the ministry's Labour Market Information and Research unit (LMIR) have focused on addressing the internal needs of policy and programs. Staff worked closely with Service Canada/HRSDC regional office for key initiatives, such as Ontario Job Futures and a 1999 wage survey, and relied heavily on the federal government's network of community-based Labour Market Information Analysts to address local LMI needs.

MTCU produces regular reports on labour force characteristics for the province and for the four regional administrative offices of Employment Ontario, the province's employment and training system which was developed when the LMDA was implemented in January 2007. Labour Force Survey data are custom purchased for the four regions. The reports are shared with the public and are posted on the Ontario government's website.

In 2005, the staff of LMIR led the development of an LMI component on the provincial government's public website, and MTCU continues to manage the contents of this site and provide leadership on LMI matters within the provincial government. The website provides links to reports by other ministries, such as the Ministry of Finance (e.g. population projections and economic reports), the Ministry of Citizenship and Immigration (e.g. bridge training programs, credentials, and occupational requirements for professions in Ontario), the Ministry of Economic Development and International Trade and Investment (e.g. investment, business development, and industries), and the Ministry of Education (e.g. descriptions of essential skills/Ontario skills Passport, and career information for youth). The LMI website also contains links to external organizations and other resources (ontario.ca/labourmarket).

Currently, the MTCU is leading the development of an updated version of Ontario Job Futures and working with counterparts in Service Canada's regional office who will provide local LMI input through its network of local analysts. Service Canada is developing local occupational profiles for 24 nationally identified occupations, and a limited number of occupations identified as local priorities. Resource constraints prohibit any significant increase in the number of occupations profiled.

Based on the COPS model, Ontario Job Futures, which will be released in mid-2009, will provide outlooks for 190 occupations in Ontario. The results will be accessible through a web-based application only, which addresses the main method used to search for LMI and career information by its primary audience – youth.

While COPS is a demand-side model, the MTCU, like peers in most other provinces, currently lacks a reliable supply-side forecasting model, which is necessary to forecast imbalances. In 2009, the MTCU staff will begin exploring options to develop a supply-side model at the provincial level. Addressing the demand for local level occupational projections however will remain a significant challenge.

A distinguishing feature of Ontario's LMI system is its complement of Local Boards. These were established in the early 1990s to replace the Local Training Advisory Boards and were funded jointly by HRSDC and MTCU. With the implementation of the LMDA in 2007, MTCU became the lead sponsor of Local Boards.

Local Boards are community-based organizations that facilitate partnerships and capacity building among stakeholders in the community. Local Boards provide some analysis of local labour market issues for input into local planning, but they do not produce LMI except through special research projects that may contain an LMI component. The

approximate 25 Local Boards in Ontario provide a range of reports including an annual Trends, Opportunities and Priorities report. Local Boards have also been instrumental in developing the Inventory of Programs and Services, a searchable database of local, provincial and federal employment programs and services in the local community. In 2008, MTCU began a pilot project to transform the local planning process and create Labour Market Planning Committees. This work includes the creation of a base community profile with 10 socio-economic indicators. The existing Local Boards are leading the pilot phase of this project, which will result in a new model for community collaboration in labour market planning.

The Community Indicators Collaboration is an inter-ministerial initiative that represents an indirect provision of labour market information. It brings together 20 ministries within the Ontario government to strengthen collaboration for sharing indicators relevant to community economic development and social planning. Several of these ministries provide public access to information related to, but not specifically identified as, labour market information. Discussions are currently underway to explore the feasibility of providing greater public access through an integrated site.

The lack of LMI on job vacancies and wages is a concern for Ontario. It limits the province's ability to analyze employment dynamics, including the evolution of skills requirements, the nature and magnitude of potential skills shortages as measured by unfilled vacancies, changes in prevailing wages, and variation in turnover rates across industries. The MTCU, in cooperation with the former Ministry of Economic Development and Trade, had explored the possibility of contracting with Statistics Canada to conduct a province-wide vacancy and wage survey. Due to the high cost for undertaking such a survey, however, the status of this project is currently being reviewed with an aim to expand the ministry partnerships.

In addition, work with the Council of Ministers of Education Canada (CMEC) has identified a number of data gaps and challenges related to postsecondary education data. These challenges have implications for a number of LMI products in Ontario including supply-side analysis, and policy issues involving postsecondary education capacity and planning.

4.8 Québec

The province of Québec has an extensive, relatively well resourced LMI system that provides reliable, up-to-date information of high quality to multiple users through its various documents (available online in PDF format and local employment centres) and the online LMI application. It represents a "best practice" among provincial LMI systems. While a number of Québec ministries and agencies produce and distribute LMI, Emploi-Québec is responsible for the overall management of LMI in the provincial government.

LMI is viewed as a universal service that is an integral component for the delivery of public employment services to the population as a whole. The Act respecting the *Ministère de l'Emploi et de la Solidarité sociale* and establishing the *Commission des partenaires du marché du travail* (Commission of Labour Market Partners) stipulates that public employment services include, in particular, labour market information, placement and active labour market policy.

Emploi-Québec defines LMI broadly as all the studies, analyses and data needed at the provincial, regional and local levels to better match labour supply and demand. More specifically, Emploi-Québec classifies the LMI needed into the following categories:

- Characteristics of the labour force (employed and unemployed);
- Labour market trends, issues and priorities;
- Analyses and information on trades and occupations;
- Analyses and information on economic sectors;
- Characteristics of businesses;
- Analyses of economic and labour market cycles;
- Socio-economic profiles;
- Information on labour market entry of graduates from educational and training institutions; and
- Information on education and training institutions themselves.

Internal users for whom LMI is important include the staff of Emploi-Québec's central, regional, and local units; the Commission of Labour Market Partners; and the regional councils of labour market partners. These internal clients need continuous access to all the various categories of LMI for various purposes and to varying degrees, including providing clients with effective services. To encourage a better integration of LMI in the provision of its service, Emploi-Québec has, among other things, put in place a network of regional offices and has established LMI Internet sites at the provincial level and in several Québec regions.

Some Emploi-Québec's resources are allocated to address the needs of other ministries in the province including the Ministry of Economic Development, Innovation and Export Trade, and the Ministry of Immigration and Cultural Communities. The latter uses Emploi-Québec's occupational outlooks for immigrant selection and in its efforts to help immigrants enter the job market. The Ministry of Education, Leisure and Sport uses LMI to more closely link training with employment.

The high demand for LMI, however, is not confined to provincial government ministries. External clients include end users such as the unemployed and employed job seekers and businesses whose needs tend to be more specific. External clients also include intermediaries and stakeholders, such as labour market partners, practitioners with outside agencies, sector committees, advisory committees, business associations, and private-sector providers of labour market information whose needs are different than those of end users. Generally for these clients, the LMI must be adapted to meet their particular needs.

Emploi-Québec reaches a broad audience by disseminating LMI through several channels including:

- Government Internet sites:
 - LMI online: imt.emploiQuebec.net
 - CETECH: www.cetech.gouv.qc.ca
 - LMI page on Emploi-Québec site: emploiQuebec.net/anglais/index.htm
- Some regional Emploi-Québec offices, such as those for Estrie and Mauricie, make regional LMI available on a separate website.
- Multiple public- and private-sector Internet sites that link to LMI produced by Emploi-Québec. For example, the REPÈRES site (www.REPERES.QC.CA) references Emploi-Québec's online LMI for, among other things, results on career prospects. REPÈRES is an educational and vocational site that can be accessed, for example, from all Québec schools. Also, many labour sector committees and the Vocational and Technical Training "Inforoute" site (www.inforoutefpt.org/home.htm) make LMI available via links to the Emploi-Québec site.
- Through publications available in the multi service rooms at local employment centres, or through partners.
- The media and channels such as libraries, e.g. the Bibliothèque nationale du Québec.
- Emploi-Québec's two general online services, LMI and placement, link to each other. For example, a company that wants to prepare a job description to post on the placement service can easily consult LMI online for job requirements and training requirements.

One important feature of Québec's LMI system is that it must provide LMI to each region of Québec, since the province does not have a single labour market. Each of the 17 administrative regions, and in many cases each community, has its own labour market. And Emploi-Québec has a regional office in each region. Because of the regional nature of the Québec labour market, most of the LMI materials produced by Emploi-Québec contain regional information. The occupational outlooks, for example, provide information on career prospects on a five-year horizon for each of Québec's 17 regions. Similarly, the online LMI website provides regional LMI.

In the future, LMI is expected to take on an even more important role for decision-making in Québec. There is growing competition between businesses to recruit and retain employees as the population ages and labour becomes increasingly scarce. Furthermore, adults and youths generally make more than one career choice.

Québec faces three types of challenges in making its LMI system still more effective:

- Being more responsive to changing labour market needs by developing new products and tools and maintaining national exchange networks to share best practices;

- Maintaining and improving the quality and quantity of LMI available to the many users or clients by providing more reliable, up-to-date and relevant regional and local LMI on industries, trades and occupations; adding new data on labour costs, working conditions, wages, vacancies, mobility, and the availability of workers (immigrants and older workers, etc.); and, developing a methodology for labour supply forecasting and attrition; and
- Developing and updating the technological platform to facilitate access to information without jeopardizing access to any future national system for Québec users.

Furthermore, meeting these challenges will require the measurement of the impact of LMI, a reduction in the degree of overlap regarding the diffusion and production of labour market analyses, and the addition of human resources.

4.9 New Brunswick

In New Brunswick, the Labour Market Analysis Branch (LMAB) of the Department of Post-Secondary Education, Training and Labour (PETL) has the lead responsibility for LMI. The province uses much of the LMI produced by Statistics Canada, Service Canada and HRSDC, but LMAB also conducts its own primary research into areas where gaps exist. Research includes: wage surveys, employer surveys, labour market studies of various regions, and follow-up surveys of graduates from New Brunswick's postsecondary educational institutions.

The information is distributed on the New Brunswick government website as well as in its Career Information Centres that are located in various communities throughout the province to provide in-person services to clients. LMI products are available in schools, libraries, and counselors' offices in New Brunswick. LMAB also provides formal and informal presentations, LMI workshops, face-to-face consultations, and assistance in interpreting and analyzing LMI to a wide variety of groups. Major users include other provincial government departments and agencies, the Enterprise Network (local economic development agencies), the New Brunswick Community College network, private trainers, students, career and employment counselors, employers, investors/site selectors, and the general public. LMAB is involved in program evaluations, and this ensures a continuous flow of information and improvement in the quality of LMI.

4.10 Nova Scotia

In Nova Scotia, the collection of information and data is mostly undertaken by Service Canada. Based on their mandate, the information is collected at the economic region level. Provincial-level LMI is generally provided by the Department of Labour and Workforce Development (LWD) which works with the federal government to aggregate the regional information. LWD uses Service Canada's occupational information and regional labour market analysis products that are available on the National LMI System.

Provincial-level LMI is accessible on LWD's Career Options website. While Internet is the primary source for disseminating LMI, printed material is still an important part of the LMI system in Nova Scotia, since it reaches audiences who have limited or no access to the Internet.

In addition to LWD and Service Canada, a number of other organizations in Nova Scotia produce LMI that is targeted for their particular needs. For example, educational institutions, other government departments, sector councils, and private sector entities all produce some LMI. In most cases, Service Canada and/or LWD are invited to provide input on their work, and this joint effort helps to promote consistency and objectivity.

In recent years, LWD and Service Canada have jointly increased their focus on promoting and using LMI through regional training sessions with various end-users, such as employment counselors from the Aboriginal community and Nova Scotia Department of Community Services. Both Service Canada and LWD are working towards improving the linkages among key LMI sources within the province. In addition, the provincial government is in the early stages of developing an LMI strategy that will explore ways to further strengthen linkages. Currently, most of the linkages in Nova Scotia's LMI system are to producers/users within the system, which is a feature of a strong system. However, Nova Scotia's LMI system contains few linkages to sources outside the province. Some non-government LMI producers in Nova Scotia have national affiliations/linkages, a good example being the Construction Sector Council's *Construction Looking Forward* report.

The provincial COPS group (comprised of Service Canada, LWD, and other government and non-government experts) produces macro labour market, industry and occupational projections and the results are highlighted in four annual publications. The provincial information is published through LWD's Career Options website and Handbook (novascotiacaereroptions.ca). At an occupational level, Nova Scotia provides information on wages, employment prospects, employment estimates, various demographic and statistical profiles, employer contact lists, skill and educational requirements, and career path information.

More recently, Nova Scotia has introduced some innovative features and programs into its LMI system. For example, *Parents as Career Coaches* is a three-session workshop being offered for free to parents of students in most Nova Scotia high schools to help them understand the labour market their children are entering and what role they can play in guiding and supporting their children as they move from high school to postsecondary education or training into the workforce. *CORI* is an interactive career exploration tool aimed at youth and available on the Career Options website. BrightCareerFutures.ca is an LMI web resource targeted at youth that promotes career opportunities in five key sectors in the province. The website extracts LMI from the Career Options database and uses an iPod concept to engage youth. *The Audio LMI Learning Tool* is an audio presentation aimed at promoting a better understanding of the labour market. It was developed in partnership with the Nova Scotia School for Adult Learning to be used in their curriculum.

In Nova Scotia, business development authorities have identified gaps in LMI on skills/credentials availability. Attempts have been made in the past to “inventory” labour/skills availability, but the costly and time-sensitive nature of such information eventually derailed efforts. This information is important from the perspective of securing investors who require assurance that their labour requirements will be met.

4.11 Prince Edward Island

With a relatively small population base, Prince Edward Island faces many challenges in developing an LMI system with strong capacity to respond to the various needs of users. Even when certain labour market issues are raised, it can be both expensive and time-consuming to address these issues. In some cases, data are not available, or cannot be released for confidentiality reasons. Resources are also often an issue.

The collection of data in Prince Edward Island is largely undertaken by Service Canada and Statistics Canada. The data are collected at the economic region level, which in this instance, is identical to the provincial level. At present, the Province of Prince Edward Island does not publish or maintain a separate LMI system. The overall LMI system in Prince Edward Island is coordinated through the Charlottetown Service Canada regional office, which works in partnership with various stakeholders from the Government of Prince Edward Island, other federal government departments, as well as, not-for-profit agencies and private groups. Together, these groups form the PEI Labour Market Information Network, whose purpose is to facilitate an integrated, value-added approach for responding to a variety of labour market information needs.

The government of Prince Edward Island, Service Canada and HRSDC have partnered together through the LMDA to provide support for ongoing LMI through various sector councils on the Island, as well as other non-governmental and private organizations. The main provincial partners in the LMDA are the departments of Health, Education and Early Childhood Development, and Innovation and Advanced Learning. Also, the department of the provincial treasury does publish broader employment and labour market information, but does not provide information more detailed than at the industry-level, and does not provide employment and labour market projections.

The Prince Edward Island LMI network also serves as the provincial Canadian Occupational Projection (COPS) group, providing input and feedback to the COPS annual forecasts. The aggregate nature of COPS data, however, presents further challenges in Prince Edward Island. Although the occupation projections are helpful, the projections are for industries, and not for specific jobs within these industries. Due to the size of government in Prince Edward Island, and the disaggregated nature of the LMI system in place, there exists little scope to estimate this information on a provincial level.

The Internet is the predominant way of disseminating LMI in Prince Edward Island, either through the federal government’s National LMI System or other Service Canada projects, or through private or non-governmental organizations. However, there is still

paper distribution, notably through the Job Futures information that is disseminated in educational institutions, or the publications put forth by the Employment Journey. The Service Canada website provides information on wages, employment prospects, job openings, demographics, employer contacts, and skills and education required in Prince Edward Island. The site has links to the Job Bank, Prince Edward Island Job Futures (pei.jobfutures.org - also a Service Canada product), and to the LMI provided by the Prince Edward Island Sector Council (www.careeroptionspei.com). The Prince Edward Island Sector Council itself has links to various groups that provide information specifically about the industry in question, both locally and nationally, as well as links to the Service Canada sites.

A distinguishing feature of the LMI system in Prince Edward Island is the use of the CareerCruising website that is being used in most schools across the province to disseminate LMI for career planning (www.careercruising.com). This system allows students to create a profile that they can carry with them throughout their education and career enabling them to update their profile as they go.

4.12 Newfoundland and Labrador

Newfoundland and Labrador's LMI system is managed by the Labour Market Development Division of the Department of Human Resources, Labour and Employment (HRLE) which provides LMI to support the needs of a variety of users. There are two main components to the LMI system.

First, Research and Analysis includes activities such as monthly monitoring of the provincial labour market and job vacancies, developing the provincial supply/demand model, developing sub-provincial LMI, responding to LMI requests, providing ad hoc labour market analysis for stakeholders, and establishing research priorities. Second, Labour Market and Career Information Products and Services includes developing tools such as the programs and services resource directory, the postsecondary offerings listing, the HR Toolkit for Employers; providing presentations at career fairs, workshops and other events; and providing LMI via the toll-free labour market and career information hotline.

There are also two indirect components that complement and help define strategic directions: LMI development for policy support (e.g. impact analysis and input into strategies), and labour market partnership activities (e.g. the Labour Market Committee of the Strategic Partnership Initiative, the Petroleum Industry Human Resources Committee, the Construction Sector Council IAS, the Harris Centre Advisory Group, the Federal/ Provincial/ Territorial Essential Skills Technical Working Group, and the Federal/Provincial LMDA Industrial Adjustment Committee).

In addition to HRLE, there are a number of other departments and partners involved in the development of LMI in Newfoundland and Labrador. For example, the Department of Education conducts a graduate survey and produces data on enrolments, graduates, and

apprenticeships. The Department of Finance and the Newfoundland and Labrador Statistics Agency provide population and economic data and forecasts and community accounts. Under an HRLE/Education Partnership, HRLE has recently established new Career Information positions within the secondary education system to work with students, teachers, and school boards. These positions are managed through the Career, Employment and Youth Services Division of HRLE.

A key feature of Newfoundland and Labrador's LMI is its dissemination system. In May 2007, Newfoundland and Labrador launched the LMI and career portal which provides access to LMI in the province. Employment Assistance Offices, which were also established under the LMDA, are also key dissemination points for LMI. There are also 14 Career Work Centre Networks and 26 District Offices.

An issue of key importance to Newfoundland and Labrador, which has witnessed significant out migration of workers to Alberta in recent years, is the limited available information on workers mobility. An enhancement to the current data collection would be to capture information for both "place of residence" and "place of work."

4.13 Yukon

With the approval of the *Labour Market Framework for Yukon* in October 2008, the Yukon will develop a *Labour Market Information Strategy* that will guide federal and territorial activities over the next 10 years and include an action plan. It is anticipated that the strategy will establish a more coordinated and consistent approach to providing LMI to Yukoners, furthering the work of the Joint LMI Committee that was established under the *Canada-Yukon Co-Managed LMDA*.

Currently, Yukon provides LMI obtained from Statistics Canada including Census information, Labour Force Survey data, and aggregate data on EI from Service Canada. Yukon's Work Futures also provides a list of occupations for career planning. Yukon and other territories sometimes work with adjacent provinces such as British Columbia and Alberta in these kinds of initiatives. Yukon's Work Information Network (YUWIN) provides LMI links and has both a job and bulletin board feature.

Yukon works closely with the federal government including the department of Indian and Northern Affairs Canada (INAC) which provides additional funding support for LMI initiatives. In fact, INAC funding has enabled Yukon's Bureau of Statistics to conduct an annual Business Survey. However, no federal or territorial funding is in place beyond 2010, highlighting how critical stable funding is for maintaining an effective LMI system especially in areas with limited alternative sources.

4.14 Northwest Territories

In the Northwest Territories, the LMI system is operated by a number of partners including the NWT Bureau of Statistics which collects LMI at a community level and disseminates LMI from Statistics Canada. Individual departments produce reports and statistics and maintain administrative records which also provide LMI data.

The NWT Bureau of Statistics, which has the overall responsibility for the territorial government's statistical program, collects local LMI by conducting surveys once between the Census years. As a result, every community in the Northwest Territories has up-to-date LMI data every two or three years instead of every five years. At the broader level, the NWT Bureau of Statistics maintains T-STAT, an online statistics retrieval system that incorporates select Statistics Canada CANSIM data, and disseminates this LMI internally. Other individual provincial government departments produce reports and statistics and maintain and share administrative records and data internally as well.

4.15 Nunavut

In Nunavut, the major LMI system is a case management system that was developed to track clients when the LMDA was reached in 2006. Nunavut is also developing an apprenticeship tracking database that will provide more information.

While administrative data systems like this are useful for operational planning, they generally do not provide the more general kind of LMI usually desired by external clients. In contrast, they tend to be more interested in demand and supply LMI including occupational projections, wages, detailed occupational data, and skills inventories of persons not in the labour force. These elements generally cannot be captured through administrative databases.

In Nunavut, the Department of Education, whose mandate includes delivering adult training programs, has developed the *Nunavut Community Skills Information System* (NCSIS) with the assistance of INAC. This system is a community-based skills inventory and reporting system that is designed to facilitate the development of an employment and training program in Nunavut. It is based on HRSDC's essential skills approach, but is a "made in Nunavut" solution using a more innovative and practical approach to matching jobs and applicants in the North. The system contains four components, including a reporting system that can extract information from the NCSIS database and present a wide variety of LMI at the territorial and community level. This application may become an invaluable part of the strategic planning process within Nunavut when it is fully deployed.

Nunavut has successfully used the NCSIS to create targeted training programs that are tied specifically to economic development opportunities, such as those associated with the mining industry. During the pilot phase of this project, the NCSIS application was

rolled out into various regions where it has been seen as a valuable economic development tool, fostering partnerships between regional Inuit associations, provincial and federal governments, and employers. NCSIS has been recognized as one of Canada's most advanced employment and training applications and is perceived to be on the leading edge of a national movement to use essential skills as the basis for human resources development. It is hoped that in the near future, with adequate resources, NCSIS will reach its full potential.

5. Private-Sector Sources of LMI

5.1 LMI Provided by Wide Variety of Private Sector Entities

The collection, analysis and dissemination of LMI involve substantial economies of scope and scale. Comparatively speaking, centralized, large providers are naturally more advantaged than small and medium-sized firms. Also, the “public good” characteristics of aggregate-level LMI have important implications for its production and distribution. Once the information is collected, it can be distributed at virtually zero cost. And it is not desirable to exclude people from accessing aggregate LMI if they can derive a benefit from it as the cost of providing it is negligible. This makes it very difficult for private sector suppliers to turn a profit out of LMI. Consequently, it is not surprising that public-sector providers have largely come to dominate the collection and compilation of labour market statistics that are used for analytical purposes and have a public good character.

On the other hand, it is possible for private-sector suppliers to exclude users and charge for LMI related to labour exchange functions. Consequently, these types of LMI are also provided by a wide variety of private sector entities. Non-profit providers include sector councils, who typically compile industry-specific information that is sought by firms or that informs advocacy on the sector’s behalf, as well as charitable agencies, who typically provide assistance with job matching, especially for low-skilled or disadvantaged labour market participants. Additionally, private-sector economics departments of for-profit financial institutions play an essential role in the dissemination of labour market information and facilitate the public’s comprehension of labour force statistics.

This chapter focuses on the following key private sector providers and disseminators: sector councils; firms providing electronic labour exchanges; headhunters; organized labour; and other third party providers. It is important to note that these providers/disseminators have been identified by employers as the main providers and disseminators that they use when looking for training and career development LMI (Box 5.1).

Box 5.1**Main sources of LMI used by employers**

A recent EKOS (2007a) survey shows that when looking for training and career development LMI, employers of small and medium sized enterprises use the following sources:

- Professional association or union (23%)
- Sector council or industry association (15%)
- Federal and provincial government websites and publications (14%)
- Local business association, colleagues, equipment suppliers, or educational institutions (varying from 9% to 12% each).

The least frequently cited sources of information included: unspecified online sources, general printed publications, private consulting firms, or private Internet sites.

Source: EKOS 2007.

5.2 Sector Councils and Other Partnerships

Sector Councils bring together representatives from business, labour, education, and other professional groups in a neutral forum in order to analyze and address sector-wide human resource issues. Membership usually includes: corporate executives; owner-operators of smaller firms; employees; union leaders; educators and interested government representatives. The overall goal of the Sector Council is to improve the quality of the Canadian labour force, and to improve firms' ability to be flexible in meeting competitive demands. At present, there are 33 sector councils funded by the federal government. In addition, the national-level sector councils are represented by Canada's Alliance of Sector Councils (www.councils.org).

Many of the sector councils compile industry-specific information for their member firms or to inform advocacy on the sector's behalf. For sector councils, labour market information constitutes a "public good," having non-rival and non-exclusive characteristics. However, firms in a given industry desire detailed information about workers that may not be collected by central public agencies as it is not of interest to the public in general. The sector council's role is to facilitate the data collection and analysis that no single firm would find profitable to undertake, but that is required by the industry.

In addition, over the past six years, about one half (17) of the active sector councils have undertaken some type of labour market forecasting for the industry or occupation that they represent. Of those 17 councils, 9 provided detailed forecasts by occupation (Table 5.1).

Table 5.1
A Survey of Occupational Forecasting Undertaken by Sector Councils, January 2009

Name	Aggregate Occupation / Employment Forecasting for the Sector	Detailed Forecast by Occupation	Description of Occupational Forecasting Activity
Sector Councils Participating in the HRSDC Sector Council Program			
Aboriginal Human Resource Council (AHRC)	no	no	
Apparel Human Resources Council (AHRC)	no	no	
BioTalent Canada	yes	no	Qualitative "Expected HR Challenges in Next 3 to 5 Years" in Labour Market Report
Canadian Agricultural Human Resource Council (CAHRC)	no	no	Report being prepared on 5-year projection of HR needs in the agricultural sector
Canadian Apprenticeship Forum (CAF)	no	no	
Canadian Automotive Repair and Service Council (CARS)	no	no	
Canadian Aviation Maintenance Council (CAMC)	no	no	Labour market information system under development
Canadian Council of Professional Fish Harvesters (CCPFH)	no	no	
Canadian Food Industry Council (CFIC)	no	no	
Canadian Plastics Sector Council (CPSC)	yes	yes	In the October 2007 Labour Market Update Project <i>The Plastics Industry to 2016</i>
Canadian Printing Industries Sector Council (CPISC)	no	no	2008 and developing a database and an HR study
Canadian Steel Trade and Employment Congress (CSTEC)	no	no	
Canadian Supply Chain Sector Council (CSCSC)	yes	no	2005 Strategic Human Resources sector study
Canadian Tourism Human Resource Council (CTHRC)	yes	yes	2008 Report with labour supply and demand model by Conference Board; Forecast by province, NAICS industries, and occupations
Canadian Trucking Human Resources Council (CTHRC)	yes	yes	Sector HR Study in 2003 projected demand from 2003 to 2008
Child Care Human Resources Sector Council (CCHRSC)	yes	no	Sector HR Study done in 2004 with outlook

Table 5.1
A Survey of Occupational Forecasting Undertaken by Sector Councils, January 2009

Name	Aggregate Occupation / Employment Forecasting for the Sector	Detailed Forecast by Occupation	Description of Occupational Forecasting Activity
Construction Sector Council (CSC)	yes	yes	Forecast by occupation, province, region, to 2015, last updated in May 2008
Contact Centre Canada (CCC)	yes	no	Very limited qualitative outlook in <i>The Implications of Current Trends on Human Resources</i> report in 2007
Council for Automotive Human Resources (CAHR)	yes	no	Aggregate employment outlook in <i>Competing Without a Net: The Future of the Canadian Automotive Industry</i> in 2008
Cultural Human Resources Council (CHRC)	no	no	
ECO Canada (ECO)	yes	no	In Canadian Environmental Employment, 2007, forecast of environmental jobs by NAICS sector
Electricity Sector Council (ESC)	yes	yes	In Powering Up the Future: 2008 LMI Study
Forest Products Sector Council	no	no	Website non-functional
Forum for International Trade Training (FITT)	no	no	
HR Council for the Voluntary & Non-profit Sector	no	no	
Information and Communications Technology Council (ICTC)	yes	yes	2008 Report <i>Outlook for Human Resources in the ICT Labour Market: 2008-2015</i>
Mining Industry Human Resources Council (MiHR)	yes	yes	2005 Report <i>Prospecting the Future</i> . Developing the Mining Industry Workforce Information Network (MIWIN) which will provide information about demand and supply of labour specifically for the Canadian mining sector. (HR Prospector Newsletter, Summer 2008)
Motor Carrier Passenger Council of Canada (MCPCC)	yes	yes	Skills demands by occupational category. Human Resources Sector Study 2006
National Seafood Sector Council (NSSC)	no	no	
Petroleum Human Resources Council of Canada (PHRCC)	yes	yes	2003 Report updated in 2004: <i>The Decade Ahead</i> . Forecast by region and occupation.
Police Sector Council (PSC)	yes	no	<i>Policing Environment 2005</i> included a qualitative outlook for 2010

Table 5.1
A Survey of Occupational Forecasting Undertaken by Sector Councils, January 2009

Name	Aggregate Occupation / Employment Forecasting for the Sector	Detailed Forecast by Occupation	Description of Occupational Forecasting Activity
Textiles Human Resources Council (THRC)	no	no	
Wood Manufacturing Council (WMC)	yes	no	2005 HR Sector Study. Aggregate labour force demand forecasts by NAICS industries
Partner Organizations & Developing Sector Councils			
Association of Canadian Community Colleges (ACCC)	no	no	
Canadian Council of Technicians and Technologists (CCTT)	no	no	
Engineers Canada	no	no	
Installation, Maintenance and Repair Sector Council (IMR)	no	no	
Source: Sharpe (2009). Taken from sector council websites. List of Sector Councils from the Alliance of Sector Councils: (www.councils.org/tasc/nav.cfm?s=memblast&p=memballs&l=e).			

In terms of methodology, many Sector Councils provide a qualitative forecast of aggregate employment for a sector or occupation, usually as part of a broader study on human resources issues in the sector. About half the sector councils have at least taken this step. Some sector councils have gone further by publishing reports that provide more detailed and quantitative forecasts of occupational employment levels. The Electricity Sector Council, the Canadian Plastics Sector Council, the Information and Communications Technology Council, and the Canadian Tourism Human Resource Council have taken this approach (Sharpe, 2009; Giddings, 2008).

Many sector councils also conduct surveys of employers, and publish annual reports on labour demand and shortages. The Canadian Automotive and Repair Service Network (www.cars-council.ca), the Information and Communications Technology Council (www.ictc-ctic.ca) and the Plastics Council (www.cpssc-ccsp.ca) all actively publish reports on the labour needs and the employment outlook for their respective industry. The Tourism Human Resources Council (www.cthrc.ca) also publishes studies periodically – even contracting the Conference Board of Canada to compile a 20-year supply-demand projection that is to be updated biannually. The Tourism Council makes extensive use of Statistics Canada’s Census data and data from the tourism satellite accounts of Statistics Canada’s Economic Accounts. Local or regional associations provide labour market information, along with boards for job postings. The Vancouver Regional Construction Association’s www.construction-jobs.ca is an example, providing detailed occupational descriptions along with wage information and educational links. The site additionally provides links for employers to candidate résumés, organized by type of position. (Sharpe, 2009)

The sector councils with the most developed occupational forecasts have online databases that allow for detailed and up-to-date forecasts by industry and province or region. The Construction Sector Council (www.csc-ca.org) falls into this category and has arguably the most developed occupational forecasts of any national sector council (Box 5.2).

Sector councils have the unique ability to reach out and take the pulse of their industries on various topics in a timely way which makes them ideal producers and disseminators of labour market information. Also, one of their most useful functions is as distributors of the information produced by Statistics Canada and governments. Consequently, the sector council approach should be viewed as complementary to publicly produced LMI as it builds on publicly provided information. By itself, it does not provide a complete picture of the economy at the national level, and is uneven in terms of the type and depth of information that is available through each sector council.

Box 5.2**The Construction Sector Council**

The Construction Sector Forecasts website, which we view as a “best practice,” is an online delivery system that provides construction organizations with timely forecast data on residential and non-residential construction investment activity and labour supply and demand at the national, provincial and regional levels.

Specific information found on the Construction Forecasts website includes the economic environment faced by the construction industry in all Canadian provinces, residential and non-residential investment outlook, labour demand and supply forecasts over a 10-year period for more than 30 skilled construction trades, markets for trades and occupations, retirement patterns in construction trades and potential for labour mobility.

This information is also published annually in a series of national and regional documents entitled *Construction Looking Forward*. (www.csc-ca.org).

5.3 The Labour Exchange Services

Labour exchange services through their online search engines are another significant provider and disseminator of labour market information (a background study on online LMI is available on our website – www.lmi-imt.ca). Most job-matching sites feature search tools, guides and occasional articles on labour market trends. These sites also offer employers screening tools, and access to worker résumés. Many of these sites also have important information about labour supply and demand specific to particular occupations and industries.

The private sector offers a variety of labour exchange engines. Workopolis and Monster.ca offer the most prominent private job search engines in Canada. Other important labour exchange sites are: Jobboom.com; Careerbuilder.ca; and Working.com. In terms of popularity and overall usage, the job search engines fall behind the federal government’s jobbank.gc.ca (see Chapter 9), but taken together are fairly evenly matched. Workopolis features over 50,000 jobs a day, with over 3.7 million visitors monthly in Canada. It claims a 71 percent hiring success rate for customers, and reports 1.8 million active resumes in the database (www.workopolis.com/EN/Common/AboutUs.aspx). Monster.ca has an average of close to 3 million unique visitors a month, a repository of over 2 million resumes online, and over 25,000 Canadian job postings (about.monster.ca/6268_en-CA_p1.asp). These top private sites also have on average higher paying and better quality jobs than does Jobbank.gc.ca. They also advertise the availability of their services much more prominently than Jobbank.

In terms of producing LMI, Workopolis and Monster.ca have sufficient scale to use their data on job postings to derive rough measures for market demand. Workopolis.com features a salary calculator, administered by an affiliate, PayScale. The data are based on surveyed salary information for occupations similar in geography and title. It is based on salary surveys of employees and trade associations. Monster.ca produces a Canada-wide

Monster Employment Index, as well as indices for 13 local markets and various occupational classifications. Monster.ca intends the index, which has been produced since 2007, to provide a relative indicator of demand across time in given markets and occupations as once did Statistics Canada's now defunct Help-Wanted Index.

Monster.ca has also partnered with industry associations, such as the Canadian Advanced Technology Alliance (CATA), in the production of occupation-specific indices, disaggregated by geography. For example, the CATA and Monster have jointly produced an Advanced Technology Employment Index (ATEI) that tracks searches, and postings in high-tech occupational descriptions.

Workopolis and Monster.ca both provide important job matching services and produce valuable employment index information. Although similar in many ways, the services that they provide complement those provided by The Government of Canada's National Job Bank.

There are also other important job-matching sites. They include: www.wowjobs.ca, which features salary data and comparison plots of number of postings by occupation and qualifications; www.thejobstores.com, which is focused on the B.C. labour market and features various links to government-provided LMI resources; and www.jobpostcanada.com, which similarly links to government-provided LMI resources.

In addition, MediaCorp maintains a job listing site through its online Canadian Employment Weekly and additionally provides a job-search board at www.eluta.ca. The company also partners with MacLean's magazine in producing an annual survey of Canada's 100 Top Employers (published at www.canadastop100.com). The survey documents "Top Employers" in provinces, as well as for given cities, sectors and demographics. The survey features a letter grade for employer characteristics and descriptions of workplaces, characteristics of the firm's employees, benefit structure, and other attributes of employment. The survey does not produce aggregate information but does provide some descriptive insight into workplace trends. Framed as a competition, employers have incentive to reveal details about their workplace because of the publicity accorded to participating employers. Job-seekers can link directly from the competition webpage to descriptions of employers and can link to a given employer's current postings on the Eluta website.

5.4 Organized Labour

Organized labour has always played a key role in matching workers and jobs through union hiring halls. These institutions have been important in craft-based unions in construction, trucking and the entertainment industries. In recent years, industrial unions have taken on new roles relevant to their consumption of LMI. They are involved in institutions that provide immediate job matching assistance to workers in the context of

large layoffs and, in some cases, related services including providing access to training (Baldwin, 2009).

Reliable, valid and timely labour market information is critical to ensuring that workers have the best available information upon which they can base decisions. Given the circumstances of the current economic downturn, many workers are faced with decisions around job loss and retraining. They need access to the best LMI possible to ensure they make the best decisions possible. In addition, the development of good LMI must factor in the input of organized labour on an ongoing basis. As a key user of this information, workers can add valuable insight into the development of this tool that can benefit all concerned.

Newfoundland and Labrador Federation of Labour

Organized labour is also an important producer of LMI as participants in the collective bargaining process. The data bases compiled by governments from the agreements provide important non-wage information that largely does not exist elsewhere. All jurisdictions maintain a library of collective agreements in their jurisdiction and these include descriptions of most terms and conditions of employment of workers covered by collective agreements. Thus, one can see not only what terms and conditions exist, but how they are combined. Unfortunately, not all jurisdictions are able to be comprehensive and current in their collections. Moreover, many fall short of meeting the need of union researchers for agreements that are readable online. The collective bargaining data base is used to provide custom analyses in response to questions raised by trade union researchers; one off studies by government analysts associated with the data bases, and standardized quarterly trend data. Current data are drawn on regularly by users and is regarded as important and helpful (Baldwin, 2009). In addition, local training and adjustment boards and not-for-profit agencies that provide job search help to job seekers also generate new LMI and they are acutely sensitive to LMI needs and dissemination issues (Baldwin, 2009).

Organized labour, local training and adjustment boards provide valuable labour market information from a largely worker-based perspective that does not exist elsewhere. The collective bargaining database is an especially important source of information on non-wage benefits that serves as a key complement to public sector LMI.

5.5 Other Third-Party Suppliers

Another important group of private LMI providers and disseminators are other third-party suppliers. They include: employment service agencies, human resource firms, professional associations, private sector economic departments, universities and economic research institutes.

Manpower Inc. (www.manpower.com) is considered a world leader in the employment services industry. Manpower offers employers a range of services including permanent, temporary and contract recruitment; employee assessment and selection; training;

outplacement; outsourcing and consulting. Manpower has a worldwide network of 4,500 offices in 80 countries and territories. Manpower produces a free employment outlook survey which includes forecasts by quarter for 33 countries.

Human resource and strategic management consulting firms are also active in compiling labour market information. Consultants do not provide regular, ongoing surveys of labour market conditions. Rather, their role is typically limited to periodic, issue-specific reports, which summarize existent data and may include a limited, targeted survey. Examples of such HR consultancies are Watson Wyatt Worldwide, WCG International HR Consultants, or Human Capital Strategies. Consultancies are often employed by local Chambers of Commerce or development agencies in order to survey aspects of regional labour supply – particularly in relation to skill shortages or challenges for disadvantaged groups. Strategic consultancies also produce occasional, high-level reports on labour market trends – such as on the aging workforce or qualification-levels. For instance, Boston Consulting Group and McKinsey & Company have published such studies (Giddings 2008).

Professional associations such as those for Registered Nurses or Certified Management Accountants sometimes provide demographic and labour market information about their members to governments or the general public. These administrative data are particularly useful LMI when membership in the association is mandatory as a condition of employment.

Across the country there are also many privately-sponsored publications providing useful LMI. For instance, there are: the *British Columbia Labour Market Report*, a monthly subscription report, and its weekly counterpart, the *Hot Sheet* e-newsletter; and the *Sask Trends Monitor* (www.sasktrends.ca) tracks social, economic, and demographic trends including those related to the labour market in Saskatchewan.

Private-sector economics departments or units are another group that produce and disseminate much valuable LMI. The economics departments of Canada's financial institutions are a particularly important source for commentary and analysis, but labour groups and business organizations also disseminate labour market information. Banks' economics departments publish commentaries on every release of Statistics Canada's Labour Force Survey and other labour statistics, as well as author frequent reports on labour markets, providing employment forecasts for different industrial sectors and regions. While useful for internal business decisions, these departments generally publish their commentary on unsecured websites as a matter of public service and goodwill. These economics departments play an invaluable role in disseminating statistical releases and highlighting salient trends. Economics departments' commentary reaches a wide audience through national media and enhances the public's awareness of labour market information.

Public policy think-tanks, economic departments of universities and economic research institutes also provide commentary on labour markets. The C.D. Howe Institute (www.cdhowe.org) publishes ongoing reports on issues in labour markets. These tend to

be focused research pieces on long-run, high-level issues in labour markets. Similarly, the Institute for Research on Public Policy (www.irpp.org) examines aspects of labour markets within the context of its Canadian Priorities Agenda or Economic Growth and Social Progress program. In these programs, IRPP is particularly focused on long-term, economy-wide policy issues like population aging, income security, productivity growth and the work-life balance. The Fraser Institute and the Canadian Centre for Policy Alternatives also produce occasional reports, though these are often intended to advocate policy prescriptions rather than to provide insight on trends. The Atlantic Provinces Economic Council also occasionally provides analysis focusing on the labour market of the Atlantic Provinces, and the Centre for the Study of Living Standards does a lot of useful work on productivity, including studies of the relationship between labour markets and productivity.

Many think-tank reports tend to be focused on higher-level, long-run issues, and they do not typically produce regular analyses of labour markets. The Conference Board of Canada is focused on providing data and commentary targeted to Canadian businesses. The board produces a variety of publications on trends in human resources, particularly aimed to assist firms in planning compensation. As well, they produce industrial outlooks in which employment by industry is discussed. The Board also markets historical data and its forecasts. The reports and data series are available for a fee on its website.

Much valuable LMI is produced by third party private sector suppliers. Although much of this information is fee-based and not available to public users, a lot of it is publicly available and can be of great value to the users of LMI that search it out.

5.6 An Opportunity for Partnerships

The privately-produced LMI that is available is complementary to the LMI produced by governments. It serves the useful purpose of bridging existing data gaps where public information is not available, or where a profit can be made by supplying specific LMI needs that have not been addressed by governments.

Private sector LMI suppliers play an important role as intermediaries in providing LMI to their clients and in facilitating the matching of people and jobs. The information that is produced and disseminated by sector councils, job search engines, organized labour and other third party suppliers is designed to meet the needs of their specific targeted audience. This information provides a level of detail and specificity not found in the 'bigger picture' labour market information which exists at the national, provincial and even the local level.

In moving forward, whether it is at the local, provincial or national level, private sector LMI is a growing reality that cannot be ignored. At a minimum, the public sector needs to be aware of what is happening in the private sector and plan accordingly. But an even better approach for the public sector would be to take advantage of the opportunities to work together with the private sector to build the better LMI system Canada needs. This will require a greater willingness by all concerned to share LMI and to enter into innovative new partnerships for its dissemination.

6. International Best Practices on LMI

6.1 An Overview of LMI Systems

As a comprehensive review of international systems would be very time consuming, we decided that it would be more in the interest of the Panel and the FLMM to focus upon best practices that could be adopted to improve the Canadian system. This dictated looking only at countries that had economies and systems with a reasonable amount of comparability to Canada to learn about their best practices, so we focused on the United States, Australia, the United Kingdom, Germany, and Denmark. These particular countries were chosen for the special features of their LMI systems, and for their similarity to Canada as highly developed industrialized countries with sophisticated and modern labour markets. However, these countries differ among themselves and with respect to Canada in the degree of centralization of their systems. Specifically, the United Kingdom, Germany, and Denmark have highly centralized systems. Germany and Denmark have, through legislation and enforcement built a strong and entrenched connection between the labour market information that they produce and their educational systems. On the other hand, the United States and Australia are both federations that have more-decentralized systems with the greatest level of private sector involvement.

One of the most distinctive features of the United Kingdom (UK) LMI system is that it has a well developed set of institutional support arrangements including: obligations of LMI providers and individuals, quality standards, policy advice and co-ordination mechanisms, political support, and research and evaluation support (Sharpe and Qiao 2006). In the United States, Germany and Denmark, lead agencies are responsible for labour market information. At the federal level in the United States, the Bureau of Labor Statistics (BLS) is the lead agency, in Denmark it is the Danish National Forum for Dialogue in Educational and Vocational Guidance, and in Germany the Federal Employment Service, Bundesagentur für Arbeit (BA) is the largest single producer and publisher of LMI. In Australia, the public sector is the primary producer of LMI. In some cases, the public sector provides LMI directly; in others, it contracts out production to private LMI providers. There is a larger private sector in the LMI field than in most other countries (OECD, 2002a). The private sector works well under public management, providing comprehensive information to the general public (Sharpe and Qiao, 2006).

6.2 The Governance of LMI

6.2.1 Legislation

In the United Kingdom and Denmark, career guidance has been embedded in their educational systems with specific legislation. The United Kingdom has rooted LMI in its curriculum and made legislative arrangements for LMI in the education system. The enforcement 1997 Education Act has ensured that LMI is available in both educational institutions and the workplace. The Act ensures that all schools provide a minimum program of career education and ensures that all young people have access to impartial career guidance (OECD, 2003d).

Denmark has instituted similar legislation. In Denmark, according to the Act on Educational and Vocational Guidance, guidance services are to be offered by public employment services, schools/educational institutions, and by other relevant authorities and agencies. Enforcement of the Act in Denmark has ensured that students meet a guidance counsellor several times during childhood and youth beginning at primary and lower secondary school, and continuing in a youth education programme (International Labour Organization, 2004).

In contrast, Canada does not have specific legislation or regulations regarding the provision of LMI in educational institutions, which given the distribution of powers in Canada would have to be provincial/territorial government level. Instead the provinces and the territories leave it to the discretion of local school boards whether to offer LMI to students. Canada could benefit greatly from legislation and enforcement like is done in the U.K. and Denmark, albeit in Canada at the provincial/territorial level. These measures would ensure a stronger connection between the LMI that is produced and its distribution throughout the educational system. The enhanced delivery of LMI to students would better inform their post secondary and employment pursuits.

6.2.2 Umbrella Organization or Lead Agency

In many countries, LMI can be ill coordinated between different ministries and agencies and between different levels of government, limiting its transparency and consistency. In particular, information provided by different agencies can be either overlapping or inaccurate. Users may also encounter difficulties finding what they need from the different sources, or they may find it hard to distinguish one type of information from another. But this is not the case in the United States, Denmark and Germany which all have lead agencies responsible for LMI.

In the United States the establishment of such an agency was made mandatory under the Workforce Investment Act of 1988. The United States also has one-stop information centres and a federal interagency committee, the National Occupational Information

Coordinating Committee (NOICC), which coordinates the development, dissemination, and use of LMI in concert with fifty-six State Occupational Information Coordinating Committees (SOICCs) (Sharpe and Qiao 2006).

In Germany the Federal Employment Service Bundesagentur für Arbeit, (BA) is the largest single producer and publisher of LMI. Germany's Federal Employment Service plays a strong role in gathering, analysing and disseminating LMI. There are also strong, formally defined partnerships between the Federal Employment Service and educational institutions, as well as a solid partnership between educational institutions and labour market participants with specific attention on placement information (CSLS, 2001; Sharpe and Qiao, 2006).

In contrast, the coordination of the LMI system in Canada is far less structured than in the United States, Denmark and Germany. Canada does not have a lead or umbrella agency. Having some sort of an agent also oversee the LMI system in Canada would likely better facilitate coordination of information across portfolios, particularly for education and labour; across different sectors of education; and between provincial and national governments.

6.3 Data Collection and Analysis

In Canada there is a wealth of labour market information available at the provincial and national level and at five year intervals from the Census. However, despite a strong demand for more current local area data, whether that be by town alone (i.e. The Pas, Manitoba) or by occupation (i.e. nurses) as well as town, it is not readily available except every five years with the release of data from the quinquennial Census. Yet in Australia, this type of data can be captured through Small Area Estimation techniques. In the United States it is available through the Longitudinal Employer-Household Dynamics Program. In addition, important lessons can be drawn from the data collection strategies utilized by the European Foundation for the Improvement of Living and Working Conditions and in The National Apprenticeship Vacancy Service effort pursued by the UK.

6.3.1 Small Area Data

Australia is quite advanced in its efforts to capture local area data. In Australia the official source of statistics on Australian labour market is the Australian Bureau of Statistics (ABS). Every quarter, the Department of Employment and Workplace Relations publishes estimates of unemployment and the labour force for each of approximately 1300 Statistical Local Area (SLA) regions. An SLA essentially consists of a Local Government Area or part thereof. It is important to note that although useful, the Australian government warns that these SLA level statistics should be treated with caution, as they are based on small numbers that could easily magnify into larger percentage amounts (Australia small area data). In order to get at local area data, the

Canadian government in partnership with Statistics Canada and the provinces and territories could pursue a similar methodology.

6.3.2 Gross Labour Flows

In contrast to the situation in Canada, gross flow information on changes in the labour force, employment and unemployment is available for the United States and certain European countries. In the United States, two key sources of data provide information on gross labour market flows: the Current Population Survey (CPS) and the Business Employment Dynamics (BED) program. The CPS is a monthly survey of households which covers the full civilian labor force, including self-employed individuals. It is similar in nature to the Canadian Labour Force Survey (LFS). Gross flows data from the CPS are available monthly and provide flows between the following four categories: employed, unemployed, not in the labour force and other inflows/outflows (death, persons turning 16 and net international migration). The initial dataset was created in 2005, and data are now available back to 1990, but only at the national level. Data are available in seasonally and not seasonally adjusted format and are broken down by gender. No industry details are available publicly.

The gross flows data for the period of November to December 2008 are shown in matrix form in Table 6.1. This matrix represents the number of individuals moving from a given labour market status in November (defined on the left-most column) to another labour market status in December (defined on the top row). The diagonal thus represents the number of people not changing status over the period. The right-most column provides a breakdown of the working age population by their labour market status in November (e.g. 144.1 million people were employed in November 2008) and the bottom row does the same for December (e.g. 143.4 million people were employed in December 2008). Thus, from November to December 2008, on a net basis employment fell 806,000 and the number of unemployed increased 632,000. These estimates reflected large gross flows, with almost 6.5 million individuals leaving employment (2.56 million for unemployment and 3.89 million leaving the labour force altogether) and almost 5.7 million individuals taking up employment (2.09 million from unemployment and 3.49 million from out of the labour force).

Table 6.1
CPS Labour Force Status Flows, November to December 2008, Seasonally Adjusted
(in thousands)

December November	Employed	Unemployed	Not in labour force	Other outflows*	Total
Employed	137,677	2,558	3,886	23	144,144
Unemployed	2,088	6,134	2,252	2	10,476
Not in labour force	3,487	2,380	74,158	183	80,208
Other inflows*	86	36	292	0	415
Total	143,338	11,108	80,588	208	

Source: Bureau of Labor Statistics, (www.bls.gov/cps/cps_flows.htm).

* Includes estimated deaths (outflows), persons just turning 16 (inflows) and adjustments to estimated population totals from net international migration.

The set of statistics from the BED program provided in Table 6.2 is derived from the Quarterly Census of Employment and Wages (QCEW). The QCEW is built on administrative data from US establishment, and they cover 98 per cent of US private sector jobs. Flows on job gains and job losses from the BED are available quarterly since 1992 (with a lag of approximately eight months) and are disaggregated by State, industry and firm size. Data on whether job loss/gains are from expanding/contracting or opening/closing establishments are also available. In March 2008, the number of jobs in private sector establishments was 270,000 lower than in December 2007, with 7.13 million jobs gained and 7.40 million job lost over the period. Over the same period employment according to the CPS fell 271,000.

Table 6.2
BED Job Gains/Losses in the U.S. Private Sector, third month of quarter over third month of previous quarter, seasonally adjusted (in thousands)

	September 2007	December 2007	March 2008
Gross job gains	7,323	7,676	7,130
At expanding establishments	5,849	6,220	5,731
At opening establishments	1,474	1,456	1,399
Gross job losses	7,564	7,366	7,400
At contracting establishments	6,209	6,010	6,047
At closing establishments	1,355	1,356	1,353
Net employment change	-241	310	-270

Source: Bureau of Labor Statistics, (www.bls.gov/bdm/#news).

6.3.3 The U.S. Longitudinal Employer-Household Dynamics Program

The United States has done innovative work in developing local LMI in recently years (Dea, 2008). In particular, the Longitudinal Employer-Household Dynamics Program (LEHD) uses statistical techniques to combine federal and state administrative data on employers and employees with core Census Bureau censuses and surveys to produce detailed LMI by county on a quarterly basis. The Local Employment Dynamics (LED) partnership between state LMI agencies and the U.S. Bureau of Census has developed new information about local labour market conditions at low cost without additional response burden through the creative use of worker and business records. A similar approach could be pursued in Canada.

6.3.4 European Working Conditions Survey

The report of the European Foundation for the Improvement of Living and Working Conditions (Eurofound, 2007) provides a comprehensive overview of working conditions across 31 countries in Europe. It reflects workers responses to questions on a wide range of issues such as work organisation, working time, equal opportunities, training, health and well-being and job satisfaction. The report provides valuable insight into how European workers experience and assess their working lives and working conditions. The five year cycle of the survey provides an effective means of tracking the impact on working conditions over time. Over the 15 years in which it has run, the survey has provided a complex portrait of work and working conditions in Europe. It has also stimulated new research in order to better understand and contextualize the data (Fourth European Working Conditions Survey 2007). The Eurostudy provides a best practices data collection example that could be pursued at the national level in Canada or taken forward to encompass North America (Mexico, The United States and Canada) in its entirety. Either way a study of this magnitude and depth would provide valuable information on working conditions and assist in better understanding work issues in North America.

6.3.5 The National Apprenticeship Vacancy Service

The UK is in the process of developing its National Apprenticeship Vacancy Service to bring together employers with apprenticeship vacancies and potential apprentices (UK Department for Universities, Education & Skills, 2008). This service will provide a single web based location for high quality and dynamic information on apprenticeships for use by: employers; potential apprentices; their parents and guardians; learning providers; and those providing service. It will also supply powerful management information on all aspects of apprenticeship recruitment. The service will match potential apprentices to employers with vacancies, track candidates and employers progress through the system and identify where intervention is needed. It will also record all apprenticeships and employers and offer them The National Apprenticeship Vacancy

Matching Service. In contrast, in Canada, where there are current and projected shortages of apprentices across the country, there is still no consistent national system to bring together employers with apprenticeship vacancies and potential apprentices. Such an instrument could prove extremely useful in strengthening the efficiency, and coordination within Canada's apprenticeship system and in the promotion and placement of apprentices.

6.4 Information Dissemination

In order to reach all potential users, international best practices indicate that a variety of mediums should be utilized for dissemination of LMI. LMI users can be reached through: a single web portal; video and print media; career centres, and telephone. It also suggests that it is important to promote the LMI system, possibly through an on-going media campaign so that users are made aware of all the services that are available to them. And finally, it tells us that labour data should be made freely and easily accessible over the Internet.

6.4.1 Combining a Variety of Media for Dissemination

The United States and the United Kingdoms LMI systems provide an excellent example of how to successfully utilize a number of mediums for dissemination in combination. The U.S. government LMI producers successfully combine video, print, CD-Rom, telephone and Internet to disseminate LMI. The varied delivery formats ensure that LMI covers persons with different media preferences (Sharpe and Qiao 2006).

The United Kingdom's Learndirect is another highly innovative approach to meeting the LMI needs of adults. Launched in 1998, its core is built around call centre technology funded through the University for Industry. It offers free and impartial information to assist adults to access further education and training opportunities. By the end of 2003, over five million people had called learndirect and received customized information. Learndirect also provides an online database of hundreds of specially created courses in computers, office skills and self-development at www.learndirect.co.uk. There have been over 10 million hits on the site since it opened in 2000. Any adult who wants to improve his employable skills can choose suitable courses online and find an easily accessible learndirect centre at which to begin training (Sharpe and Qiao 2006).

6.4.2 Single Web Portal

A single web portal is emerging as the international best practice for the dissemination of LMI. A number of countries have developed, or are developing, state-of-the art LMI portals that service a wide range of clients. For example, the European Union has developed EURES, the European Job Mobility Portal, which provides information on jobs and learning throughout Europe (ec.europa.eu/eures) and the German state Labor

Agency, the BA, has established the "Virtual Labor Market" (VLM). The VLM is comprised of an internal and an external online portal and links to the human resources departments of private companies and commercial employment services. By providing one integrated system the transparency of the German labour market has been immensely improved. More efficient processes and the new matching technology have led to almost 2 million job matches per week from which not only the unemployed benefit (Computer World, 2007).

The United States Department of Labor sponsored a very sophisticated and seamless single portal called CareerOneStop.org, which provides information to job seekers and employers. It is a network that connects employment, education, and training services into a coherent system of resources at the local, state, and national level. It is based on national and state government databases that are accessible free of charge via the Internet. The updated labour exchange services are built around electronic vacancy and resume databases, which are maintained by state governments. It also provides information on careers, salaries and benefits, education and training, and other relevant LMI.

In addition, Ireland's recently commissioned Expert Group on Future Skills Needs main recommendation was that Ireland should move toward a single portal/gateway site. The portal would contain careers, course and labour market information, organizational/company profiles, a range of assessment tools and testimonials, a guidance helpline and appropriate linkages to related sites. The Expert group recommended clearly defined ownership of the development and subsequent management needs of the portal to guarantee its accessibility and usability. And that if the national portal was established, a high impact publicity plan should also be developed (Phillips, Siobhan, Clarke and Classon, 2006).

In contrast, in Canada, labour market information on the Internet is housed in a number of different locations including national, provincial, territorial, local and private web-sites that are not seamlessly linked. At present there is no universally accepted single portal for LMI in Canada. Developing a single portal for LMI would be the best way to ensure consistency and coordination in Canada's largely fragmented LMI web system and put Canada back on the leading edge of technology consistent with international best practice. It would ensure that users, whether they are students, governments, labour, or business, could easily locate and access labour market information. Developing and maintaining such a portal would require federal, provincial and territorial cooperation and coordination and would involve a substantial investment of time and resources to ensure both the accuracy and currency of information and web links.

6.4.3 Multimedia Publicity Campaign

The United Kingdom's learndirect's marketing campaign can be viewed as successful in promoting the use of LMI. In order to attract callers to their learndirect services the United Kingdom conducts regular and systematic marketing campaigns. These make heavy use of radio and television advertisement, which can be targeted at particular

occupations (Sharpe and Qiao, 2006). In Canada, many potential users are not familiar with existing and available LMI. There is thus a need for more publicity and awareness to ensure that users find the LMI they need and can use it.

6.4.4 Free Downloadable Labour Market Data

All of the five countries considered make their labour market data, including time series, available on their statistical agencies' websites for free. This includes the Bureau of Labor Statistics in the United States, the National Statistical Office in the United Kingdom, the Australian Bureau of Statistics, the Federal Statistical Office of Germany, and Statistics Denmark. Indeed, it is not only these five countries that make their labour statistics available online for free. All 29 OECD countries surveyed by the Centre for the Study of Living Standards (CSLS) for the Panel have a consistent long-term time series (9-10 years or more) on the national unemployment rate and employment level (Table 6.3, Sharpe, 2009). In contrast, Statistics Canada does not make available on its website a long-term time series for either the national unemployment rate or employment level. Thus, Canada is the only OECD country that does not make basic labour market data available online for free. And because it is not necessary to provide credit card and billing information for each separate data request, it is not only cheaper but much easier to get the data in these countries and takes less time. The absence of data charges also makes the websites more user friendly and less intimidating. In all cases, the data can be downloaded directly or copied into a spreadsheet. This approach is much more straightforward than that of Statistics Canada, which charges for data obtained from its CANSIM database.

The licensing requirements and fees charged by Statistics Canada for data restricts its accessibility to many users and limits the ability of user groups to more widely disseminate the wealth of information that can be extracted from that data.

The Canadian Tourism Human Resource Council (CTHRC)

6.5 Some Lessons for Canada

Innovative international approaches to LMI that provide valuable lessons and could be considered for Canada include:

- Development and enforcing of legislation within the relevant Education Act (provincial/territorial jurisdiction) in Canada to ensure that LMI is incorporated throughout a student's education;
- Establishing a cooperative and participatory umbrella organization to guide federal/provincial and territorial work on LMI and identifying a lead agency;
- Exploring the feasibility of small area estimation and linking of administrative data and surveys to get local area data;

- Developing a national or continental study similar to the Eurostudy;
- Developing a National Apprenticeship Vacancy Service;
- Utilizing multiple media formats to engage LMI users;
- Creating a state of the art single portal for LMI;
- Undertaking a media campaign to promote LMI generally, as well as specific new developments like the single portal; and
- Having the statistical office provide cost-free access to its labour market data over the Internet.

These international best practices would be a good fit with Canada's existing LMI system. But in considering them, it is important to keep in mind that each of the countries discussed are unique and that they would have to be tailored to meet Canada's specific LMI needs.

Table 6.3
A Survey of the Free Online Availability of Labour Statistics in OECD Countries

Country	Unemployment Rate	Years*	Employment Level	Years*
Australia	yes	1978-2008	yes	1978-2008
Austria	yes	1995-2007	yes	1995-2007
Belgium	yes	1999-2008	yes	1999-2008
Canada	no	***	No	***
Czech Republic	yes	1993-2007	yes	1993-2007
Denmark	yes	1995-2008	yes	1995-2008
Finland	yes	1989-2008**	yes	1989-2008**
France	yes	1996-2008	yes	1996-2008
Germany	yes	1990-2008	yes	1990-2008
Greece	yes	1998-2008	yes	1998-2008
Hungary	yes	1998-2008	yes	1998-2008
Iceland	yes	1991-2008	yes	1991-2008
Ireland	yes	1988-2008	yes	1988-2008
Italy	yes	1992-2008	yes	1992-2008
Japan	yes	1953-2008	yes	1953-2008
Korea	yes	2000-2008	yes	1982-2008
Luxembourg	yes	2000-2008	yes	1995-2008
Mexico	yes	2000-2008	yes	2000-2008
Netherlands	yes	1970-2008	yes	1970-2008
New Zealand	yes	1987-2008	yes	1986-2008
Norway	yes	1962-2007	yes	1961-2007
Poland	yes	1990-2008	yes	2005-2008
Portugal	yes	1998-2008	yes	1998-2008
Slovak Republic	yes	1994-2007	yes	1994-2007
Spain	yes	1976-2007	yes	1976-2007
Sweden	yes	1992-2008	yes	1970-2008
Switzerland	yes	1991-2008	yes	1991-2007
Turkey	yes	1988-2006	yes	1923-2006
United Kingdom	yes	1971-2007	yes	1971-2007
United States	yes	1948-2008	yes	1939-2008

* In some cases, earlier data was available, but may not be consistent with more recent estimates.

** Database has an annual user charge - yet data was accessed for free without problem.

*** To be sure, estimates for 2004-2008 are available for these two series, and with sufficient effort, these data may be gleaned from free publications.

Note: A long time series is defined as a minimum of 9-10 years.

Source: Sharpe, 2009.

7. What We Heard

**“Good LMI is crucial.”
Submission by Polytechnics Canada**

**“We need to rely on accurate, complete information.
It must reflect the true realities of the labour market.”
EnviroCompétences**

Canadians were eager to share their views with the Panel. Using a consultation document to guide discussion, the Panel spoke with over 550 Canadians from business, labour, federal, provincial and territorial governments, intermediaries, experts and other interested parties. In addition, 12 formal submissions and 141 survey questionnaires were received.

Box 7.1 Submissions were received from:

The Alliance of Sector Councils
Caledon Institute of Social Policy
Canadian Council on Learning
Canadian Manufacturers & Exporters
Canadian Restaurant and Foodservices Association
Colleges Ontario
Jobmatics, ON
Mining Association of Canada/Mining Industry Human Resources Council
Ontario Local Board Network
Polytechnics Canada
The Russell Inn, MB
Toronto Region Research Alliance

Note: A complete list of organizations and individuals consulted can be found in Appendix A and B.

Consultations were used to explore the following general topics: the role of LMI for the given stakeholder group (what kinds of LMI are used? For what purposes?), data issues (sources, gaps), dissemination and access issues (how easy is it to find the information you need?), interpretation of LMI (do people need help in finding and interpreting LMI?) and the role of LMI stakeholders (are governments doing enough in the provision of LMI? What is the role of the private and civic sectors?).

Despite regional economic differences across the country and differing needs of different players in the labour market, some consistent themes emerged.

7.1 Fragmentation

LMI in Canada is produced by several federal government sources, all thirteen provincial/territorial governments, educational institutions, industry associations, sector councils and others. There is an ever-growing plethora of websites. However, there is little or no coordination among LMI producers, leading to a bewildering array of LMI sources for users, as voiced by many groups consulted, particularly those dealing with individual players in the labour market – students, unemployed workers, individual firms.

“Overwhelming amount of information.”

“Difficult to find something unless someone shows you.”

Two participants at FLMM LMI Forum, Fredericton, October 2008

Not surprisingly, there was overwhelming support for the idea of a single LMI web portal, although some scepticism was expressed as to the ability to actually implement and maintain one and recognition that such a venture would need to be adequately resourced.

“Have a 411 for LMI – centralize.”

Participant at the National Consultation on Career Development and Workforce Learning (NATCON), January 2009

Another aspect of the vast array of LMI is the difficulty in assessing the quality of one source over another, particularly if the statistics differ. This can often be attributed to different methodologies in collecting or generating the LMI, but can be confusing to the unsophisticated user. The need for standardization of collection methods was voiced by a number of stakeholders, particularly in relation to local LMI.

Box 7.2

Key Findings from LMI Survey Questionnaire*

- Most frequently used LMI was employment (77% of respondents); a separate website survey indicated the most sought after information was: wage, job description and job requirements.
- The LMI source used most frequently is the federal government (federal government – 81%, provincial territorial governments – 74%, private sector providers – 49%); note that in Québec the provincial government (Emploi-Québec) is more frequently used than federal sources.
- HRSDC/Service Canada (67% of respondents) and Statistics Canada (62%) were the primary federal sources.
- Monster.ca and Workopolis were cited as the most useful private sector sources of LMI.
- Respondents were more dissatisfied with federal LMI sources (52% vs 41% satisfied) than with provincial/territorial and private sector LMI sources where the rates of satisfaction and dissatisfaction were roughly equal. Satisfaction with LMI was much greater in Québec than elsewhere.
- Internet is the most common medium to access LMI (91% of respondents).
- Most frequently consulted websites were: Statistics Canada, Job Futures, Labourmarketinformation.ca (Service Canada website) and Job Bank.
- More than 40% of respondents experienced difficulty finding information.
- Labour Force Survey and the Census were the most commonly cited Statistics Canada LMI used.
- Need for job vacancy data was cited by 72% of respondents.
- Local area information was the most frequently cited data gap (60%), followed by labour mobility (42%) and labour market programs (39%).

* Breakdown of respondents by sector: 30% NGO, 20% academia, 18% federal government, 16% provincial/territorial government, 8% business, 1% labour, 7% other. Breakdown by region: Ontario – 39%, Alberta – 15%, British Columbia – 9%, Newfoundland and Labrador – 9%, New Brunswick – 8%, Québec – 6%, Nova Scotia – 6%, Manitoba – 5%, Saskatchewan – 3%. Note that a slightly different set of questions were used for the formal Québec consultations and are excluded from these percentages, although select findings are noted. The list of organizations and people consulted in Québec can be found in an Appendix A and B. The questionnaire and a report on the responses will be available on the Advisory Panel's website www.lmi-imt.ca.

7.2 Data Gaps

7.2.1 Compensation Data

Although wage data are available from a variety of sources both public and private, they are viewed as inadequate by many users. For the active players in the labour market, workers looking for jobs, employers looking for workers and for those intermediaries or agencies assisting both (such as employment counselors or headhunters), wage rates for specific occupations and in the local labour market are key, but reliable data that can be confidently used to make decisions are hard to come by. Both organized labour and employers are also looking for measures of compensation beyond the wage – benefit packages and workplace programs – to assess the comparative advantage of one workplace over another and to track trends over time.

For policy makers from the Bank of Canada to provincial/territorial ministries responsible for economic and labour market development, the Panel heard of the need for a labour price index for more accurate macro-economic analysis, as exists in other countries. Australia and the USA were both cited as having good models. They want fixed weight indices of labour costs that include the cost of all benefits.

LMI needs to be a one-stop-shop so that we are all working off of the same benchmark. In particular, when applying for Labour Market Opinions, there is no accurate or reliable one set of information that we can use. Everyone seems to use a different source and there is no system to tell which is the most valid or accurate. I believe that this is often the reason why LMO's are rejected – the employer has no idea what the prevailing wage should be and often, I don't believe that Service Canada's information accurately reflects the situation in rural areas.

The Russell Inn, Russell, Manitoba

Employers require information that can help them to retain the workers they have. A first major requirement is knowledge of going competitive local wage rates.

Canadian Manufacturers and Exporters

Timely and accurate information on salaries and wages would significantly help food service operators to anticipate and manage their costs better. In an industry where over 30 cents of every dollar in sales goes to labour costs, accurate wage information is essential.

Canadian Restaurant and Foodservice Association

The wage data from a variety of sources, such as the Labour Force Survey, the Survey of Employment, Payrolls and Hours, the System of National Accounts, collective agreements, industry associations, and others, sometimes contradict each other, leaving the user confused as to the real situation and hindering well-informed decision-making.

7.2.2 Job Vacancy Data

Although Canada used to have a vacancy survey in the 1970s, it was replaced by a Help Wanted Index, which was abandoned with the rise of the Internet and the difficulty of tracking want ads in multiple media. Consequently, it was not surprising that many stakeholders voiced the need for a job vacancy survey to assess labour demand across regions and through time. This is important to policy makers to determine the tightness of the labour market and hence for the development of the appropriate policies and programs for macroeconomic management and an efficient labour market. For example, in assessing the need for immigration to complement domestic labour supply, one needs to know which occupations are in short supply.

Job vacancy data would be helpful to determine two things: 1) which jobs are in high demand, particularly now with available occupations for the retraining of adjusted workers and 2) what jobs are in short supply (i.e. where do we have too many workers). At this point if local government agencies are not tracking it, which many don't, then that important information is not available.

Ontario Local Board Network

Assessing labour demand is equally important at the more micro level. An employment counselor in Moncton needs to know which local occupations are in high demand in order to advise unemployed individuals on appropriate training for re-employment. And employers need to know how tight the labour market is for recruitment strategies. To this end, in 2004 the Canadian Federation of Independent Business (CFIB) initiated its own vacancy survey of small and medium sized enterprises (SMEs) by asking its members in its quarterly survey *Your Business Outlook* to indicate the number of positions in their firm that had remained unfilled for four months or longer. The survey collects over 9,000 responses from businesses each year. The CFIB has recently revamped its survey extensively to get a more complete picture of job vacancies among SMEs.

7.2.3 Supply-Side Data on the Labour Market

Incomplete data on labour supply broken down by education, skill levels, and occupation – particularly from colleges and private providers was an issue for all parties attempting human resource planning, from individual companies planning new site construction to federal/provincial/territorial governments assessing current and future labour demand and supply and whether interventions are required to ensure a smooth functioning of the labour market.

Another challenge noted more than once was the lack of ability to track students in the increasingly nonlinear educational and career paths followed these days. The introduction of a unique identifier, as has been tried in Québec and British Columbia, was suggested by several as a solution.

7.2.4 Small Domain LMI

There is a tremendous appetite for current small domain LMI – that is, information about local labour markets or specific segments of occupations or industries (or information for both together). Despite increased globalization of markets and talent, at the micro-level many workers and firms, particularly small and medium-sized enterprises, operate in local labour markets and want information at that geographic level. There is no comprehensive source of this type of information, which would be prohibitively expensive to generate using surveys for all of Canada. Some efforts have been made in small area estimation, but they too have limitations. While community profiles are available from the Census, they are not timely and do not provide the level of occupational and industrial breakdown desired by many users. Consequently, stakeholders told us that they must make do with what they can get, often relying on qualitative information, informal networks of intelligence, newspapers, and more formal reports where they exist, such as those from Service Canada, provincial and municipal governments, industry associations, sector councils, local training boards and the like.

Despite the current important economic difficulties facing the manufacturing industry, CME members face a medium-term situation that will be marked by an aging work force, fewer new labour market entrants, and increasing retirements. This will place an even greater premium on firms' ability to recruit and retain workers, and on maximizing the productivity of existing staff through increased training and development. Moreover, these are ongoing, 'real-time' activities that are faced at the local workplace level and require the most current, locally focused information available.

Canadian Manufacturers and Exporters

While it may not be a realistic expectation, employers in particular want information on occupations more detailed than the 4-digit NOC level. For example, if looking for a crane operator they do not want to be sifting through a list that includes caterpillar tracker and snowplow operators. Similarly for specialized operations in mining or oil and gas, for example, employers are looking for specific skills that may be lumped in with other occupations.

7.2.5 Labour Mobility

Many people noted that there is no readily available source of data on temporary migration of workers between provinces. This is of particular concern for Atlantic Canada where a substantial but unknown proportion of workers spend time each year, working out West, and for Alberta which has attracted huge numbers of workers from outside the province in recent years. This “shadow” workforce is not well documented and hampers workforce planning in both parts of the country. It was suggested that capturing both place of residence and place of work on surveys would greatly assist in determining the magnitude of this migration.

In another context, it was observed that being able to track secondary migration of immigrants within Canada from place of “landing” would greatly assist in developing immigration policy and programs for better integration of immigrants into the labour market.

7.2.6 Specific Data Needs for Specific Users

Different LMI users have different needs. In several different contexts the following needs were identified: data by rural versus urban; flag for unionized workers; and Prior Learning and Assessment (PLAR) data.

With labour market tightness experienced in recent years, increasing attention has been focused on under-represented groups, and the need for better information on these groups. The most frequently mentioned in our consultations were: Aboriginals, new immigrants and persons with disabilities.

The Maytree Foundation has suggested that a database of new immigrants and their respective skills and qualifications to help employers recruit the talent they need and to help immigrants obtain employment commensurate with their skills. The same idea was proposed by others consulted by the Panel and has been put into practice in select areas. For example, the Engineering Matching and Placement Program of the BC Division of Canadian Manufacturers & Exporters, a pilot program with HRSDC funding support, told us that they maintain an inventory of close to 200 foreign-trained engineers and promotes them for employment (submission from CME).

In addition, Maytree and COSTI Immigrant Services expressed their concerns about what they considered the lack of transparency in the use of LMI to establish criteria for the selection of immigrants. In particular, they contended that it was not clear how the COPS projections were utilized to determine the 38 high-demand occupations for purposes of fast-tracking immigrants under the new immigration regulations.

7.2.7 Skills versus Jobs and Work versus Jobs

There is a growing need for information on skills available or demanded as opposed to jobs available or occupations in demand. The Canadian Manufacturers and Exporters told us in their submission that “Employers are increasingly looking for skill sets, though much information is cast in occupational terms...New occupations are being created, and the skills required in existing occupations can change over time.” Sherri Torjman in a submission from Caledon Institute of Social Policy pointed out that although the labour market has increasingly shifted to non-standard work (part-time, term, contractual), current methods of data collection still reflect the traditional labour market – 9-5 full-time, full year employment. So she warned that by counting only the availability of formal jobs one can underestimate the actual opportunities for work. Job developers in Winnipeg, exploring the latter option by discussing the availability of work rather than

job openings with local employers, were able to identify more work opportunities for clients.

The HR function today is going beyond the traditional administrative services that characterized HR in the past. It is moving toward a more strategic approach to managing human capital that is in line with supporting and informing business goals and direction. It is an important trend, because today's competitive environment requires HR professionals to focus on building a more flexible and adaptable workforce. Labour market information, such as that used to forecast needs and to understand labour demand and supply, is essential for improving the strategic capability of HR and for helping companies plan ahead.

Canadian Council of Human Resources Association

...it can be concluded that Canada's labour market monitoring systems, although among the best in the world, will have to improve in order to keep pace with economic and technological change. In particular, the basis for data collection must shift away from occupational titles and focus more specifically on the skill sets actually required for any given - often rapidly changing - occupation. Equally important will be enhancing Canada's capacity to analyse labour market information and put it to use.

Expert Panel on Skills: *Stepping Up: Skills and Opportunities in the Knowledge Economy* (1999)

7.3 Future-Oriented LMI

As pointed out by a number of stakeholders, we have a wealth of information on past conditions (historic data), but not nearly enough information on likely future outcomes. Recognizing that the future is inherently unpredictable, the Canadian Council on Learning in their submission to the Panel observed that businesses, educational institutions and policy makers still require some idea of what is coming in order to plan for future business, future training requirements, future labour demand (and requisite skills) and future supply (and requisite skills). There is thus a need for projections, particularly, for occupational projections, even if they are imperfect.

Detailed macroeconomic and LMI projections enable academic institutions and employers to better anticipate the training requirements of local employers. This allows industry to develop stronger business cases for programs that deliver the technical, professional and safety training necessary to meet occupational and performance standards. Such information also permits provincial/territorial governments to make better investments in training and education, which is increasingly important, given the rapid pace of technological innovation in the sector.

Mining Association of Canada (MAC) and the Mining Industry Human Resources Council (MiHR)

The Canadian Occupational Projection System (COPS) is one such projection that is used by federal and provincial/territorial departments to a greater or lesser degree depending on the department and province/territory and forms the basis for other products, such as National Job Futures. However, outside the federal/provincial/territorial governments and sector councils, the Panel found few users who had heard of it. As a result, the Panel encountered a number of groups doing their own projections, not because they were necessarily dissatisfied with others' projections or wanted to examine alternative scenarios, but simply because they were unaware of existing projections. This exemplifies the inefficiency that results from insufficient awareness and inadequate co-ordination within Canada's LMI system.

7.4 Timeliness

**"Timeliness and currency are critical."
Submission by Canadian Manufacturers and Exporters**

With rapid changes in the economy and labour market, all stakeholders (workers hunting for jobs, employers scouting for workers, policy makers) are looking for information that reflects the labour market as it is now and as it is projected to be in the near future. Almost without exception, we heard this sentiment from stakeholders. Unfortunately, there are often time lags in the provision of such information. The Census was frequently cited in this regard. It is the most comprehensive source of information available, but is only produced every five years and can take up to two years to be made available to the public.

Information that includes unemployment rates, job vacancy rates and job turnover rates is important. While Canada Job Futures provides some of this data, its latest figures are from 2004 are not of much use in the changed labour market of 2009. Timely, predictive and discrete LMI would enhance the ability of polytechnics to craft the programs that are the most responsive to employer needs and ensure that they and their students sustain a high rate of graduate career placement.

Polytechnics Canada

Every five years, Statistics Canada conducts the Census which provides industry groups like ours with detailed and comprehensive information on the characteristics of our workforce by individual occupational code. The fact that it takes two to three years for Statistics Canada to release the data makes it much less meaningful and less useful to those industry groups. We would love to be able to provide industry with analysis of this data while it is still current.

The Canadian Tourism Human Resource Council (CTHRC)

7.5 Awareness

While there is a wealth of information available, we learned in our consultations that this is not well known by the average LMI user and the Panel encountered relatively few users who directly access primary data sources. Those who do, tend to be larger and better resourced, such as the federal government, larger provinces, some sector councils and large associations.

The issue is multi-faceted. It starts with lack of awareness of what is available from key sources, such as Statistics Canada and HRSDC. It extends to difficulty in finding the information on these organizations' websites. It continues through hard-to-find, hard-to-interpret and out-dated manuals for data. If the user successfully navigates these hurdles, and many do not, they may be further hampered by the cost of purchasing the data and other access barriers.

There is a need to make better use of the information that exists. Stakeholders recommended better marketing, better search engines and more user-friendly websites and access. One should be able to google whatever LMI one needs.

7.6 Access

“In a knowledge based economy we believe that data collected by Statistics Canada at taxpayers' expense should be available free...”
Submission by The Alliance of Sector Councils

We also learned that beyond awareness there are also access issues. The cost of acquiring specific LMI either from Statistics Canada or from private sources was frequently cited as a barrier – beyond the budgets of many organizations, particularly smaller ones – smaller provinces, small business, non-profit organizations.

As pointed out by Toronto Region Research Alliance, among others, data are often proprietary, particularly among private LMI providers and therefore not accessible to other users. Access to micro-data from surveys or administrative data can be a real challenge for a number of reasons: the need for considerable technical knowledge to be able to use the data; barriers associated with confidentiality of the data or legislation prohibiting its use for reasons other than its collection. The Panel heard several complaints from sophisticated users about the easier access to such data afforded to academics. “Those outside academia have to pay for it, which is a frustration,” complained one participant at the 2008 FLMM LMI Forum in Fredericton.

From another angle, people also observed that access may be a problem for certain groups. For instance, those who can not, or do not use for whatever reason, the Internet are cut off from a vast array of information. Those far from large urban centres cannot

readily access institutional information, such as government libraries. Dissemination of LMI needs to consider the target group to be effective. Students were cited as a user group that is in great need of accurate LMI but to reach them one needs to consider the most appropriate medium, which these days is certainly the Internet but perhaps not traditional LMI sites such as Statistics Canada's. The idea of using social networks, such as Facebook, have been suggested. Multiple venues (Internet, print, in-person, community access points, and others) for dissemination are required to reach all those who need the information.

7.7 Analysis and Interpretation

"Take LMI down to the level where it can be useful."

"Data is often confusing."

Two participants at the LMI Forum, Fredericton, in October 2008

Despite the wealth of data available, the Panel frequently heard of the need for analysis or interpretation of these data for the information to be truly useful to the user. For unsophisticated LMI users, which are the vast majority, there is a need for information tailored to their needs. There is also value in the personal touch, which can only be provided by a person able to assist in interpreting the information found. This is the role of intermediaries – school guidance counselors, career counselors, employment counselors, immigrant settlement agencies. The Panel heard too of the need for LMI training for these intermediaries. Without doubt, a comprehensive LMI system would include resources devoted to analysis and interpretation.

7.8 Best Practices

Canadians are very resourceful. Throughout our consultations, we heard many successful initiatives undertaken or ideas to address shortcomings of the LMI system as it exists today. These successes provide an inventory of best practices on different aspects of the LMI system, as was suggested, among others, by the Canadian Manufacturers & Exporters. We consider this a good idea which would be best managed through a private sector body, though could be linked to the single portal mentioned previously in our report.

8. Governance and Coordination

We now turn to our conclusions from the consultations and our research into the issues. This and the following chapter provide the analytical underpinnings for our recommendations presented at the front of our report.

8.1 The Increased Need for Federal/Provincial/Territorial Coordination

The recent labour shortages in Western Canada and now the growth of unemployment all across Canada, but particularly in central Canada, have served to underline the urgency of the increased need for FPT coordination in the production of both macro labour market data and micro LMI, and its dissemination to the public. This need for more FPT coordination stems from recent changes in the sharing of responsibilities for LMI. While the federal government retains an overall responsibility for LMI, the provinces/territories have assumed a greater degree of responsibility for LMI as a result of Labour Market Development Agreements (LMDAs). A higher level of co-operation and coordination among governments is thus now required to make sure that Canadians get the LMI they need and deserve. And this will require making sure that the LMI system has the appropriate governance structure.

8.2 The Best LMI Model

LMI can be produced and provided in various ways in a federation such as Canada. Regardless of which way is chosen, though, it has to reflect the existing shared responsibilities for LMI programs, policies and services. Within this pre-existing framework, the options range from establishing a more centralized LMI governance structure to retaining and strengthening the existing fragmented, and admittedly not very well coordinated, LMI system. But the issue of the optimal degree of centralization does not involve a simple choice along a one dimensional scale. In fact, the relative advantages of centralization differ significantly for each of three key LMI functions of collection, analysis and delivery to the public. Centralization thus has a functional aspect that can be as important as the geographic.

For the collection and production of labour market data, the existing centralized system with a national agency Statistics Canada doing the job is clearly best. Few would deny that there is a distinct advantage to having a highly specialized world leading statistical agency like Statistics Canada responsible for the collection of data. And while provincial statistical agencies are able to do useful supplemental work, they require access to the full range of Statistics Canada labour market data and surveys to do their jobs properly. There are definite economies of scale in the production of statistics that favour concentrating the collection of labour market data in a single statistical agency. There is also a good

deal of merit in having comparable data available across jurisdictions for comparative purposes.

Data analysis might also benefit from a more centralized approach for certain types of analysis that require a national focus that is only subsequently disaggregated. The Canadian Occupational Projection System (COPS) and *National Job Futures* are examples of key analytical products required for labour market and immigration policy making that can be usefully produced in a centralized manner by the federal government. The provincial and territorial governments then have a very useful role to play. Starting with a COPS national forecast, they have to carry out analysis of their own distinctive labour markets to develop projections more tailored to the needs of their residents. And they are able to bring unique knowledge of the local labour market to this task. While this does raise issues of overall consistency, they are generally considered to be of second order concern.

The delivery of LMI could be centralized more, or decentralized entirely to the provinces and the territories, but it could also continue to be done by both the federal government and the provinces and territories. The key issue here is that the most appropriate LMI be delivered to those that need it, when they need it. And each government has its own comparative advantage in meeting certain types of needs. For instance, the federal government can best provide information on national labour markets and provincial and territorial governments can best provide information on provincial and local labour markets. However, because of its longstanding responsibility for Employment Insurance and related labour market programs and policies, the federal government has developed a network of offices across Canada now operating under Service Canada. These offices contain a valuable repository of expertise on provincial and local labour markets and enable the federal government to also contribute useful information on provincial, territorial and local labour markets. Indeed some provincial and territorial governments have come to depend on this LMI from Service Canada.

An argument has been made that the LMI system could be improved by the establishment of an independent LMI Agency. Some models for such agencies exist in Canada.

The most ambitious and comprehensive model is the Canadian Institute for Health Information (CIHI). This independent, not-for-profit organization was established by the federal and provincial/territorial governments to supply essential data and analysis on Canada's health system and the health of Canadians. It collects and tracks information from hospitals, regional health authorities, medical practitioners and governments. Its data and reports cover: health care services; health spending; health sector human resources; and the health of the population. A unique contribution of CIHI is the identification and promotion of national health indicators such as life expectancy or per-capita health spending. These indicators can be used to compare health status and health-system performance and characteristics both interprovincially and internationally.

The governance and funding of CIHI could serve as a model for a LMI Agency. Its 16-member Board of Directors includes representatives of federal, provincial and territorial governments as well as non-governmental health-related groups. The Chief Statistician of

Canada is also a member. In addition to its responsibilities for overseeing CIHI, the Board provides strategic guidance to the Health Statistics Division of Statistics Canada, as well as advice to the Conference of Deputy Ministers of Health and the Chief Statistician of Canada on health information matters.

The largest part of CIHI's budget, which amounted to \$107 million in 2008-09, was obtained from bilateral funding agreements with federal and provincial/territorial ministries of health and individual care institutions. It also received project-specific funding and revenue from the sale of products and services.

While CIHI is a possible model for a new LMI Agency, there are many obvious disadvantages of establishing such an agency. Chief among these is its long start-up time. It might be worth while incurring these costs if they were necessary to secure the cooperation of all levels of government. But for LMI there already are very good working relations between the federal, provincial and territorial governments in the FLMM.

Another model is the Canadian Centre for Justice Statistics (CCJS). It is a division within Statistics Canada that was established as the operational arm of the National Justice Statistics Initiative (NJSI). The NJSI is a partnership among federal, provincial and territorial Deputy Ministers responsible for the administration of justice, and the Chief Statistician. Its purpose is to provide the information required for the administration of justice, and to make this information available to the public as well as to governments. It is thus responsible for the collection, analysis and dissemination of justice statistics and information.

The Justice Information Council (JIC) is the governing body of the NJSI. It is chaired by the Deputy Minister of Justice and Deputy Attorney General of Canada with representation from all federal, provincial and territorial Deputy Ministers responsible for the administration of justice, plus the Chief Statistician of Canada. The participation of the Chief Statistician in the JIC is the important link for the strategic planning of the justice statistics program. The work of the CCJS is overseen by the Liaison Officers Committee (LOC). It is chaired by a member of the JIC, and made up of officials appointed by members of the JIC, and of a representative of the Canadian Association of Chiefs of Police. The CCJS works under the direction and guidance of these two bodies. This provides the important coordinating link at the operational level.

The CCJS would seem to provide a more promising model for LMI as it would fit in well with existing institutional arrangements and build on their strengths and correct their weaknesses. But before going into exactly how this might work, it is necessary to consider the current governance structure for LMI.

8.3 The Role of the FLMM

The core of a governance structure to coordinate and manage LMI in Canada already exists. The Forum of Labour Market Ministers is the responsible FPT body that brings all the FPT Ministers responsible for labour market to the table. Its LMI Working Group has established a very good rapport among jurisdictions on LMI and has already made a major contribution in its efforts to coordinate federal, provincial and territorial governments' work to build a more accurate and relevant LMI. More specifically, the Working Group has developed standards for LMI that address a number of issue areas such as: privacy and ethical practices; accuracy completeness and timeliness; information relevance for users; accessibility; Internet delivery; program and service information; jobs and recruiting information; career planning information; education and training information; and labour market profile information.

We recommend that the FLMM be recognized by FPT governments and all Canadians as the Pan Canadian body responsible for the coordination and management of LMI. Its role would be to serve as a catalyst, co-coordinator and monitor for the overall system. It would not actually manage on a day-to-day basis the individual pieces of the system. This would continue to be the responsibilities of governments and indeed all Canadians involved in the provision of LMI. Much of what we recommend in this report can be implemented by each stakeholder acting within their own area. But we still believe that there is a much better chance of the whole system being improved in an efficient way if an oversight function is established under the FLMM.

But, while the FLMM forms a good basis from which to develop the effective pan-Canadian co-operation and collaboration required, it will need to adopt a much more strategic focus for its work and to reach out to embrace all the relevant players. Its task should be to proactively assume the leadership role and to provide the broad strategic direction needed to manage and coordinate Canada's overall LMI policy.

The FPT Labour Market Ministers should work together to establish the overall priorities for the collection, analysis and dissemination of LMI. To date the process has been one characterized by the provinces and territories taking the LMI produced by various federal entities and making the best use they can of it for their provincial needs. To their credit, these federal entities, principally Statistics Canada and HRSDC, have been open and responsive to provincial and territorial input, but such input has not been systematically provided and the process definitely needs to be improved.

There are many examples of the lack of coordination between and among the federal government and the provinces as they seek to carry out their growing policy responsibilities in the field of labour markets. A fundamental problem has been their failure to develop an overall plan to obtain the LMI they require. We recommend that the FLMM be recognized by FPT governments to develop such a plan to meet the Canada's need for an improved LMI system. And we are hopeful that our report can provide the basis for the plan. The plan's key elements should be: the identification of the data needed to fulfill the policy responsibilities (that can realistically be collected at a

“reasonable” cost); provision for the interpretation and dissemination of the data to Canadians who can benefit; and the specification of an adequate and certain funding level for the LMI needs of their respective governments and the private sector.

The specification of an adequate and certain level of funding for LMI and the willingness to secure the required funding commitments from governments are absolutely essential. Good information is critical for the development of sound policy, but it comes with a price tag. There has never been a strategic review of the ongoing funding needs of LMI, either before, during or post the development discussions. LMI rests on the foundation of some key surveys. Yet they are not funded on an ongoing basis. To the credit of Statistics Canada and HRSDC, they have often managed to identify funds within internal reallocations to continue these surveys even in the face of budget cuts. But many surveys remain under constant threat. The funding issue is viewed largely as a federal matter. Yet the information the provinces/territories depend upon comes from these surveys. Their responsibilities could not be fulfilled if the federal funding is not available. As just one example, the National Graduate Survey provides information that is critical for many educational institutions across the country for their planning. But it has no ongoing funding. There is always, as is the case right now, the distinct possibility it will not be funded for 2010, the next time it is scheduled to be done. For example, the Canadian Occupational Projections System (COPS), which the provinces/territories, sector councils and others rely on as an input to their labour market planning, would be much less useful without the information from this survey on the performance of recent graduates in labour markets.

The funding for the sector councils themselves is not ongoing, but is only for a specific number of years. This has wide-ranging implications for their operations that undermine their effectiveness. Specifically, it is hard for them to do anything of an ongoing nature, since everything terminates after three years. This tends to create a preference for new short-term projects over continuing initiatives. It also makes it hard to attract and retain qualified staff. Instead, they tend to rely on consultants. Thus, when the work is over, the learning experience often rests with the consultants rather than the councils.

Another example of short-term funding is that of the Canadian Council on Learning (CCL), whose current funding agreement with HRSDC is set to expire at the end of March, 2010. Created in 2004, following country-wide consultations on innovation, the CCL is an independent, not-for-profit organization tasked with promoting and supporting evidence-based decisions about lifelong learning. CCL initiatives include annual reports on both the state of learning in Canada and on Canadian postsecondary education, as well as a number of projects in areas such as Aboriginal learning, essential skills development and the assessment and recognition of prior learning. Further, the CCL undertakes a broad range of research, including projects requested by provinces and territories, and produces the Composite Learning Index (CLI), the world's only statistical index of lifelong learning, which measures progress in lifelong learning for 4700 cities and communities across Canada.

Part of striking the appropriate governance structure is to formulate a plan to provide adequate and certain funding for the LMI needs of the respective governments and the private sector. To support a pan-Canadian system characterized by many stakeholders dependent upon some critical information, we cannot continue to proceed on such an *ad hoc* manner on funding. In some cases our recommendations will require additional funding. But even before we get to that, it must be recognized that even the information we have come to depend upon has a funding foundation that could at any point prove to be quick sand.

All Canadian governments did not provide estimates of the amount they actually spend on LMI. And for the most part (except for Québec) these estimates were not comprehensive, but only covered the spending of a core group concerned with LMI. In our view, an essential first step in making sure that governments provide the LMI demanded by Canadians in a cost effective manner is to actually keep track of the total amount of money being expended on LMI and how it is being allocated. This will be both useful for international and interprovincial comparisons.

Above we mentioned the need for a single portal entry to LMI. Several years ago the FLMM explored the possibility of doing that. After a great deal of effort on development issues by all parties, including the provinces/territories, the funding from HRSDC was pulled back and this project never came to fruition.

The use of existing labour market data by provincial and territorial governments has also been uncoordinated. For instance, provinces and territories have often realized that they need additional data from Statistics Canada only at the last minute. Their most frequent approach to meet their needs for data is to go one-by-one to Statistics Canada to request the same data, but at different times. Faced with these individual and uncoordinated requests, Statistics Canada has no choice but to give a cost-recovery estimate to each province that fully reflects both the fixed and operating costs for the work. The inevitable result is a group of dissatisfied customers who feel overcharged and complain about the service.

On the other hand, if the provinces were able to determine their data needs in advance and to coordinate their disparate requests, Statistics Canada would be able to meet their requirements when needed and the fixed costs could be spread over more jurisdictions, lowering the cost to all the provinces seeking the data. To respond cost-effectively to provincial government demands for data, Statistics Canada needs a much better understanding of the provincial and territorial data needs. And the provinces and territories need to better understand the limits on Statistics Canada's ability to collect quality data, particularly when the focus is on areas with relatively low populations where it is impossible to provide acceptable quality data without imposing unreasonable response burdens. We recommend that the FPT governments should better coordinate their requests to Statistics Canada for labour market data so as to be able to get better and more cost-effective data.

The national LMI system desperately needs to be pulled together in a more cohesive fashion for the benefit of all stakeholders, particularly for individuals and businesses that do not have the resources to dig for information from multiple sources. A logical body to manage this process is the FLMM. They could, for example, develop and manage a single portal for LMI. They could also, as suggested by the Canadian Manufacturers & Exporters association, develop a consulting capacity to help firms access and use LMI. These additional responsibilities would require that the FLMM establish a permanent secretariat to carry out the additional work.

8.4 The Role of Statistics Canada

Statistics Canada is the national statistical agency responsible for the collection and dissemination of labour market data. It is represented on the FLMM's Working Group on LMI and its staff are active participants in that group. This is certainly a very useful link that helps to coordinate the production and dissemination of LMI. However, we believe that the link could be strengthened and the FLMM's task of coordination would be facilitated if an additional link could also be made at the most senior level. Consequently, we recommend that the Chief Statistician be made an ad hoc member of the Deputy Minister's Committee of the Forum of Labour Market Ministers. Further, we recommend that the Chief Statistician be invited to regularly attend FLMM meetings of ministers. This would provide a formal channel at the highest level for the two-way flow of information that is required to coordinate the collection, analysis and dissemination of labour market data.

It would be very useful if the Chief Statistician could routinely brief FPT Ministers on Statistics Canada's plans and programs for labour market data and receive direct input and feedback from Ministers on their wants and needs, and the degree to which they are being met by existing and proposed Statistics Canada LMI programs.

The proposed arrangement would be similar to those that seem to work well for Justice Statistics. As was noted above, the Chief Statistician is a member of the Justice Information Council, which is the DM-level group with general oversight responsibilities for the collection of data by the Centre for Justice Statistics. And working-level officials are members of the Liaison Officers Committee, which has more operational oversight responsibilities.

8.5 The Role of the Private Sector

While governments play the leading role in providing labour market data and even to a lesser extent LMI, which is also produced by private sector suppliers, private sector parties like workers, employers, labour unions, and students are the main users. It is thus very important that private sector parties have a voice in the collection, analysis, and dissemination of LMI.

In the past, labour force development boards were forums where private sector voices could provide just such needed input. The Canadian Labour Force Development Board (CLFDB), which was established in 1991 and functioned until it was dissolved in 1999, served as a national advisory group on labour market development policy. While the main focus of the CLFDB was on training and related employment and adjustment programs and policies, it also dealt with LMI, which is essential for labour market development. The CLFDB was comprised of representatives from organized labour, business, the four designated equity groups (women, visible minorities, aboriginal peoples, and persons with disabilities), the education and training community, and provincial and federal governments (ex officio). Provincial and local labour market development boards were also created to promote labour force development policy. Currently, only Saskatchewan, Newfoundland and Labrador, and Québec still have such boards or equivalents. And some local boards in Ontario are still in existence. Sector councils currently give private sector groups an opportunity to address the labour market needs of their particular industries.

Local adjustment committees made up of representative of employers, employees and communities have been established in Ontario with support from the Ministry of Training, Colleges and Universities. Their purpose is to deliver adjustment programs when large numbers of workers are displaced as a result of company downsizing or plant closures, which have been becoming all too frequent events due to the global financial crisis. Their programs and services include: job-search assistance; vocational and educational counseling; information on training; personal support in dealing with the stress of job loss; financial counseling; and information on starting a small business. Their points of delivery are action centres established in the affected regions.

We believe that some form of regular consultations with private sector groups like sector councils needs to be reestablished to ensure that their views on the collection, analysis and dissemination of LMI are heard and that LMI is better tailored to their needs. If unemployment rises and more workers are displaced, local action committees will have a growing need for good LMI to ensure the successful functioning of their development programs. The FLMM will need to establish a formal arrangement for consulting with such groups on their LMI needs.

It is also important that private sector labour exchange services like Workopolis, Monster.ca, and Job Boom be consulted on their LMI needs.

8.6 Information on Education

The FLMM is not directly responsible for education data, yet this information is critical for carrying out the mandates of Labour Ministers. There are critical gaps in Canada's education information. For example, until January of this year (2009) data on college enrollment had not been published for many years. Statistics Canada has a Centre for Education Statistics (CES) that is responsible for developing surveys, producing statistics and conducting research and analysis on current issues in education,

training and literacy. Its purpose is to provide the information to governments and institutions required for policy development and for the management of education programs and also to supply it to a broader public both in Canada and abroad. Its program is developed in consultation with the Canadian Education Statistics Council (CESC). The CESC is a partnership of Statistics Canada and the Council of Ministers of Education, Canada. The CESC has two main programs, the Pan-Canadian Education Indicators Program (PCEIP), which prepares education indicators used for interprovincial comparisons, and the Pan-Canadian Education Research Agenda (PCERA). CMEC, through the CESC, is also responsible for submitting information to international education indicator programs.

Like the Centre for Justice Statistics, the CES is a division of Statistics Canada. And like the CJS, the CES is dependent on provincial and territorial agencies to collect and compile administrative data. ***CES also collects information directly from postsecondary education institutions.*** Both the CJS and CES report to a body that is a partnership between the PT and Statistics Canada and the Chief Statistician regularly attends the meetings that he co-chairs. However, the governance model does not appear to work as well for education as for justice. ***Unlike the justice model where the Provincial/Territorial/Statistics Canada body has decision-making responsibilities (e.g., approves the strategic plan), the CESC is only advisory.*** The CESC is currently reflecting on ways to improve it in the context of the 10-year data strategy that it has undertaken.

The FLMM could engage in discussions with Statistics Canada and the Council of Ministers of Education, Canada (CMEC) on how this Centre could be strengthened and in particular how the funding of education statistics could be improved both in adequacy and reliability.

Education data are a very important part of LMI. And LMI is a big part of what educators and learners need. Since their interests are so integrally intertwined, there is a need to intertwine their deliberations correspondingly. These are both important elements of LMI. HRSDC, Statistics Canada and CMEC are working together to develop a PSE and Adult Learning data and information strategy. CMEC data strategies should be developed in conjunction with or at a minimum in consultation with FLMM. Operationally, this should be easy because many of the provincial deputies sit on both the CMEC and FLMM Deputy Committees. There is a definite need to have the FLMM and CMEC work together to develop and effectively coordinate an educational LMI plan. This will involve getting the people on the ground together (universities, colleges, polytechnic, unions, high schools, researchers, employers, economic development groups) as well as the provincial and territorial ministries concerned to work out the broad directions and details of the plan.

9. The Collection, Analysis and Delivery of LMI

9.1 Challenges

In addition to the governance challenges discussed in the previous chapter, there are many other challenges that must be overcome to provide Canadians with the LMI they require to make well-informed decisions about their participation in labour markets and the formulation and implementation of policies to make labour markets work better.

- The first is to learn about all the LMI that is currently being produced and is available. This was a big challenge for the Panel, which is made up of people chosen for their knowledge about different aspects of LMI. And as we learned through our consultations, it is an even bigger challenge for individual Canadians, many of whom lack an even basic knowledge of LMI and where to find it.
- The second is to identify the LMI that is not available, but that is needed. And this is not easy because it is necessary to determine what is possible and affordable and not just what would be nice to have.
- The third is to make recommendations for building a better LMI system.
- The fourth is to educate Canadians on the availability of LMI and its uses and demonstrate its value as a guide for their decision-making. It is not simply a case of “if you build it, they will come.”
- The fifth is to provide adequate and certain funding for the new spending required to build the new improved LMI system that Canadians need.

9.2. The Overall Quality and Reliability of LMI

Before turning to our criticism of individual elements or features of the LMI system, it is good to step back for a moment and appreciate its overall quality and reliability from an international perspective. This reminds us that we are trying to make a good system better. And it is important to pay tribute to those conscientious public servants who have built the system over the years and upon whose professionalism and expertise we have to rely to take the system to the next level.

The quality of LMI in Canada was singled out in a recent OECD study as being “particularly strong” and as constituting an example of international “good practice” (OECD, 2004, p.88). And Statistics Canada, which is responsible for the production of labour market data, was ranked as the world’s leading statistical agency based on two surveys of statisticians carried out during the early 1990s (*The Economist*, 1991, p.88 and 1993, p.65). On its own website, Statistics Canada acknowledges that “Many organizations across the world have given Statistics Canada the ranking of one of the top statistical agencies in the world.” Canada is indeed fortunate to have such a solid base on which to build an even better LMI system.

9.3 Gaps in the Collection of Labour Market Data

As a general principle, we should take advantage where we can of our strong national statistical agency, which can produce the needed high quality data at the lowest cost by drawing on its repository of expertise and taking advantage of the benefits of economies of scale. Nevertheless, it is still important that the data be available at what is considered a reasonable cost and that it responds to the data needs of the various stakeholders. This does not preclude other data collection efforts, but requires that they be measured against the quality standard and economies of scale that are possible with a national agency. There are probably not many examples of others duplicating Statistics Canada rigorous data collection. However, Statistics Canada leaves some holes from the perspectives of some stakeholders, which they seek to fill through a proliferation of *ad hoc* data collection efforts. In the labour market policy sphere, which has been devolved to a large extent to the provinces, their jurisdiction must be respected. However, there is still a case for a division of labour that assigns the national statistical agency the task of filling in the main data holes and leaving the provinces/territories and other stakeholders only the task of filling the gaps that are more unique to their particular circumstances. At a very minimum, the provinces, territories and others should be given the choice of using the data prepared by the national statistical agency at a “reasonable cost” without being forced by cost into collecting their own duplicate data. And reliable labour market data should be available for all provinces and territories, including even the smallest jurisdictions. This may require some increases in sample size when sampling these jurisdictions for surveys collecting labour market information.

9.3.1 Job Vacancies

One of the most important gaps in Canada’s labour statistics is the absence of a national job vacancy survey. The broad goal of such a survey is to provide information about the distribution of present employment opportunities. These vacancy statistics complement a labour force survey by providing insight into whether the supply of labour is geographically and sectorally matched with the demand for labour. In particular, such a survey can identify structural sources of unemployment that result from a mismatch of skills with jobs or because workers and jobs are in different locations. There is no doubt that reliable estimates of job vacancies would be extremely useful information for macroeconomic policy formulation as they would shed light on the unemployment/vacancies relationship, known as the Beveridge Curve. An increase in the number of vacancies and at the same time as an increase in unemployment reflects rising mismatch unemployment likely due to structural factors.

Statistics Canada regularly provides information on individuals' demand for jobs, but far less current information on the potential supply of jobs – job vacancies; surveys of employers on short and longer-term hiring intentions, the potential for attracting investors requiring postsecondary skills, etc. It should explore the potential of using surveys such as SEPH... to shed light on changes in employer plans for hiring, layoffs, etc.

Colleges Ontario

Information on job vacancies is very important in our industry as we are currently experiencing a significant labour shortage. Accurate information on job vacancies would help unemployed Canadians to make relocation choices to areas where job opportunities exist. Furthermore, accurate job vacancy information would help government officials to develop policy to deal with labour shortages and unemployment by industry/occupation and region.

Canadian Restaurant and Foodservice Association

In addition, job vacancies reveal firms' desired capacity utilization, which is a key variable in consensus monetary models (Cristiano, Eichenbaum and Evans, 2005) and can be a useful gauge for policy-makers. A measure of job vacancies is also relevant for the construction of macroeconomic models for unemployment and job-matching (Shimer, 2005 and 2007). Such information may be of direct aid to workers in acquiring appropriate skills or finding jobs.

Canada has not always lacked a national job vacancy survey. Statistics Canada conducted a quarterly job vacancy survey (JVS) from 1971 to 1978 which involved a direct two-stage random survey of establishments, stratified across six groups (Ostry and Sunter, 1970). Vacancies were defined according to four criteria: 1) available immediately; 2) externally available; 3) not filled on the survey day; and 4) active advertisement for the past four weeks.

A Canadian Help-Wanted Index, which is another form of a job vacancy index, was first constructed in 1973 and was the only measure of unfilled Canadian labour demand after the JVS was cancelled in 1978. The overlap in the two Canadian series was used to construct a job vacancy series and compare vacancy rates between Canada and the U.S. (Zagorsky, 1993). The Help-Wanted Index itself was terminated in 2003. The index was patterned after an index developed by the U.S. Conference Board. After 1989, it involved a count of advertisements in the classified section of the Saturday editions of 22 metropolitan-area newspapers spread across five regions. Before 1989, the index was based on the number of column inches printed. The ratio for a particular newspaper compares the number of ads for any given month against the average number in a reference month. For the aggregate index, the ratio for each newspaper is weighted according to the population for the metropolitan area in which it is published. Indices for Canada, regions, provinces and Census metropolitan areas were published monthly until the index's termination.

The only information recently available on vacancy rates in Canada comes from the annual Workplace and Employee Survey (WES) that Statistics Canada initiated in 1999 and that has been discontinued. The latest release for this survey is 2006. The WES is a

longitudinal survey and was targeted to identify differences in vacancy rates at the establishment-level across time (Krebs, Patak, Picot and Wannell, 1999). In particular, the survey documented employer characteristics (particularly in regards to research and development activities) and linked these to vacancies by job classification and required skill-level. The establishment sample is drawn from the Business Register and stratified by region, industry and firm size (by employees). The initial 1999 panel of employers is followed for an intended 8-year life and an additional birth panel of 2,000 additional businesses is appended to the sample each year. Certain of the sampled businesses are out-of-business, seasonally inactive or out-of-scope when surveyed, or are owner-operator establishments with no employees. From employer lists, Statistics Canada generates a sample of employees for each establishment and follows these employer-linked employees for two years. The WES thus comprises both an initial employer survey and subordinate employee survey. Each iteration from 1999 to 2005 involved between 5,800 and 6,600 employers, comprising 16,800 to 24,000 employees.

The data on vacancy rates and other tables from the WES are published in a compendium and the microdata are used within various analytical studies. Annual vacancy rates are reported by firm-size and benefit coverage. Vacancy rates can also be computed by occupation, industry sector, region, or establishment characteristics (such as investment in R&D, provision of training programs, or collective bargaining status) from the survey's microdata. The data are otherwise extremely rich, with great detail on employer and employee characteristics cross-sectionally and over time. However, the data are published with a substantial lag, the 2005 compendium being only released in September 2008. While useful for in-depth analysis of long-term labour market trends and to inform professional decisions, such a survey has less utility for real-time policy-making and job matching.

Although Canada currently lacks a national job vacancy survey, it should be noted that there have been recent efforts to fill the gap at least for small business. The Canadian Federation of Independent Business has been conducting a quarterly vacancy survey of its members since 2004.

If Canada is to reestablish a quarterly national job vacancy survey, there are two general approaches available: 1) a direct survey of establishments, or 2) a survey of published vacancies in specified media. The former provides a basis to estimate vacancy rates with statistical significance across regions and sectors; the latter identifies information presently available to job seekers but its degree of correlation with actual vacancies is difficult to quantify.

The U.S. Bureau of Labor Statistics (BLS) publishes indicators of labour demand from its Job Openings and Labor Turnover Survey (JOLTS) which has been developed since 1999 (Mueller and Wohlford, 2008). The BLS surveys 16,000 private and public sector establishments representative of the fifty states and the District of Columbia. Aggregate estimates are published for the national-level and for each of four Census regions. Estimates for the private and public sectors, and for nine NAICS industry sectors are published at the national-level.

Job openings are recorded according to three criteria: 1) there is work available and the job exists; 2) the job could start within 30 days; and 3) workers are being recruited from outside the reporting unit (that is, internal postings, transfers, or positions to be filled by contracting agencies are excluded from the count). Hired but yet-to-start workers are excluded as are those with start dates more than 30 days into the future. The job vacancy rate therefore represents an end-of-month snapshot of the momentary stock of openings rather than an average of the stock during the month. However, survey designers report the finding that experiments with collecting mid-month vacancies met with a lack of data by employers.

Additionally, the survey tabulates rates and numbers of hires and separations, and further disaggregates between voluntary and involuntary separations. These are total flows over the month prior to the survey date.

Many U.S. States undertake independent data collection efforts. Minnesota conducts an approximately 10,000 firm survey with stratification across firm size, economic development regions, and sectoral classification. Job vacancies are reported by region, occupation and sector, and occupations-in-demand are available for economic regions. Washington publishes results of a similar quarterly vacancy survey of 18,500 employers.

The Australian Bureau of Statistics (ABS) conducts a quarterly Job Vacancy Survey (JVS), which is similar conceptually to the BLS's JOLTS. The survey reference date is the third Friday in the middle month of the quarter. The survey draws a probability sample from the Australian Business Register, stratified according to state or territory, industry and establishment size by number of employees (with size ranges varying between states or territory and industry). This sample is updated quarterly based on ABR changes.

A job vacancy is defined according to two criteria: 1) an employee job exists that is available for immediate filling on the survey day; and 2) employers have undertaken active recruitment. Jobs of less than one-day duration are excluded from the vacancy count, as are contract positions, positions to be filled by contract agencies, or those to be filled by internal transfers or only posted internally.

Data on job vacancies are reported by state or territory, sector, and industry. Private and public sector vacancies are disaggregated at the state- or territorial-level but vacancies by industry are reported only for the national-level. Since 2003, the JVS does not survey number of employees, and vacancy rates (vacancies/employed persons) are computed using estimates of numbers of employed persons from the Labour Force Survey.

Additionally, Australia's Department of Employment, Workplace Relations and Small Business publishes i) a skilled vacancies index, ii) an information and communications technology (ICT) index, and iii) Vacancies on Australian JobSearch. The skilled vacancy index is published monthly and based on a count of skilled vacancies across 18 occupational groups in major metropolitan newspapers in each state and territory. The ICT index is based on a weekly count of postings on three job posting websites. Postings

overlap between websites and the index does not adjust. Australian JobSearch is a government-operated employment database and the department publishes counts of vacancies by date, state or territory, and occupation. This series counts positions available rather than postings, and jobs with an unspecified location are excluded.

We think that Canada needs to reestablish a quarterly job vacancy survey to provide more reliable information on the tightness of labour markets to assist macroeconomic policy makers in stabilizing the economy, as well as to help Canadians in identifying job vacancies by occupation and industry across the country. The best approach would be to rely on an establishment survey as was done in the past. And Canada already has in SEPH a high quality establishment survey that could possibly serve as the platform for adding questions on vacancies. But Statistics Canada will need to do more work to determine what is feasible and what would be the best approach.

Box 11.1
Job Vacancy Surveys

A job vacancy survey generally includes some or all the following characteristics: random sample of companies, selected by industry, size, and region; questions about the number and types (e.g. full or part time) of positions open for hire; questions about hires, quits, layoffs, discharges, and other separations; educational, training, and experience requirements for those positions; the average pay and benefits offered; and expectations about future job vacancies.

The objectives of a job vacancy survey can include helping business managers develop effective recruiting strategies; identifying industries and occupations in which jobs are available; and detecting emerging labour and skills shortages; and preventing imbalances between the supply and demand for labour.

In the United States, job vacancy surveys are regularly undertaken by state governments and by the Bureau of Labor Statistics at the federal level through the Job Openings and Labor Turnover Survey (JOLTS). The first estimates from JOLTS were released in 2002. JOLTS differs from many state-run surveys, because it does not ask about occupation, the difficulty of filling various positions, or openings for specific kinds of employees (e.g. skilled or unskilled). JOLTS is a voluntary monthly survey of 16,000 establishments, out of a sampling frame of 8 million establishments (<http://www.bls.gov/jlt/>). The JOLTS sample is stratified by ownership, census region, major industry division, and size class. JOLTS estimates are published at the Census Region level (Northeast, Midwest, South, and West) for a variety of industry aggregates based on the North American Industry Classification System. JOLTS provides estimates of hires, quits, layoffs, discharges, and other separations. In November 2008, there were 2.8 million job openings in the United States (last day of the month), whereas there were 10.5 million people unemployed.

Outside of the United States, many countries have job vacancy surveys, but most were only recently instituted. According to a report by Statistics Netherlands in 1997, only Germany, Sweden, and the Netherlands conducted relatively frequent enterprise-based vacancy surveys. At that time, the United Kingdom, Canada, and the United States surveyed help-wanted advertisements to create indexes as a proxy for job vacancies (Clark and Philips, 2002). Since that time, Finland, Portugal, Spain, and the United Kingdom have launched job vacancy surveys. In 2002, the European Union (EU) launched a quarterly job vacancy survey similar in many ways to JOLTS, however, participation is not mandatory for member countries. While data are available for 26 EU members except Ireland, some members have not conducted the survey in every quarter. For example, survey results are only available for the third quarter of 2003 in Denmark. Only job vacancy rates by sector are published, actual numbers of job vacancies are not. The job vacancy rate is the proportion of posts that are vacant. In the third quarter of 2008, the job vacancy rate for all countries reporting was 1.9 per cent.

9.3.2 Labour Price Index

Another major gap in Canada's system of labour statistics is the lack of an employment or labour price index. This deficiency is most felt by the Bank of Canada because of its responsibility for monetary policy and its policy of establishing inflation targets. Employment costs are the single largest cost counting for more than half of all costs. A rising cost for labour exerts upward pressure on firms' prices and, consequently, is a spur for inflation. While average wages represent the marginal returns to labour for workers, total compensation – including both wages and benefits – is the relevant measure of labour costs from the perspective of a firm. As well, the rigidity of employees' total compensation has implications for firms' labour demand in the presence of supply shocks. These frictions feature strongly in macroeconomic modeling – particularly in models that attempt to link macro-evidence on unemployment and inflation with micro firm-level facts. Moreover, wage behaviour is key within central banks' workhorse New Keynesian models, which feature monopolistic competitive firms who set prices as a markup over unit costs.

Unlike Unit Labour Cost (ULC), which measures compensation per unit of output, a Labour Price Index does not control for labour productivity. As a gauge for monetary policy, the former may be more appropriate since higher wages with complementary gains in labour productivity will not, all else constant, create upwards inflationary pressure. However, while a higher ULC caused by a shift towards more skilled labour might be misinterpreted as labour cost inflation, a Labour Price Index avoids this problem by using fixed weights by occupations and industries (Garner, 1998). Moreover, while ULC mixes labour cost and productivity, a Labour Price Index is useful in studying the relationship *between* labour costs and productivity.

As well, the components of a Labour Price Index provide insight into the structure of labour compensation – particularly the presence of benefits as insurance against certain contingencies, such as unemployment, health problems or the longevity of retirement. A Labour Price Index is often referenced in contract negotiations or used in indexation of wages and benefits.

The U.S. BLS produces an Employment Cost Index (ECI) as a measure of the change in the cost of labour, using data from its National Compensation Survey (NCS). While published quarterly, the ECI is not a “quarterly” measure in that it represents a snapshot of data from the third month of the quarter rather than a quarterly average. Sampling is stratified by area, establishment size and sector, and occupational characteristics. The ECI is constructed using fixed occupational and industry weights, based on the BLS's most recent Occupational Employment Survey, in order to remove the influence of employment shifts. Data for the June 2008 quarter involved 56,500 occupational observations of 12,100 establishments, comprising 11,800 private sector establishments and 1,900 state or local government establishments. The private industry establishment panel is divided into five panels and a new replacement panel is introduced each year such that the entire sample is replaced every five years. The state and local government

sample is fully replaced every ten years. The longevity of the panel increases the complexity of administration and burden of compliance.

The ECI covers wages and benefits. Wages are defined as the hourly straight-time wage or, for salaried workers, earnings divided by hours, and are calculated before deductions. Incentive earnings, production bonuses and commissions are included in wages but overtime, premium pay, and non-production bonuses are included in benefits. Benefits otherwise include paid leave, insurance, employers' contributions to retirement and pensions, and statutory benefit payments. Notably, the ECI does not incorporate stock options and the BLS has not yet resolved whether and how to incorporate such non-wage benefits.

Results are published for the four Census regions and nine Census districts, and an aggregate measure is reported for each of Census metropolitan areas and non-metropolitan areas. Industry and occupation sub-series are reported only at the national-level. However, the ECI for each classification of bargaining status is disaggregated between goods and service industries. The samples are not large enough to hold constant weights for regions, union/non-union, and metropolitan/non-metropolitan areas. Therefore, weights of these subsets vary and the indices for the resulting sub-series are not strictly comparable to those for the national aggregate, for occupations or for industries.

The Australian Bureau of Statistics' Labour Price Index (LPI) is conceptually and methodologically similar to the U.S. BLS's ECI. The LPI is constructed from wage and non-wage components. Two versions of the LPI are published: i) excluding bonuses, and ii) including bonuses. Information is collected from mail questionnaires to a sample survey of approximately 4,800 private and public sector employers, drawn from the ABS's Business Register.

Price changes in labour cost for each segment of the labour market (by state, sector, industry and occupation) are combined using weights, representing their respective share of employers' Australia-wide expenditure, and the LPI is chain-weighted on an annual basis to adjust for shifts in weights. Only "matched" jobs (those with characteristics common to two consecutive quarters) are used to compute the index, thereby ensuring that changes in the quantity and quality of work are removed from the index. In contrast to the BLS long-lived ECI panels, the ABS's survey sample for the LPI comprises five panels in total, one of which is replaced each quarter so as to refresh the entire sample annually.

An LPI is reported for each state and territory, and component indices, disaggregated between private and public sectors, are reported for each geographical area. The public and private sectors are disaggregated by occupation and by industry. However, unlike the U.S. BLS ECI, indices are not reported by occupation within each industry.

Statistics Canada undertook a pilot project in 2001 to develop a Labour Price Index (LPI) that would similarly measure employers' total cost of labour but be neutral with respect to shifts in occupations or industrial composition (Sharan, 2001). The proposed LPI would include: 1) wages and salaries; and 2) non-wage benefits, comprising i) statutory benefits (EI, CPP/QPP, and provincial health taxes) and ii) non-statutory benefits (both salary-based benefits and fixed dollar value benefits). The Workplace and Employee Survey (WES, as described above) could possibly be used to provide microdata components for the proposed LPI if it were to continue to be carried out on a regular basis. Payroll and benefit costs could be extracted from the WES employer survey and wage rates obtained from the WES employee survey. Again, the WES has the feature of linking employers and employees. In order to construct a quarterly index, wages and salaries from Statistics Canada's monthly Labour Force Survey (LFS) would be used to project a quarterly LPI, based on point estimates from the WES.

During development, non-wage benefits proved difficult to cost accurately. One lower-cost approach is to employ actuarial estimates by benefit providers, which would use data on employee characteristics from the WES. This proved infeasible given the level of detail in the WES, which excludes the family data that would be required for actuarial estimates where dependents are covered. The development team instead advocated an approach that solicits data on the average benefit cost per employee as part of the WES employer survey.

Based on the results of the pilot project, Statistics Canada decided not to continue with the proposed methodology because it was clear that it would not provide data of acceptable quality. Further work was conducted in 2005 to investigate the possibility of implementing a Labour Price Index similar to that of Australia, but work was halted due to lack funding.

Our own view is that we need an overall labour price index for Canada. While the Bank of Canada would be satisfied with a national measure, there would be advantages in having more regional and industrial detail as in the indices prepared in the United States and Australia. Of these two, the Australian index is produced much more cheaply because the benefit structure is simpler in Australia and does not require complicated analysis as in the United States. As the benefit structure in Canada is similar, the Australian approach could be adopted in Canada. This would be more cost effective and is the approach favoured by the Bank of Canada. Consequently, we believe that Statistics Canada should resume its work program on this issue and should develop a labour price index along the lines of that produced in Australia.

9.3.3 Wages and Total Compensation

The data on total compensation are not complete. In particular, there is a scarcity of needed information on the non-wage component of compensation that is felt particularly by those engaging in collective bargaining. The Census and SEPH provide good data on the wage component of compensation, but the data on non-wage compensation, which

include a variety of components such as the employer share of EI contributions, CPP/QPP premiums, pension contributions, dental care and supplementary medical care insurance. These are components that have to be costed in an employment cost index. Data on them comes from such diverse sources as the special business survey, the now-ended Workplace and Employee Survey, and *Pension Plans in Canada*.

9.3.4 Beyond Wages and Salaries

For trade union commentators on LMI, the single biggest information gap is the absence of data on elements of compensation other than wages and salaries. Their concern is that if one wants to know what is happening with non-wage pension and insurance benefits, hours of work and paid time off, or health and safety provisions in Canadian workplaces, it is difficult to get answers for the society as a whole, for sectors or regions, or - subject to one important caveat - for individual workplaces. This limitation in Canadian LMI is relevant to all of policy analysis, collective bargaining and job matching.

There has been an unsteady history of gathering data that would permit the monitoring of non-wage elements in compensation. Statistics Canada ran a Survey of Work Arrangements on an occasional basis in the 1990s. With the introduction of the Workplace and Employee Survey (WES) in 1999, the need for the Survey of Work Arrangements was deemed to exist no longer. With the WES ending, so is all data collection in this important area. In Québec, the Institute of Statistics of Québec conducts a survey on total compensation that still collects this type of information.

The question of what is happening to non-wage terms and conditions of work is important in being able to assess progress (or the lack of it) that working people are experiencing. Given the changes that are taking place in the composition of the labour force and the apparent desire of some policy makers to encourage greater labour force participation among older workers, non wage issues are likely to take on even greater importance. The retirement cycle of the General Social Survey (GSS) has regularly found that retired people would be willing to return to work under a variety of circumstances with more limited and flexible hours of work being a prominent condition (Morissette, 2004; and Foursly and Gervais, 2002).

Not only is it impossible to monitor the evolution of specific non wage benefits it is also impossible to monitor movements in total employee compensation. This raises general questions about the comparability of pay in different sectors and occupations. It also limits our ability to assess the slack or tightness in labour markets. This has also been an issue in relation to the specific public policy context of the Temporary Foreign Worker Program. Under this program, foreign workers are brought to Canada on a temporary basis to fill jobs that employers have been having difficulty filling from domestic labour supply. A condition of the program is that the foreign workers are to be paid the going Canadian wage for their labour. A concern of Canadian trade union representatives is that the wage threshold that has to be matched ignores non-wage benefits. Thus, the wage may be matched but not the total compensation.

9.3.5 Breakdowns for Union and Non-Unionized Workers

The labour movement has long been interested in obtaining more LMI containing a breakdown for union and non-union workers. And indeed such information is of more general interest to analysts and researchers. Included in the changes made to the Labour Force Survey (LFS) in the late 1990s was the introduction of the question whether employed people are union members. The addition of this question was welcomed by trade union representatives as work on policy analysis and collective bargaining often require that data be separable by union membership status. It should be noted however, that while some other surveys (e.g. SLID and WES) ask about union membership, the Census, which is an important source of small area data, does not. The GSS is another important source of data on social and economic conditions that does not ask about union membership. All Statistics Canada surveys of labour market conditions and related social and economic conditions should be able to distinguish the situation of unionized and non-unionized workers. Moreover, the union membership question should probably be put to all LFS respondents, not just the employed, including those on temporary layoff.

9.3.6 Collective Bargaining Information

The collective bargaining data bases provide an exception to the general rule about the absence of non-wage information. All jurisdictions maintain a library of collective agreements in their jurisdiction and these include descriptions of most terms and conditions of employment of workers covered by collective agreements. Thus, one can see not only what terms and conditions exist, but how they are combined. Unfortunately, not all jurisdictions are able to be comprehensive and current in their collections. Moreover, many fall short of meeting the need of union researchers for agreements that are readable online.

The collective bargaining database is also used to provide custom analyses in response to questions raised by trade union researchers, one-off studies by government analysts associated with the data bases, and standardized quarterly trend data. The first two areas of activity were felt to be very valuable but there are concerns about the last type of analysis on the grounds that conclusions can often be dominated by a small number of unrepresentative agreements.

The view was expressed in interviews that more cooperation among jurisdictions with respect to the maintenance of a comprehensive library of agreements and in the realm of analysis would be helpful. That said, the current data are drawn on regularly and is regarded as important and helpful. Collections and analysis in Alberta, Ontario, Québec and in the federal jurisdiction received positive comment. It was a general view that improvements can be made.

9.3.7 Working Conditions

The Workplace and Employee Survey (WES), which was described in Chapter 3, provided some useful information that sheds light on a number of issues relating to employers and their employees including workplace conditions. However, this information is considered insufficient by some in the labour movement who want more information for purposes of collective bargaining on such things as flexible hours, child care provisions, worker safety, and precarious workers. In addition, there is relatively little information available in Canada on internal labour markets and internal recruitment. Such information could perhaps be provided by a workplace survey such as WES. Labour representatives pointed to the European Working Conditions Survey, which was discussed in the chapter on international best practice, as a possible example of the types of questions that could be asked.

The problem is that the WES itself is no longer being funded. So that instead of getting more needed information from the WES, we will actually be losing the information we do get from it. Consequently, we recommend that the WES should be reinstated and expanded to meet these needs for additional information on working conditions. It would cost about \$5 million a year on an ongoing basis to continue to operate the WES.

9.3.8 Purchasing Power Adjusted Wages

While Statistics Canada collects data on absolute price levels by commodity by province and Census Metropolitan Area (CMA) for the CPI, it does not produce data on purchasing power adjusted wage levels by province and CMA. This is a major LMI data gap because such estimates would be very useful for workers making decisions regarding interprovincial migration. For instance, a worker making \$20 per hour in Newfoundland and Labrador may find a wage of \$40 per hour in Fort McMurray to be very attractive, but the worker also needs to take into consideration the much higher cost of living there (regional Purchasing Power Parities), or else he may find himself unexpectedly worse off after incurring great expense to move to Alberta to take up the job.

9.3.9 Gross Labour Flows

LFS estimates are generally expressed in net terms. For example, a fall in employment of 50,000 jobs may result from a gain of 100,000 new jobs more than offset by a loss of 150,000 jobs, or an increase of 10,000 in the number of unemployed may result from 30,000 joining the ranks of the unemployed, 15,000 unemployed persons finding employment and 5,000 unemployed persons leaving the labour force. These figures are called gross flows estimates, and they are very useful in the study of labour market dynamics as they allow the tracking of movements between different labour force statuses. These movements vary with the business cycle and can change over time to structural factors. The data needed to estimate gross flows, namely information on the labour market status of individuals 15 and over in the current and previous month, are

already collected in the LFS. But for technical reasons, Statistics Canada no longer produces or publishes gross flows estimate.

In contrast, gross flow information is available for the United States from two sources, the household-based Current Population Survey and the establishment-based Quarterly Census of Employment and Wages, and in certain European countries. Consequently, Statistics Canada has fallen behind international best practice in its lack of public estimates of gross flows.

In Canada, the information on gross flows used to be prepared based on specifically designed questions in the LFS and taking advantage of the panel structure of the LFS which means that 5/6 of the LFS sample remains the same from month to month as individuals are only dropped from the sample after 6 months. It was published as a 3 by 3 matrix for each of the included demographic groups. As the questions on transitions are no longer included, it is no longer possible to produce the data on transitions except by matching survey responses from month to month for individual respondents. Some data on transitions are available from WES and SLID, but the former has been discontinued and the latter may be combined into the new Canadian Household Panel Survey and some labour market information could be lost. It is unfortunate that no reliable gross flows data are available, especially given the light it could shed on rising unemployment. Statistics Canada should thus produce data not just on net job changes as in the LFS and SEPH, but also on the gross flows.

The LFS is residence-based and thus cannot be used for analysis of where the individuals work. A place of work question would lead to more robust use of the survey.

Toronto Region Research Alliance

However, past experience at Statistics Canada with gross flows has indicated that there is a problem to be overcome before reliable gross flows data can be produced for Canada. It is that data on gross flows for Canada has in the past intrinsically and quite significantly overstated real gross changes in the labour force status of people in consecutive months. This was due to the fact that any reporting error in either month typically appeared as a change in labour force status between the two months. Such reporting errors (since they could occur in either direction) largely netted out in the estimation of net changes; but they did not net out in estimating gross changes. Research carried out at Statistics Canada some years ago showed that the resulting overstatement of gross change can be substantial enough to render the estimates highly suspect. In fact, this was the reason that a decision was made to halt the routine production of estimates of gross changes. Before re-introducing the production of gross change estimates, Statistics Canada will have to carry out research to assess the likely magnitude of the bias introduced by this phenomenon and to develop an approach to minimize it and make sure that the gross flows data was reliable enough for statistical purposes.

9.3.10 Multiple Job Holders

Another significant gap in our LMI is information about multiple job holders – those who hold down two or more jobs simultaneously. The LFS could possibly, without too much additional cost or respondent burden, collect more information on multiple job holders. For instance, right now we know about the existence of a second job but nothing about it such as its industry, or hours of work. More complete information on secondary jobs would enable a more accurate calculation of the number of “positions” in the labour market rather than just the number of people employed.

9.3.11 Layoffs

Data on mass layoffs would be of particular interest at times like the present when employers are shedding large numbers of workers. Under federal and provincial labour codes, employers are required to report to the appropriate government labour department (federal for employers in sectors such as financial, transportation and telecommunications operating under the Canada Labour Code and provincial for all other employers) pending layoffs above a certain size threshold which varies from jurisdiction to jurisdiction. It would be useful if this information could be collected and regularly published on a timely basis to provide advance warning of major decreases in employment. The information on layoffs itself would have to be collected by Statistics Canada from government labour departments.

9.3.12 Broader Measures of Joblessness and Unemployment

As the economy slows due to the global financial crisis, unemployment is expected to rise and workers are expected to leave the labour force. The issue of disguised unemployment is likely to come to the fore again. It will be associated with an increase in the number of people that can be considered to be “marginally attached” to the labour force. They are people who say they want to work but have not recently looked for employment for various reasons, such as that they do not think there are jobs available in their field. There also likely to be a steep rise in the number of people who would like to work full-time but only have part-time work.

Statistics Canada already produces data on broader measures of joblessness and underemployment. They include estimates of the unemployment rate under 8 different definitions that permit the analysis of the nature of unemployment and its real level. These are:

- R1 - unemployed 1 year or more;
- R2 - unemployed 3 months or more;
- R3 - comparable to the United States rate;
- R4 - official rate;
- R5 - plus discouraged searchers;

- R6 - plus waiting group (recall, replies, long-term future starts);
- R7 - plus involuntary part-timers (in full-time equivalents);
- R8 - plus discouraged searchers, waiting group, portion of involuntary part-timers.

The official unemployment rate, R4, is featured in the monthly LFS and gets all the attention. The other different definitions of the unemployment rate are not presented and discussed, and hence tend to be ignored by the press and the public unless they are highlighted in a special study.

In contrast, the U.S. Bureau of Labor Statistics (BLS) publishes five alternative measures of labour under-utilization:

- Persons unemployed 15 weeks or longer;
- Job losers and completers of temporary jobs, excluding voluntary job leavers
- Total unemployed plus all discouraged workers;
- Total unemployed, plus all discouraged workers, plus all “marginally attached” workers; and
- Total unemployed, plus “marginally attached” plus involuntarily part-time workers.

The first two measures are more restrictive than the unemployment rate while the latter three measures cast wider nets. Under the BLS definition, “marginally attached” workers are defined as those who are able and desirous to work and who have sought a job in the past year, but who have not looked for a job in the past month. Involuntary part-time employment (or “underemployment”) records those who are employed but work fewer hours than they would like. The BLS features in its monthly *Current Population Survey* employment press release both the “marginally attached” unemployed and the involuntarily part-time workers, which constitute the components of a broader indicator of unemployment and which have both been rising rapidly.

Given the likely public interest also in Canada in broader measures of unemployment if unemployment climbs and becomes a major issue again as seems likely in the current recession, we recommend that these different measures of the unemployment rate also be featured prominently in Statistics Canada’s monthly LFS release.

9.3.13 Women

Because women are a group that was historically disadvantaged in labour markets, there is a genuine concern that LMI should meet their information needs. Fortunately though, women have, for the most part, the same core LMI needs as other groups. Consequently, it is useful for women, policy makers, and researchers to have gender identification on all labour market data. And this is generally the case. In fact, no exception to this rule was brought to our attention.

Beyond the need for gender identification on labour market data, many women also have a broader set of LMI interests. For example, given the work-life balance issues many

face, they are particularly interested in the conditions of work beyond simply compensation, such as those dealing with flexible time, and time off for family responsibilities such as child care and elder care. The termination of a survey such as WES can be particularly harmful in this regard as it could be used as a vehicle to provide more of this type of information. Such interests also highlight the needed breadth of LMI. The General Social Survey can provide information on things like unpaid work activities and could perhaps be enhanced to provide more LMI.

While much progress has been made, women are still under-represented in many occupations. It is thus very important that labour data be broken down by occupation and by gender and that they provide needed supports for career planning.

We are firmly convinced that the overall improvements in LMI that we recommend will benefit women as well as men.

9.3.14 Disadvantaged Groups

Better information needs to be collected and disseminated on people with disabilities, recent immigrants, visible minorities, and Aboriginal peoples. These groups typically perform much worse than the rest of the population in the labour market. They have lower participation in the labour force and experience longer periods of unemployment. They also earn less than other Canadians. Better LMI on disadvantaged groups is needed to design policies and programs to help these groups become better integrated in the labour market. In some cases it may be a matter of making better use of information that is now available. For example, the Participation and Activity Limitation Survey (PALS) which is conducted every 5 years and Survey of Labour and Income Dynamics (SLID) could perhaps be used to track the labour market transitions of people with disabilities over time.

The Labour Force Survey and other instruments should publicly and frequently report on non-workers with the same degree of detail as they currently report on the unemployed: reasons they are not working, conditions which might encourage them to enter the workforce, etc.... Specific details of the success of under-represented groups (immigrants, Aboriginals, physical and mental disabilities, etc.) in the workforce, and clarification of their progress in obtaining jobs commensurate with their skills and educational levels.

Colleges Ontario

Information on the performance and integration of under-represented groups would assist our industry in tapping into underutilised labour pools as a means to respond to our labour shortage.

Canadian Restaurant and Foodservice Association

While young and older workers are not disadvantaged in the same sense as these other groups, they have their own problems in participating in the labour market which require better information. As the labour force ages, the problems of older workers will become more pressing in aggregate and special types of LMI will be required. For instance, it will be very important to have a better understanding of the factors determining the participation of older workers in the labour market and the basis of their retirement decisions. For youth, the big issue is the transition from education to work. It is likely to be more difficult if unemployment rises and may require innovative policy responses that will have to be developed based on data.

Students do not know generally what LMI is and what role it can play both in determining what programming to pursue and finding suitable employment upon graduation.

Polytechnics Canada

9.3.15 Aboriginal Peoples

A particularly glaring gap is the limited data on the labour market performance of Aboriginal peoples. Historically, this has been for three reasons: many reserves have historically not participated in the Census; the LFS could not capture the labour market performance of the off-reserve Aboriginal population because of the absence of a question on Aboriginal identity and limited sample size; and the LFS excludes persons living on Indian reserves. The first two of these three limitations have now largely been overcome, and some progress is hoped to be made on the third.

High quality LMI is absolutely key to meeting our future labour market needs. In Saskatchewan, we have an Aboriginal population that is ideally situated from a demographic point of view to replace retiring baby boomers. Yet, we have limited information on Aboriginal people, and only the Census information about those living on reserves. Since Aboriginal people will constitute an increasing proportion of our future workforce, we need to know more about the kinds of occupations in which they find employment, their work experience, access to and participation in training and skills development, educational attainment, and so on.

Saskatchewan Labour Market Commission

In the 2006 Census, only 22 reserves were not completely enumerated because of a failure to cooperate with Census takers, a major improvement from earlier Censuses (30 in 2001 and 77 in 1996). Since 2004, the LFS has included a question on Aboriginal identity for British Columbia and Alberta, and since 2007 the question has been asked at the national level. More importantly, the off-reserve Aboriginal population is now oversampled to increase the reliability of estimates. Because of these steps, detailed up-

to-date information of the labour market performance of off-reserve Aboriginal peoples is now available.

The major gap remaining in the collection of labour market information on Aboriginal peoples to make it comparable in scope to that of non-Aboriginals is the extension of the LFS to reserves. Statistics Canada plans to run the LFS on a reserve (Siksika First Nation) on a pilot project basis. There are some sampling methodological issues to sort through in moving the LFS on reserve as well as determining what geographic level of estimates is required. Statistics Canada is working with a number of federal departments, in particular, Indian and Northern Affairs Canada, to develop an on-reserve survey strategy. Beyond the Siksika pilot, tests will be conducted over the next 2 years to develop an appropriate methodology as well as to develop a governance strategy for the conduct of on-reserve surveys.

Last December, the Saskatchewan Labour Market Commission (SMLC) requested in a letter to Statistics Canada that LFS data be collected for the on-reserve population in Saskatchewan. Statistics Canada's response was that while it was very interested in closing the survey coverage gap that it has on-reserve, there were issues of cost and access to reserves that may be barriers to collecting the requested information.

When we pursued the issue of collecting LFS data on reserves, we learned that the required oversampling would be very expensive (the cost for just one top-up project in Saskatchewan was estimated to be around \$1 million), and that there was resistance from reserve authorities to allowing Statistics Canada to collect data on the reserves for several reasons. Typically, reserve authorities for each reserve are only interested in obtaining LFS estimates for their own reserve. And they are not interested LFS estimates for the on-reserve population rolled up at the provincial level, or other levels of geography. In fact, Statistics Canada is not able to produce estimates for a given individual reserve; the reserve authorities will often not allow Statistics Canada on the reserve. And, some reserve authorities go with the "OCAP" principles (Ownership, Control, Access, Possession) promoted by the Assembly of First Nations, which conflict with obligations under the Statistics Act. The most vocal proponents of OCAP principles are in the Mohawk territories, where even the Census-takers have been denied access for many years.

It is hoped that the cost and political barriers can be overcome and that LFS coverage can be extended to all reserves in the near future. Hopefully, the recently established First Nations Statistical Institute may be able to play an important role in achieving this objective.

One approach worth considering is for Statistics Canada to essentially be a data collection agency working on behalf of Aboriginal communities on reserves. A downside might be that the data would not be consistent with those collected off of reserves. But the results may well be an improvement over the general dearth of on-reserve data now.

There is a proposed pilot project with the Siksika Nation east of Calgary to collect LFS data for the on-reserve population. If it goes ahead, Statistics Canada hopes that it can demonstrate that an on-reserve LFS is possible and desirable, and that it would lead to additional funding to expand the program to other reserves in the future. But first this pilot project, which we support, needs to secure funding.

9.3.16 Immigration

Better LMI is required by both immigration policy makers and the immigrants themselves. Policy makers require the information to identify immediate and medium-term labour market pressures in order to ensure Canadian employers get the skills they need, faster and to make the immigration system more efficient and competitive. As of February 27, 2008, LMI information (COPS projections) is being used to prioritize applications from skilled workers who have at least one year of experience under one or more of the 38 occupations identified as being in high demand nationally. LMI is also being used for managing the Temporary Foreign Worker Program.

LMI may also be helpful for immigrants themselves as they seek information along their path to putting their skills to work in Canada.

As a private foundation that works on immigrant and refugee settlement issues, good labour market information is essential to ensure that we are making, or recommending, the right interventions at the right time. National data is important but data at the local level where immigrants live and work is essential."

Our immigration system is changing rapidly -- with little debate. We need good labour market information so we can understand how these changes affect all of us living in Canada.

Maytree Foundation

In partnership with HRSDC and CIC, Statistics Canada added questions to the Labour Force Survey in 2006. These questions have provided Canadians with a valuable source of information on the performance of immigrants in the labour market. The publication of an annual Statistics Canada report on the labour market situation for immigrants to Canada, using these LFS data, should continue.

Immigration should also be a source of LMI data as suggested in the following innovative recommendation made by the Maytree Foundation on information on the characteristics of immigrants just arrived or about to arrive.

In a letter to the Prime Minister in fall of 2008, the Maytree Foundation proposed:

“We also require new systems to fast-track the road to employment. A searchable database of future Permanent Residents will allow employers to view the resumes of future immigrants (with the permission of the applicant). Once a job offer is made, the worker can quickly move through the application process. While this database could initially be designed for the principal applicants of the Skilled Worker Class, it could eventually be expanded to other potential immigrants and underemployed Permanent Residents already in Canada. Searching this list should be a pre-requisite for an employer seeking permission to recruit a temporary worker to ensure that those who intend to make Canada their permanent home are given priority over temporary workers.” (Broadbent and Omidvar, 2008, p.2).

We believe that this proposal has merit and deserves serious consideration as a concrete suggestion for improving the LMI system. However, we would caution that in order to keep the task and database manageable, it would be desirable to limit it to those immigrants who have been accepted or were about to be accepted. And while the database would be a valuable source of LMI for employers looking for workers and would be used voluntarily as an aid to recruitment, we would not make its use a mandatory precondition for employers seeking workers under the Temporary Foreign Worker Program. Furthermore, to be of most use to prospective employers the information on future immigrants would have to be classified by the NOC. This would enable the employers to search the database and find the exact type of workers they are looking for.

Immigration policy makers need to have good information to assess the degree of integration of immigrants in the labour force. The best measure of this is the relative performance of immigrants compared to non-immigrants in the labour market. In the past, the main data source on this was the Census. It provides a rich body of data on labour markets and earnings that provide fertile ground for analysis. The main problem, though, is that the data are only available every five years and even then only with a couple of years lag. For instance, some data on immigrant earnings from the 2006 Census was only released in May 2008 and even then the detail by source countries was not available.

More timely data on the performance of immigrants are clearly required if immigration flows are to be matched more closely to the needs and absorption capacity of the Canadian economy. Fortunately, the required tools and data do exist, even if it is not quite as timely as might be desired. The Immigration Data Base (IMDB) is maintained and developed by Statistics Canada, supported by a consortium led by Citizenship and Immigration Canada and including Human Resources and Skills Development Canada and various provincial governments. It contains information on all immigrants landing since 1980 including their annual tax information. This can be matched with the Longitudinal Administrative Database (LAD) containing a 20 per cent sample of T1 tax returns. These databases can be used along with the Labour Force Survey (LFS) by immigration policy makers, immigration settlement agencies and researchers to monitor the performance of immigrants in the labour market. Tracking the performance of immigrants through these databases should focus on their earnings relative to comparable Canadian workers.

9.3.17 Small Domain LMI

There is general agreement that we need better labour data coverage on “local labour markets” including occupational as well as geographic information. Indeed this is the number one data gap identified by LMI users in our consultations. The demand for better local LMI is especially strong from the provinces and territories, particularly the smaller ones. Indeed, for the smaller provinces and the territories the small domain LMI problem could be considered to apply for aggregate data for the whole jurisdiction. The employment data for even an entire (small) province can be so volatile as to raise questions about their reliability.

The provinces and territories also need small domain LMI because they have the responsibility for labour market policy and programs at the local level. It is hard to properly plan at this level without detailed information on the supply and demand of labour by industry and occupation for fairly small geographic areas. LMI on the local labour market is also critical to those making decisions related to job matching or career planning – employers, intermediaries and individuals. And this means reliable information on the availability of jobs and people for specific industrial and occupational opportunities. It is also needed by action committees charged with running adjustment programs to help displaced workers to become reemployed and other representatives tasked with developing human resource strategies. Again they require information on specific industrial and occupational openings that can be filled by the workers looking for new jobs.

In today's highly competitive environment, accurate and timely labour market information is a vital ingredient for companies who are making investment decisions, such as expansions, relocations, and workforce training. Local labour market information is essential for attracting new businesses. For example, the cost of labour in the local area, such as wages and compensation, is a significantly important factor in all site location decisions by potential investors. Communities face serious competition in their economic development efforts in this global economy, and therefore, good local LMI has become even more important. Without it, site selectors often discount communities outright when making location decisions. These opportunities are then lost not only to families in the local community, but also, they represent a loss to the Canadian economy as well.

Windsor Essex Development Commission

There are many organizations involved in the site location and economic development 'business' that could benefit from having detailed statistics on the availability of labour through a multi-level job classification database.

- Real estate companies
- Site location consultants
- Local government and regional economic development agencies
- The various organizations that advise individuals on career and job options – especially social service agencies and educational institutions
- Business organizations that promote investment or help local businesses – the Toronto Board of Trade and the Canadian Manufacturers and Exporters (CME) are two obvious examples
- DFAIT (The International Trade Division), Industry Canada and Human Resources Development Canada (HRSDC).
- Ontario Ministry of Economic Development, (MED) the Ontario Ministry of International Trade and Investment (MITI), Ontario Ministry of Research and Innovation (MRI), the Ontario Ministry of Small Business and Community Services (MSBCS) and the Ontario Ministry of Training Colleges and Universities (TCU).

Toronto Region Research Alliance

Capturing and reporting local level LMI is both challenging and costly. The fluid nature of today's labour market makes it difficult to produce and sustain timely, relevant local information. To complicate the matter further, most users seeking local LMI want both high quality and detailed information. Information that is out-dated or inappropriately aggregated does not meet the standards set by local LMI users and frequently there is a sense of disconnect with what the information is saying and what they believe to be the case.

The insatiable appetite for small domain LMI (whether it be geographical or occupational) and the dissatisfaction with what is produced by Statistics Canada has led to a proliferation of data creation efforts across the country, which is certainly not an efficient way to collect information.

There are two extremes with respect to data collection. The one is to have Statistics Canada create all the data in Canada; the other is to have hundreds of other data collection activities or centres. Obviously, there is an appropriate balance to be achieved somewhere in the middle. The former has the merits of Statistics Canada's reputation for quality and its economies of scale. Its disadvantage is that quality can come at a high cost both in terms of money and timeliness. The advantage of the latter is that they know the small domains well and know what data they need. The disadvantages could be cost, quality, lack of consistency et cetera. The key question is: what is the appropriate balance?

And even putting aside the cost issue and the need for quick data, there is no agreement on whether the need for better information on local labour markets can be best met through expanded or more frequent surveys or through stepped up efforts by labour market analysts in local offices. It is an unfortunate fact that there has been deterioration in the information from labour market analysts in the Service Canada offices, which is further discussed in the next section on analysis of LMI.

Furthermore, our discussions with Statistics Canada have indicated that a general expansion of the LFS is not a *complete* answer. There are limits to what can be done by expanding the LFS sample and we are already up against them. The LFS is already a very large survey with over 55,000 households responding monthly, and is the appropriate size for producing estimates at the national, provincial and economic region level with the required degree of accuracy. To target small areas or groups in the population by expanding the overall sample would be inefficient and would substantially increase the response burden in some already oversampled areas like Prince Edward Island, and the territories, and for the northern residents of some of the provinces, where surveyors have to repeatedly go back to the same household, and are already up against the limits. To provide reliable estimates for small areas would transform the LFS almost into an annual Census in some areas. Thus, it would be impossible to produce the kind and quality of small area data requested by users through any reasonable expansion of the LFS. On the other hand, specially targeted expansions such as that recently done for Aboriginal people in the west or for immigrants can produce valuable LMI. And it would be worthwhile exploring further the concerns expressed by some of the smaller provinces and territories about the reliability of estimates at the provincial and territorial level for these jurisdictions.

But it is our view that the problem of inadequate local labour market data is not one likely to be fully addressed by an expansion of the sample size in Statistics Canada's labour market surveys.

The key test for how much more Statistics Canada should be asked to do should be what can be done at a reasonable cost and with a reasonable chance of satisfying the demands for small domain data. A process needs to be set up to make sure this test is met by any proposals to have Statistics Canada provide more small domain data.

Specifically, we propose that the FLMM DM group with the Chief Statistician as an adhoc member (recommended in Chapter 8) should set as one of its first priority items of business to commission a study on meeting small domain data needs - pulling together efforts to date on improving the collection of the data, identifying other possibilities for obtaining estimates to explore, creating the mechanism to implement the production of the required small domain data.

As an aside, we observe that some of the dissatisfaction over the availability of small domain LMI may stem from the lack of awareness of existing data. The best source for such information is the Census. In the past, accessing Census data has not always been easy. But in recent years, Statistics Canada has made great efforts to make Census information more readily available on its website. An important feature now available on its website is Community Profiles, which presents community-level profiles from the 2006 Census. This has recently been extended to provide comparable information for Census tracts, which are small, relatively stable geographic areas that usually have a population of 2,500 to 8,000 and are located in Census metropolitan areas (CMAs) and larger Census agglomerations (CAs). But we recognize that this information, which only includes employment broken down into 10 broad occupational and industrial classes, may not be sufficiently detailed to meet the demands of all users.

The data from the LFS for small domains may also not be as widely disseminated as it could be. A possibility to make this information more widely available would be for Statistics Canada or the Service Canada analyst to simply prepare a one-page LFS survey report (maybe quarterly) for each area. It could be distributed in the same manner as the Community Profiles on the Statistics Canada website.

9.3.18 Small Area Estimation

Small Area Estimation is a possible alternative approach to expanding sample size. It is a technique that uses models and statistical procedures to estimate labour market and other data for small areas for which data are not collected directly in the required time period (a more technical introduction to the technique is presented in Rao, 2003). According to Statistics Canada, the term “small area” is a generic term that includes both geographical areas and small (non-geographical) domains. For example, estimating the number of unemployed people in a small town using Labour Force Survey (LFS) data is a small area

problem, as is, estimating the number of 25-year-old plumbers in Ontario, which is a big area, but which has a small, sparse population of the target group. Given Statistics Canada's definition, small area data are best defined based on specific data needs for information on industry, occupation, place of residence, and/or gender.

A wealth of valuable qualitative information can be found at the small area level by the enterprising labour market analyst such as those that work in Service Canada's local offices. However, LMI on small areas is difficult to collect, disseminate and validate. For example, when a plant closes workers, unions, and the associated business have the best and most current labour market information, which can be obtained by a few well directed telephone calls or face-to-face meetings. However, most of this information is largely anecdotal and often is not collected, validated, or disseminated systematically.

Ideally, small area data estimates would be obtained directly from survey or Census data from a particular small area, however, surveys have limited sample sizes and Censuses are infrequent. Statistics Canada has indicated that the Labour Force Survey would have to be expanded substantially to support small area estimation. For example, almost all residents in some areas of Atlantic Canada would have to be surveyed every few years to provide small area data for that sparsely populated region.

Methods have been developed for survey data that effectively increase the amount of information available for the small area by:

- making use of auxiliary information from administrative or other sources;
- borrowing strength from similar areas by using data from a similar kind of community, occupational group; and
- borrowing strength overtime by using several months of data instead of just one month.

However, there are risks involved when using these methods. For example, when borrowing strength from similar areas, the statistician must make a number of assumptions and confirm them with statistical models. If the assumptions (or equivalently the models) are wrong, then the resulting estimates may be unreasonable to a person with local knowledge. Proper model validation is essential, and even then, the results should be used with caution since what was true when the models were validated may no longer be true on the ground. The long time required to build the model and validate its assumptions may render it outdated before it is even used.

Less sophisticated techniques often used by labour market analysts in the field make use of the Census data that are collected every five years and of the changes in available data from comparable larger areas to estimate the data for the small area. This simpler approach can also be used to estimate data for small groups such as occupations. In this case, it is called Small Domain Estimation.

Another possible simplified approach that appears promising is to use SEPH data to project Census data forward in time to estimate data for small areas.

In 2005-2006 the FLMM Labour Market Information Working Group (LMIWG) commissioned Statistics Canada to develop statistical techniques to provide detailed data at the sub-provincial level. Consequently, a prototype tool for small area estimation was developed and tested. The pilot project was completed using data from Newfoundland and Labrador. The results of the pilot indicate that the Small Area Estimation tool produces data that are as accurate as traditional data collection techniques (such as the Labour Force Survey) in areas with smaller sample sizes. Presently, commissioned by HRSDC, Statistics Canada is conducting a feasibility study on small area data estimation based on a new model, Australia's Structure Preserving Estimates (SPREE) model. In general, based on the Australian experience, development of small area data estimates are doable, but require ongoing and significant resources and staff support.

Statistics Canada is currently engaged in an internal discussion exploring whether or not they are best equipped to do small area data estimation generally for the labour force and health. The outcome of this internal discussion will be a part of their larger feasibility study on small area estimation. Statistics Canada provided an update on this study to the attending Panel members at the Roundtable on Labour Market Data on December 18, 2008. Their final report is forthcoming.

Based on our discussions with Statistics Canada and its report, we have reluctantly come to the conclusion that it is unlikely that Small Area Estimation Techniques will be capable of producing small area data of the quality required by the provinces/territories. In our judgment, the best that Statistics Canada will be able to do is make some preliminary estimates and hand them to the provinces loaded with caveats as to how they might be used. Or alternatively, Statistics Canada might be able to develop the methodology and seek some other economic research organization to take it over on an ongoing basis. From the point of view of a national statistical agency, the problem is that the results are too dependent on models and assumptions. And the complex model techniques will not likely be fully understood and their results will always be subject to question from local labour market analysts who will continue to second guess the estimates and rely on local knowledge and contacts. The unfortunate result could be to damage Statistics Canada's reputation for only producing high quality data. We thus wonder if the regular preparation of small area estimates is even an appropriate role for Statistics Canada, which is our national agency responsible for measuring actuals, not for producing model estimates.

Nevertheless, while we recognize that Small Area Estimation techniques are unlikely to be the silver bullet the provinces/territories are seeking to meet their small area LMI needs, we still recommend that Statistics Canada continue to explore the methodologies and possibilities of Small Area Estimation techniques.

9.3.19 Administrative Data

Administrative data are not actually a gap. Rather they are a rich treasure trove of information that has not been fully exploited to fill gaps in LMI. The main data files made from administrative data are:

- the Immigration Data Base (IMDB) already discussed above;
- the Longitudinal Administrative Database (LAD) containing a 20 per cent sample of T1 Family File tax returns;
- the Employment Insurance (EI) Administrative Files, including the Record of Employment (RE) file; and
- the Longitudinal Employment Analysis Program (LEAP) file, which contains employment information for each employer business in Canada, for each year starting with the 1991 reference period.

In addition, there is a wide variety of other sources of administrative from many FPT programs.

The use of the LAD in monitoring the performance of immigrants was already mentioned. It can also be used to shed light on interprovincial labour mobility because it includes information on the province or territory of residence on December 31 of the tax year. Its rich income data can also be linked to other surveys to enrich analysis. But such analysis has often been inhibited by privacy concerns. If an occupational identifier were added to the T1 income tax form, it would also be possible to add an occupational dimension to the analysis.

The EI administrative files also are used by Statistics Canada to prepare a monthly report on regular EI claims, beneficiaries, and benefits. Provincial, municipal, and some demographic breakdowns are either published or available. The release is made and noted in *The Daily* about two months after the LFS reference week to which the EI statistics apply. In contrast, in the U.S. the BLS releases weekly Unemployment Insurance data.

In its EI data release, Statistics Canada is very careful to caution that the “data are produced from an administrative data source and may, from time to time, be affected by changes to the Employment Insurance Act or administrative procedures.” A further caveat that we would add is that the EI program is very complex, with its variable entrance requirements and eligibility periods, and the administrative files are as a result very complicated. This makes it very difficult to interpret the data and to produce useable information on such important issues as employment trends, job transitions, unemployment durations, and employment and unemployment changes by occupation and industry in local labour markets. For instance, the variable entrance requirement and the different and changing levels of coverage by region make it very difficult to use EI data as an indicator of employment trends.

Nevertheless, analysts in HRSDC have been using EI administrative files for years for policy analysis. The EI files contain a record for every EI claim made. These records can be strung together chronologically for any given individual because they can be linked on the Social Insurance Number. They contain variables that can be used for general analysis including:

- the start and end date of the claim (enabling the calculation of the duration of unemployment, the number of beneficiaries by week, month or any larger time period);
- the benefits and allowances received;
- the reason for being unemployed ;
- the characteristics of the beneficiary: age, gender, language, flag if student, apprentice, Aboriginal, disabled, visible minority;
- the presence of dependents;
- training;
- occupation (NOC);
- geographic codes for province, economic region;
- the last employer business number, and industry code (SIC for historic, NAICS since 1998).

As long as the majority of the population studied regularly file claims such as in seasonal or cyclical industries/occupations, it is possible to use the EI file to carry out analysis that can be generalized to the workforce for that particular industry or occupation with some confidence that it is not excessively biased. And if a link is made to the Record of Employment, it is also possible to examine:

- mobility - occupational, industrial or geographic (down to economic region);
- the duration of unemployment;
- the number of beneficiaries (by occupation, industry, province, economic region...) over a given time period (monthly, quarterly, yearly)

An area where the EI files have been particularly useful is in providing information on the local labour market. For instance, they can be used to calculate the exact number of workers laid off collecting EI in a town like Oshawa that has been hard hit by layoffs in the automobile industry. The EI files are thus often used as a source of labour market information by LMIA's in Service Canada's local offices.

While we recognize the difficulties in using and interpreting LMI obtained from the EI files, we believe that the EI files can provide much more useful and reliable LMI than is obtained currently and that hence they can be productively further mined by analysts.

The LEAP file has been used largely for internal research on employment dynamics. This includes pioneering studies on employment creation and destruction, by firm size, in Canada. In the future, it will be a fruitful source for further useful studies on the functioning of the labour market.

Some limited LMI can be gleaned from the income tax records produced by the Small Area and Administrative Data Division. The information can be broken down for smaller communities and neighbourhoods and include the presence and level of individual employment income by gender. Paid and self-employment income is available separately. However, it is badly out of date for current market analysis – income for the 2005 calendar year is available as of January 2009.

The Longitudinal Employer-Household Dynamics (LEHD), which was noted in Chapter 6 as an international best practice, is an innovative program within the U.S. Census Bureau (CB). The CB uses modern statistical and computing techniques to combine federal and state administrative data on employers and employees with core CB Censuses and surveys while protecting the confidentiality of people and firms that provide the data (Title 13 of the U.S. Code). The LEHD infrastructure files provide a detailed and comprehensive picture of workers, employers, and their interaction in the U.S. economy by county on a quarterly basis, providing LMI for very small geographic units.

The U.S. Local Employment Dynamics program integrates existing data from state-supplied administrative records on workers and employers with existing censuses, surveys and other administrative records. To replicate the same or a similar methodology to produce information about local labour market conditions in Canada, unemployment insurance and Census of employment and wages records on a quarterly basis are necessary. Both data series are available in Canada. As such, Canada should be able to produce local employment dynamics information from a purely statistical point of view. However, it may be problematic from a legislative point of view. The legislation in the United States – under Title 13 of the U.S. Code – is in place to link datasets coming from different states and/or partners while preserving the statistical integrity of the data and protecting respondent confidentiality. In Canada, there would be a need to investigate whether changes would have to be made to Canada Statistics Act to allow such work. Nevertheless, the possible applicability of the approach to Canada is worth exploring further.

9.3.20 Interprovincial Labour Mobility

Interprovincial labour flows have been of growing importance in recent years. They are important sources of labour supply, particularly in the west where until recently labour shortages have been most acute. We consequently need more and better data on labour mobility. An increasingly important, and much commented on, new development in the labour market is itinerant workers who work in one province and maintain a permanent residence in another. This has been particularly prevalent for workers from Newfoundland and Labrador and other Atlantic provinces who work out West. One expert speculated that as much as 10 per cent of the labour force of Newfoundland and Labrador could work outside the province.

Provincial governments are especially interested in acquiring data on the exact numbers of workers involved. We thus also need data on place of work as well as place of principal residence. We realize that this can not likely be captured for the smaller

provinces through an expanded LFS. It would require a special survey with hook-ups to some of the administrative data discussed above.

There are also other interesting questions concerning interprovincial labour mobility. They include: the number of people that move or want to move permanently; the impact of the move on their labour market performance and income; the number who face barriers to movement such as occupations licensing and regulation; and the number who overcome barriers.

The data sources that can be used to provide preliminary answers to these questions include: the Census; the Longitudinal Administrative Database; the EI File; the Survey of Labour and Income Dynamics; special one-off surveys. The IMDB is also a potential source for immigrant labour mobility data.

The Census provides the most comprehensive information on Canadians. This makes it useful for providing information on the numbers and locations of those in particular trades or occupations and their earnings. It can be used to analyze the earnings gaps for occupations in different jurisdictions and to identify occupations where regulatory barriers may be significant. But the fact that it is only available at five-year intervals and is not longitudinal makes it less useful for tracking interprovincial labour mobility and related analysis.

The LAD's advantages are its large size, longitudinal nature, annual frequency, and comprehensive coverage of earnings. Its disadvantages are its rudimentary place identification, lack of information on specific jobs, relative lack of occupational identifiers as well as its confidential nature. Statistics Canada staff has used this file for studies of labour mobility. With suitable arrangements to maintain confidentiality, it could perhaps be made available to researchers for specific studies.

The EI file has information from the Record of Employment that makes it more useful in tracking labour mobility and earnings in different jobs. A major drawback of the EI file, as mentioned above is its complexity and confidential nature.

The SLID can also be utilized. Its advantages are its longitudinal nature and its combination of labour market and income variables. Its disadvantage is the small size of the sample for examining the interprovincial mobility in regulated occupations.

While no data source is perfect for the task, the Census, the LAD, the EI file, the SLID all can be used by skilled researchers to provide information on labour mobility.

Special surveys can also be used to supplement existing data sources. An example is the 2004/05 survey of labour mobility in Canada that was discussed above (FLMM, 2004). It was directed at regulatory authorities and provided invaluable information on the functioning of the mutual recognition approach under Chapter 7 of the AIT. To be really useful, it needs to be continued and refined.

A survey could also be done of those individuals who apply for licensure, registration or certification as well as the regulatory bodies. This could provide longitudinal follow-up information on the consequence of being refused or approved. This could include, for instance, whether rejected applicants were eventually approved, and the impact of moves on earnings for individuals whose applications were approved.

9.3.21 Special Surveys/Studies on the Labour Market

As LMI needs are constantly changing, there is a need for an expanded capacity to conduct special surveys/studies on major emerging phenomena in the labour market. Statistics Canada already carries out a number of useful special surveys like the currently are have some special surveys covering LMI, such as Older Worker Survey. A good recent example of an issue that could be examined through a special survey is the shedding of manufacturing jobs and what is happening to the laid-off workers. This would require some sort of tracking survey.

There is also a need for more studies using the LMI that is available to make sure that labour market policy and programs are based on the best information possible. Statistics Canada has already created a store of LMI that is one of the best in the world. And it is unfortunate that it is not being fully utilized by researchers. Two problems stand in their way. The first is access and the second is start-up costs.

Statistics Canada already provides access to many of its public use micro-data files, databases and geographic files through its Data Liberation Initiative and Research Data Centres. However, this is limited to academics and students affiliated with post secondary education institutions for research and teaching purposes. Access could easily be expanded to all Canadian researchers.

Many researchers are reluctant to embark on a research project using Statistics Canada micro-data because of the high start-up costs that must be incurred in learning about the structure of the files and in mastering the software utilized for analysis. This barrier could be reduced at a relatively modest cost by making skilled research assistants available to help researchers manipulate the files to generate and analyze the data required for their research.

Current efforts such as the Youth in Transition Survey are providing a revolutionary look at how individuals are interacting with the postsecondary system and labour markets. These surveys must not be considered a one-time event, but must be replicated regularly to allow benchmarking the success of policies to address the issues they raise. They should also be extended to older age groups... Currently, there is some ability to measure separation from firms, and essentially no ability to link either continuing education or employer-paid training with future success.

Colleges Ontario

9.4 Gaps in the Collection of Education Data

Major gaps in the collection of education data were brought to public attention when the OECD recently released its report *Education at a Glance* and a lot of data for Canada was missing. As a result, some provincial Deputy Ministers have sent letters to their postsecondary institutions to increase compliance with their reporting of administrative education data to Statistics Canada which developed the Postsecondary Student Information System (PSIS) for capturing and reporting data. The problem is that postsecondary institutions view themselves as autonomous organizations not under the direct control of provincial governments so that they do not always respond promptly to provincial government requests. Other gaps also exist. There is little data on adult education. We also need better and more timely data on literacy (the international literacy survey is on a 10-year cycle). The next international literacy survey (PIAAC) does not have secure funding.

Given the intrinsic relationship between polytechnic education and employer needs, good Labour Market Information (LMI) is crucial. LMI is used by our members to analyse their portfolios of programs to determine if they should be continued, reshaped or discontinued. LMI is also used by students to help them find employment and determine what program best responds to market demands.

Polytechnics Canada

Although improvements are being made, we still need better data on PSE. The data on the numbers of students in universities was reasonably satisfactory although as noted during consultations, we still need data on when exactly they graduate (not everybody finishes in April any more). The data for the number of students in colleges have not been published, but the 2005-06 data are scheduled to be released in early 2009 along with the back data to 2000-01.

The data on the labour market performance of university and college graduates provided by the National Graduates Survey has been useful. However, the NGS could be terminated due to lack of funding. There would be economies of scale in having the data collected at the national level rather than the present situation of provinces conducting their own graduate surveys in duplication of Statistics Canada efforts. We also need to track dropouts

Statistics Canada did a pilot in the Atlantic Provinces to see if Educational Identification Numbers (EINs) were needed to track students and concluded that they were not. However, this was because there is not the same movement between universities and colleges in the Atlantic Provinces as there is in Ontario where the flow is both ways. In Ontario, many university graduates go to colleges or polytechnics to acquire additional education more focused on the labour market. And many students do two years in college and then switch to a university. In such a context, tracking of students through the

education system and out into the labour market is impossible without some form of identifier like EINs. With so much movement between universities and colleges, EINs are absolutely needed to integrate university and college data.

Something fairly fundamental needs to be done to make sure that the required PSE LMI is collected. The current approach is broken and badly needs fixing. While Statistics Canada has worked with the CMEC to develop a Pan Canadian Education Indicators Program (PCEIP), for the PSE sector, the results have been disappointing. The Centre for Education Statistics at Statistics Canada, which is responsible for producing the data, is supposed to respond to the provinces/territories. However, the provinces/territories often face different challenges and circumstances, sometimes having divergent views on the priorities, and therefore not always reaching a consensus. The publication containing the indicators (PCEIP) will now have reduced analysis, although the data tables will still be available biannually. A further challenge is the volume of indicators (more than 100), which adds to the response burden for educational institutions. Perhaps progress could be made on addressing the data gaps if an agreement could be reached to reduce these to 30 core indicators, which are most meaningful for understanding of the performance of education systems in Canada. A review of the Postsecondary Student Information System (PSIS) itself might also be useful to determine if there are other obstacles to reporting, including technical issues.

Information is lacking on private educational institutions. They may also be playing an important role in providing education and training, but we just do not know.

Some information on training is available from the Adult Education and Training Survey (AETS), which was originally supposed to be conducted on a regular basis, but which has become a survey repeated at variable intervals. The AETS is being folded into the new Access and Support to Education and Training Survey (ASETS). But we need better information on private sector spending on training and the form it takes (i.e. direct spending by businesses or contracting out to colleges and polytechnics or industry associations).

It is clear that all LMI educational data collection mechanisms need to be modified to reflect the increased diversity of the postsecondary education system in Canada including private sector institutions and the emergence of polytechnics and baccalaureate degree granting colleges and institutions in order to better capture the inter-sector mobility and provide more comprehensive information. Where possible, data/information needs to be provided in both quantitative and qualitative form, allowing readers of all backgrounds the capability of understanding the nature of the information being presented.

Our industry stakeholders recognize the need for high quality data on postsecondary education, such as the number of graduates coming out of our colleges and universities who will form our future workforce. Without this information it is difficult for companies to determine if they will have the necessary workers for the future and to plan ahead. Our industry has been one of the major drivers of the economy and it is important that we continue to have the right educated and skilled workers in the future. However, the information that is currently available on our education systems is limited. The university data is too aggregated and we need to be able to track information at the discipline level. We need to know not just the number of graduates but also the types of graduates by discipline. There needs to be a linkage between the national and provincial data on graduates, and it would be helpful to have this data accessible in one location.

Petroleum Human Resources Council of Canada

All LMI educational data needs to be available and accessible in a timely, accurate and inexpensive fashion.

When collecting data, an eye to the future is more important than an eye to the past. Most people use educational LMI to influence future behaviour. Hence, data need to be collected, presented and distributed in a fashion that will aid the future, rather than simply understand the past. For example, with the current economic difficulties, unemployment rates will increase and there will be a need to help people find another job. Hence, while we currently have a problem with supply being larger than demand, in the not so distant future with the retirement of baby boomers, the situation is likely to completely reverse itself resulting in excess demand and labour shortages.

There needs to be an education section in any LMI portal with data/information links provided for specific types of users, including job seekers (current and future), educational institutions, educational career advisors, policy makers, employers, unions and government agencies.

Along with the overall intent of more fully enlightening individuals about what LMI is already available, special effort needs to be made in the educational sector to link educational training opportunities to careers.

Youth are increasingly using social networks/media to obtain labour and career-related information. Information developers and providers need to re-think their distribution mechanisms when they are trying to attract the attention of youth and provide them with relevant information.

The provincial and federal governments need to collect educational LMI in a way that allows for the reporting of and comparison to OECD data, which is not currently the case.

The projection of future employment opportunities is becoming increasingly complex. Yet, a view of the future is necessary and, in fact, multiple views of the future (scenarios) are seen by many as a way of providing a richer understanding of the directions that may unfold. This information should be distributed in both traditional and non-traditional

means, with a particular focus on students and parents in the early years (Grades 6 to 8) of their education.

When collecting educational-related institutional data, the information needs to be complete and comparable covering employees (full-time and part-time), students (full-time and part-time), programs (degrees, diplomas, certificates, and apprenticeships), fields of study of students and graduates, across all types of institutions (public, private, universities, colleges, polytechnics, and institutes), budgets and expenditures. Drastic improvements need to be made in college, polytechnic and apprenticeship data. Employers require much better and more detailed information on the supply of highly skilled labour coming into the labour force. It is the supply of these newly educated workers on which they must draw to meet their growing labour demands.

Educational outcome measures (employment, income, credential completion, employer satisfaction, graduate satisfaction etc.) need to be routinely collected and disseminated.

Agreement across the provinces and territories needs to be reached on the creation of an educational identification number (EIN) that would allow for a better understanding of Canada's intellectual and skills capacity and the contributions being made by all postsecondary education sectors.

Data collecting on continuing education/lifelong learning needs to be enhanced with attention to the role and contribution of the private sector.

A major problem in the education field is that there is no secure funding for key existing surveys. This means that there is always a risk that required data will not continue to be provided. It is estimated that \$15 million annually is needed to pay for these surveys.

This would cover the education surveys enumerated above: the Youth in Transition Survey (YITS), the National Graduates Survey (NGS), the Follow-up of Graduates (FOG), the Access to Education and Training Survey (ASETS), the Survey of Earned Doctorates (SED) and the National Apprenticeship Survey (NAS). It would also cover the Postsecondary Student Information System (PSIS) and the Programme for the International Assessment of Adult Competencies (PIAAC).

The profile of expenditures would obviously not be a constant \$15 million every year but would fluctuate depending on the phase of the surveys. Expenditures peaks when collection takes place: annually for PSIS and SED, every two years for YITS, every five years each for NGS, FOG, ASETS and NAS and 7-8 years for PIAAC. By planning properly and avoiding simultaneous collections, the expenditures hover around \$15 million annually.

The NGS/FOG costs \$10.1 million over a whole cycle, which spans a 6-7 year period and includes two collections - a first 2 years after graduation and a follow-up 5 years after graduation. This would average \$1.5 million per year. This estimate is based on an initial NGS sample of 60,000 graduates.

The other education surveys would cost \$13.5 million per year (\$15 million minus \$1.5 million).

9.5 Improvements in the Analysis of LMI

9.5.1 Canadian Occupational Projection System

The Canadian Occupational Projection System (COPS) is a widely accepted model for projecting medium-term labour market conditions across industries and occupations at both the national and provincial levels. The projections are used for the identification of potential imbalances between the demand for and supply of labour across occupational groupings and skill levels in the medium term. The dissemination of the projection results may help to promote adjustments in the labour market that will contribute to limiting actual imbalances. Results of the labour market projections are reported every two years in *Looking-Ahead: A 10-Year Outlook for the Canadian Labour Market*. The information on occupational imbalances is also used in labour market information (LMI) products, such as *National Job Futures*, targeted at assisting Canadians in their education and career decisions. Many improvements have taken place in recent years including the addition of a supply-side model at the national level, the use of Longitudinal Administrative Data (LAD) in the retirement model and the increased use of provincial data. The COPS team is committed to continuously updating and modifying the COPS framework to keep it responsive to the current analytical needs.

COPS is considered to be useful, particularly by the provinces and territories. In addition, some sector councils like, most notably, the Construction Sector Council also use the COPS projection to help produce occupational projections for their own industries. The Sector Council notes the limitations of the COPS occupational breakdown for construction and the failure to use information on major construction projects (although the COPS projection of economic activity in the construction sector does implicitly encompass information on major construction projects collected by the Conference Board of Canada).

Citizenship and Immigration Canada finds the COPS projections to be adequate to their needs as a helpful starting point for the preparation of their “Occupations Under Pressure.”

However, several issues remain at play. Among the broader public, there may be an inadequate appreciation of the nature of the projections and the high level of uncertainty that necessarily surrounds them. Like all projections, they are subject to great risk. This starts with the forecasting accuracy of the underlying macroeconomic projection, which can, as in the present circumstances with the unexpected onset of a serious recession, go badly off track in the short term. The COPS macroeconomic projection over the short term is also subject to these risks as it is based on an average of private and public-sector forecasts available when preparing the scenario. It can also go astray in its industrial and

occupational projections even if the macroeconomic forecast is reasonably on target. An example of this is the forecast for the IT industry and professionals made during the 2000 high tech bubble. However, the emphasis of the COPS projections is on medium term trends. Being off-track in the short term does not automatically mean that the medium-term trends in labour supply and labour demand will be affected.

A useful way of illustrating the risk involved in a projection is to produce alternative scenarios which show a range of likely results. The scenarios could reflect alternative paths for overall economic growth, productivity or sectoral shifts.

There have been some reservations noted in preparing scenarios. First, the economic scenario used in the COPS projections is a "mainstream" one, broadly consistent with the economic outlooks of private and public sector organizations at the time of preparing the projections. The use of alternative economic scenarios, departing from the "mainstream" view could be interpreted as an indication of inconsistent views within the Government of Canada about the economic outlook. We do not believe this should be an obstacle. The whole COPS exercise is about stylized projections rather than official Government forecasts. The Government of Canada often provides alternative scenarios in the Economic & Fiscal Updates and Budgets and gives rules-of-thumb as to how the budget balance is impacted by different economic assumptions. Further, through COPS, HRSDC is providing a service that is used by many groups across Canada and there must be sufficient flexibility to best meet their needs.

A second reservation is that producing the full COPS projections under alternative economic scenarios is not as straightforward as with conventional macro-forecasting models. Among other things, the economic scenario is prepared by an outside provider. This cannot be done quickly and inexpensively. We recognize the resource constraints in meeting our recommendations for COPS and are suggesting a modest increase to the funding of the project.

The main problem with COPS from the point of view of the general public is its lack of accessibility. While it is usually made available on the HRSDC website, it is not with a great deal of fanfare. And as a result, most people outside the closed FPT/sector council world are not even aware of its existence and availability.

For example, in contrast to the situation in the United States where projections of labour supply are regularly published by the BLS, the lack of such official labour supply projections is an important LMI gap in Canada. This need not be the case. In Canada, such projections are actually produced at the national level as part of the annual COPS exercise, but are kept inside government as part of a federal/provincial/territorial process for a long period of time and only subsequently made available to the broader public. To meet the more general need for timely LMI on labour supply, we recommend that these labour market projections be made readily available to the public on a timely basis and be expanded to include provincial labour supply projections. Alternatively, Statistics Canada could assume responsibility for publishing regular labour supply projections. It published labour supply projections in 2007 covering the period from 2006 to 2031 (Statistics

Canada, 2007a). But for labour supply projections to be truly useful and not out-of-date they would have to be published at least once a year.

The COPS projections have been criticized from several different more technical angles. For instance, it has been said that the underlying methodology is overly "mechanical" (Meltz, 1992). The main issue is the use of fixed (or more recently trending or projected) coefficients relating industry employment demand to industry output and occupational employment demand to industry employment. Labour markets are dynamic and wages are the key price variables equilibrating labour demand and supply. The price elasticities and cross price elasticities of demand thus have a critical role. Employers can substitute workers with different skills for others. And workers can often change from one occupation to a related occupation with a minimum of retraining. Moreover, because the projections are long term, workers and employers both have the opportunity to change their behaviour and even technologies to respond to prospective labour shortages, and to prevent them from occurring.

Such criticisms often reflect a lack of understanding of what the COPS projections are about. The purpose of the COPS projections is not to project how demand and supply gaps will be closed *ex post*. It is to project what they are *ex ante* over a timeframe that matters for the hundreds of thousands of young Canadians and potential immigrants making educational and immigration decisions. The projections are about trends over the medium-term in labour supply and labour demand, and about the identification of occupations that could be facing shortage or surplus pressures in the medium term. Changes in these projected trends are driven by changes in factors such as demographics, enrolments and graduations in the school system, and potential economic growth. The projections do not include market adjustments: wages do not respond to imbalances between supply and demand and there's no inter-occupational mobility induced by those imbalances. This is because available data do not support the estimation of equations for wage responses by occupation and for the estimation of inter-occupational mobility. However, what the available data allow for is identifying where supply-demand gaps could occur. This is what the COPS projections do. Note that the occupational projections prepared by the U.S. Bureau of Labor Statistics do not even provide this information as their projections cover only labour demand at the occupational level.

Elementary and secondary schools play an important role in educating our future workforce. One of the most useful things that guidance counsellors can do to help prepare students to broaden their career horizons and to prepare for the future is to advise them about the wide spectrum of occupations that will be needed in the future and the kinds of education and skills they should acquire. For this we need good projections on occupations including demand cycles. As we shift into "smart industries", we will also need more LMI on emerging industries, not traditional industries. Although it's a challenge to get students to think about LMI, they need to be exposed to up-to-date information about careers at this crucial stage in their career development. Parents, as mentors and career stakeholders for their children, also need this information. And, there should be stronger linkages between schools and industry groups [OSCA] who have told us that they are worried about future skills shortages.

Ontario School Counsellors' Association

The final issue is if the occupational projections are going to have any credibility, they need to be periodically assessed to determine their reliability. An OECD assessment of occupational projections in Canada that was completed in 2002 noted that there was no regular assessment of the accuracy of the projections produced by HRSDC using the COPS model (Smith, 2002). An earlier, more detailed review of occupational projections, found that accuracy declines significantly with more detailed occupational categories, but that errors cancelled out to some extent when detailed projections were aggregated (Foot and Meltz, 1992). Thus it seems highly likely that occupation projections remain more accurate at higher level of aggregation. On the other hand, as Smith notes, occupational projections are more valuable for policy making if they are more disaggregated. Hence, the relationship between accuracy and level of aggregation is problematic.

There are other complex issues that arise in assessing occupational projections that need to be considered. The most fundamental issue stems from the nature of such projections. Specifically, that COPS is projecting gaps that will not actually be observed (especially with no data on job vacancies measuring unfilled jobs) renders the usual tests of forecasting accuracy (comparing outcomes with projected values) more difficult to apply and interpret.

Also, serious constraints prevent the possibility of undertaking such an exercise for some of the model components. For example, it is difficult to assess whether the retirement projection is good as no survey directly capturing retirements currently exists in Canada. Accordingly, there is no benchmark to compare the projection results. Assessing school leavers (which is the main component of labour supply) is also difficult given the long lead time it takes Statistics Canada to release education data (college data is only available up to 1999). In this case, COPS has to estimate the past (sometimes years and years of it) before producing a projection of the future.

In that context, what is more important for assessing the credibility of the COPS projections is the methodologies and assumptions used in the development of the projections. Information on these methodologies and assumptions was provided in the reports that have been published on the Internet. The COPS team has received feedback from a number of readers of the report published in 2007. No issues were raised with respect to the projection methodologies and assumptions.

The main complaint of provincial officials responsible for LMI is their contention that the COPS projections do not fully reflect all the available information on their provincial and local labour markets. While they view the recent efforts at "provincialization" of COPS positively, they still worry about new problems, including added volatility and "anchoring" issues in provincial occupational projections. Nevertheless, provinces use the COPS projections as a starting point for their own industrial and occupational employment projections. However, they do make significant post-estimation adjustments to industry and occupational employment estimates to suit their perspectives on their jurisdiction.

For example, some provincial jurisdictions "linearize" their 5-year industry and occupational employment projections, by estimating a start and finish point, which may result in inaccurate labour demand estimates given the retirement estimates are based on the single year values. Also, estimating labour demand, based on population constrained employment growth, may result in underestimation due to the exclusion of unfulfilled employer demand. This would most likely occur in the presence of labour shortages where markets do not clear themselves in the short-run. Another example relates to retirements, which will soon account for three quarters of labour demand. The retirement model relies on national 3-digit occupational data to estimate provincial 4-digit occupational retirements. And while the retirement model has greatly improved with the incorporation of LAD data, the lack of detailed provincial occupational data is a limitation to enhancing this important demand-side component. Lastly, some components are missing, such as an occupational mobility model at the provincial level, which reduces the realism of COPS.

Another major issue hanging over the whole COPS exercise is the nature of the data utilized and the long lead times before the data becomes useful for value-added analysis such as forecasting. For instance, provincial occupational supply projections will require an expansion of the NGS, whose future is uncertain, to produce detailed provincial data. And even if detailed provincial NGS were to become available starting in 2011 it would still be years before one could start to do provincial supply side projections with COPS because one needs more than a single year of data for time-series projection. As importantly, given uncertainty about NGS and the certainty that without the supply side the COPS demand side is not of much value, the COPS managers have to have second thoughts about investing in a major system whose value may be substantially reduced by the disappearance of data within a few years.

In spite of the criticisms and reservations expressed about COPS, it must be acknowledged that COPS is considered to be useful and everybody wants to see it continued and improved.

The national COPS projections are done for 33 NAICS industries and 140 NOC occupations. They are then distributed across 520 NOC occupations using Census information. While some that we heard from might desire more details than this, our view is that this should be sufficient. In fact, more detailed projections would not provide much additional value or information as they would tend to be even less reliable than the current projections. In our view, the timeliness of the projections, the development of scenarios, and working toward the development of provincial projections in partnership with the provinces and the territories should be the high priority for the COPS team.

Improvements are possible in COPS with the current resources as was shown with the work that has been devoted in recent years to improve the retirement and school leaver projections, to model mobility across skill levels etc. However, additional resources would be needed to undertake major work such as the production of reliable provincial-level projections for each of the labour demand and supply components, including a block on inter-provincial migration (not an easy job). Data also remains a key issue.

Because Statistics Canada releases only complete datasets, some of the educational administrative data required to run the school leavers model is very dated, even at the national level. For example, community college and trade and vocational information is nearly 10 years old, with the most recent data coming from the 1999/2000 school year. Hence, to produce a 10 year projection, the model must forecast nearly 10 years of additional historical data. Also, another key survey, the National Graduate Survey, has no ongoing funding. The NGS is a key element in the production of COPS labour supply projections by occupation. Having to produce labour supply projections by province would also require a larger sample size for the NGS.

9.5.2 National Occupational Classification (NOC)

There is much dissatisfaction with the NOC, especially among businesses, sector councils and labour unions. The big issue is that the NOC fails to keep up with the fast changing labour market and does not recognize occupations of importance to their industry or sectors. It inappropriately combines occupations into groups or amalgamates occupations that are very different. This is based on the view of many users that the main purpose of the NOC is to reflect the jobs as classified in their particular industry so that they can use the information for planning and human resource management purposes.

The National Occupational Classification (NOC) system used by HRSDC clearly provides much interesting and useful LMI. However, the NOCs are not sufficiently specific to the mining industry. They do not reflect the full spectrum of occupations and job descriptions typically used by mining companies, academic institutions and human resources practitioners.

Mining Association of Canada (MAC) and the Mining Industry Human Resources Council (MiHR)

Many specific anomalies were identified where the NOC combines occupations into groups or amalgamates occupations that are very different. For instance, the NOC category for “electrical engineer” includes ICT workers as well as power systems engineers and traditional electrical engineers. The tourism sector council also commented that there is too much aggregation for their industry noting that food and beverage workers were aggregated with hotels. And CAW considers the disaggregation provided in skill type H – “Trades, Transport and Equipment Operators and Related Occupations” to be too broad to be of much use for them. The mining industry argued that in its industry NOCs are not sufficiently specific and “do not reflect the full spectrum of occupations and job descriptions typically used by mining companies, academic institutions and human resources practitioners.” The oil and gas industry noted that combining oil, gas and mining together renders the data useless from their point of view because each particular industry differs substantially in the type of labour used and its geographical concentration. While this is a problem that arises from the North American Industrial Classification System (NAICS) and not NOC, they also were concerned that the NOC categories for their industry do not line up with their jobs. From their point of

view, it was bad enough that it takes 6-7 years to introduce a change in classification, but even worse because 5 major occupations in their industry were not identified at all, including one that is celebrating its association's 50th year. In addition, they contended that a blanket category like "operator" was useless to them. They wanted to know: what kind of operator?

These examples illustrate that, at least in some instances, the NOC does not line up with the current realities within the world of work. And it may not be enough in our rapidly changing knowledge-based economy to only introduce changes in accordance with Census cycles (every 5 years). Furthermore, greater occupation-specific detail is required to provide sub-occupational level information, which would provide a higher degree of detail.

But too much detail in occupational classifications can create different sorts of problems, particularly for the other main class of user the analyst who looks for a certain degree of aggregation and consistency across time. The NOC has attempted to provide a balanced, accurate and useful basis for statistics and Labour Market Information for coding the Census and LFS while providing an extensive listing of occupational titles, duties and educational requirements across industries.

The predecessor to NOC in HRSDC was the Canadian Classification Dictionary of Occupations (CCDO), which used a 7-digit code that got down to the level of detail that many people want. The problems, however, in using it for analysis were: (1) the unacceptably high proportion of inaccurate coding and the lumping into the "general" category for many occupations, if the coder did not know the exact specialty; and (2) small sample size once the fine level of detail was reached, which made it difficult to reach any rigorous conclusions.

While it is clear that occupational classifications need to be stable over time to be useful for statistical purposes, including the analysis of time series, it is equally obvious that occupational classifications need to change to keep up with a fast changing labour market to be of value for business and career planning. The current practice is for HRSDC and Statistics Canada to have ongoing consultations with users on the NOC and to make appropriate changes every five years for the Census. But they only make major structural changes to the NOC on the 10-year Census cycle (NOC 2001) and constrain themselves to lesser changes every 5 years (NOC 2006).

We support their efforts to periodically review job classifications to make sure they keep up with fast evolving labour market. And we hope that these consultations will result in needed improvements in the NOC taking full account of the trade-offs between relevance and consistency over time into account. We need to have occupational forecasts for occupations that are meaningful for the labour market. This means occupations that users recognize as existing in their workplaces. In our view, this will require HRSDC and STC to be willing to make major structural changes every five years when they revise the NOC if required to keep up with the more rapid change in the occupational structure of the Canadian labour market.

It must be acknowledged that to ensure an up-to-date NOC, significant technological upgrades will be necessary. Major structural changes to the NOC database will be required to accommodate new content, a revised coding framework and proposed additional information from Statistics Canada. Further, changes to the NOC coding assistant (a mechanism that helps users find appropriate occupational codes) and modifications to the updating features in the database are needed to ensure updates can be incorporated quickly and seamlessly. Our recommended investment to modernize HRSDC national LMI foundational systems would fund these necessary improvements.

It is worth noting that Canada's problem in keeping its NOC up to date with a fast-changing labour market is not unique. The occupational classification systems have usually been developed for statistical purposes and are used to make comparisons across countries and across time. In Europe, for, instance efforts at harmonization have resulted in the International Standard for the Classification of Occupations, the current version of which is still ISCO-88 which was developed in 1988. ISCO is revised every 20 years so the next version will be ISCO-08 (OECD, 1997). The Bureau of Labor Statistics in the United States revises its Standard Occupation Classification every ten years for the Census. The current version is SOC for 2000 and the next will be for 2010.

9.5.3 Local Labour Market Analysis

A longstanding and valuable feature of the Canadian system of LMI has been the presence of local economists and LMI analysts (LMIA's) in local Canada Employment Centres. While on the job, these analysts acquired a good knowledge of local labour markets in the communities to which they were assigned. They interacted with local groups like chambers of commerce, economic development boards, and social welfare councils where they provided valuable input on the labour market into local decision-making and picked up useful intelligence on the local labour market.

Over time with the transfer of resources and responsibilities to the provinces through LMDAs, the resources allocated to local labour market analysis by HRSDC/Service Canada have been steadily reduced. And in September 2005, the LMI analysts were transferred to the newly established Service Canada, which is the single point of access for a full range of government services. There the resources allocated to local labour markets had to compete with the higher priority of providing concrete and highly visible services like EI, CPP, and OAS/GIS payments to Canadians. The overall result was that the non-wage funding allocated to the local labour market analysis function dropped from \$1 million in 2003-04 fiscal year to approximately \$400,000 in the current 2008-09 fiscal year. And the number of LMI analysts dwindled from a peak of 280 to only around 100 currently. As a result, many previously serviced areas no longer are staffed by LMIA's. For example, Kitchener-Waterloo, where the hard-hit motor vehicle and parts industry is important, does not have a LMIA to provide a window on the labour adjustment occurring in that industry.

In addition, after the establishment of Service Canada, the LMIs in the Service Canada regional offices were disconnected from HRSDC headquarters in Ottawa, to whom they had previously reported for their LMI work. Instead, they reported to the Director General (DG) of the regional Service Canada office for all functions. This development had two implications. First, with the Regional DGs having more responsibility for resource allocation, some chose to give less priority to LMI than before. This led to atrophy of the LMI function in some instances and may account for the great variation in the extent and possibly quality of LMI by province offered by the Service Canada regional offices.

The LMIs also lost their formal organizational links with the officials responsible for LMI development at HRSDC headquarters in Gatineau. This meant that new LMI products developed at headquarters were not adopted as quickly in the regional offices, compared to the situation when HRSDC still had responsibility for these offices. In addition, HRSDC headquarters lost its ability to maintain consistency in the LMI analysis and forecasts delivered by the federal government to Canadians at the regional level.

The loss in organizational links and the reduction in the available resources for the LMI function was exacerbated by the expansion of the Temporary Foreign Worker Program (TFWP), which required LMIs to provide key LMI such as wage information to assist TFWP staff to prepare Labour Market Opinions (LMOs) which are necessary before an employer can recruit foreign workers. The more fundamental problem was that Service Canada did not think it had the mandate to provide the functional guidance needed to effectively carry out the LMI function. The LMI collected has varied substantially from one office to another and there has been no standardized set of LMI products and reporting templates. The overall result has been a significant deterioration in the LMI function.

A promising recent development from an organizational point of view is the consolidation of Service Canada's National LMI Unit back into HRSDC as of November 24, 2008. Its Skills and Labour Market Information Division is now assuming responsibility for providing functional guidance on LMI to the regions, while organizational responsibility will remain with Service Canada. The objective under the Performance Management Framework is to ensure LMI users have access to consistent, timely, and relevant LMI at the national level and at the provincial and territorial and sub-provincial and sub-territorial levels. The plan is to establish a core set of standard LMI products in consultation with the provinces and territories. This project has been given a new sense of urgency because it is anticipated that the regional/local labour market intelligence provided by the Regional LMI Network will be an essential component in monitoring and in the early identification of labour market issues arising from the downturn in the economy.

While the new functional reporting relationship should help to improve the LMI provided by the regions, there is still the issue of providing adequate resources to support the LMI function. Based on our consultations with HRSDC staff, it will require 50 to 100 additional staff (FTE) at a cost of \$3.5 to \$7 million per year to supply the needed resources. In our view, the combination of the plan to revamp the local labour market

function and the provision of adequate resources is the best way to meet the expressed needs of users outside of Québec for better local LMI. In Québec, our consultations indicated that the situation is different. There Emploi-Québec is already providing the local LMI desired by users.

9.5.4 The Lack of Local LMI

The current approach to LMI, which has depended heavily on Statistics Canada efforts, has been largely top-down. While it may be able to drill down further in producing local data, it will probably never be able to efficiently satisfy the vociferous demands we have heard for more local data.

The other alternative is a bottom up approach. The key question here is: can local efforts at information gathering, analysis/interpretation and dissemination fill the gap left by the top-down approach? In answering this question we must consider what HRSDC/Service Canada and the provinces and territories are doing on this front. The larger provinces like Québec and Alberta have introduced their own programs to produce information on and analysis of local labour markets. The smaller provinces, particularly in the Atlantic region, and the territories have tended to rely on partnerships with Service Canada.

We heard many complaints about the lack of information on local labour markets even though it can not be denied that some local LMI is being produced. The dissatisfaction we heard may arise as much from concern over the “quality” of local LMI as about its “quantity.” There are a number of factors that may give rise to this dissatisfaction.

On sites where local information is presented, data can be as much as two years old and in some cases is just not available.

Ontario Local Board Network

Our work at the local level found other inadequacies with existing labour market data. One problem had to do with the timing of the available information....

Statistics Canada produces labour force surveys on a monthly basis. But these are limited in that they provide information for 10 occupational categories only. It is also difficult to apply this information locally....

Caledon Institute of Social Policy

One, the restructuring in HRSDC/Service Canada and in many provinces in recent years may have contributed to confusion over who is providing what. And the resources allocated to the LMI function at the local level have been reduced. Consequently, a gap certainly does exist in the available LMI. We found that in some provinces, the National LMI System, which was developed by HRSDC to address local LMI, is no longer being maintained on a regular basis. The system is there, but the data may be missing, or out-of-date. It may provide too much generic NOC material, and not enough local content.

Thus, while there may be local LMI, it is often not a lot, and frequently out-of-date. In addition, the National LMI system could use a more user-friendly and flexible search feature, which is a disadvantage and could be a deterrent for users.

Second, there is only limited local area data available from Statistics Canada. The LFS cannot reasonably produce community level LMI and most users perceive Census data to be outdated. Consequently, not much hard up-to-date statistical data can be provided at the local level. In many provinces, there is a demand for occupational projections right down to the city level. Since we will never be able to address that demand, it is necessary to educate users about what it is possible to provide. But this will not stop people from saying that there is no information for their community, even if they have been told about these challenges and the need to look at the labour market more broadly. For an intermediary or non profit agency, the issue might be no LMI that is detailed enough, e.g. demographic and labour market characteristics for the specific group they are serving (persons with disabilities, immigrants, etc.) in their local communities. National and provincial studies are sometimes perceived as too broad for them, and they sometimes want to repeat or commission a similar local study that confirms the trends in their own communities, or something that is “theirs”.

Third, "LMI" has a very broad definition and many different kinds of users. Priorities for local analysts may vary depending on the community or region, resulting in a gap for some. Sometimes, local agencies might not be aware of who is doing what. In larger communities, for example, there are often different players who want to have a hand in LMI, and this can add to the complexity of the issue, and contribute to fragmentation.

Fourth, in the case where LMI and reports are available from Service Canada and provincial and territorial governments, they may not be as useful as the intermediaries and non-profit agencies want them to be. They may not have enough analysis, or be too focused on LFS data or not answer some particular question or issue. The National LMI System depends a lot on the NOC, but needs the local content to be meaningful for job seekers. Many reports, like the "Labour Market Bulletins" provided by local offices, consolidate newspaper articles and announcements from the local media, and the "Newsflash" was developed to post these kinds of messages more quickly. While some people complain that this just repeats what is in the newspaper, it at least provides some consolidated information on what is happening locally at the present time.

One key component of local LMI that could be compiled locally is a list of the employment levels of major employers, particularly employers who are exporting goods and service and bringing money into the area. The trend in the aggregate employment of these employers is a good barometer of the state of the local labour market.

Strategic planners may take it one step further, and ask what the local LMI means or what the implications are for the future. For them, it might add value if there were some additional analysis or context about the underlying trends that they can relate to, and possibly, some forward-looking statements about the implications or directions. But this is not easy. It takes time and effort, requires: a strong community network; a more

comprehensive understanding of the users needs; skills and the building up of analytical expertise of local analysts; and dedication to the function, including a strong commitment by management who might be facing resource challenges.

Community agencies and intermediaries will complain if there are no reports at all, and they sometimes criticize existing LMI for not being comprehensive or useful enough. Thus, the question might be, is there core LMI that should be collected and produced locally and by whom? There will be differing views on this, given the way the system has unfolded in the different jurisdictions.

It is evident that the unsatisfactory state of affairs with respect to the provision of local LMI has been exacerbated by the devolution of some responsibility for LMI (the labour exchange function) to the provinces and by the ongoing reorganization of HRSDC/Service Canada, which has undermined functional lines of responsibility and accountability for LMI. Hopefully, this is just a transitional problem and the recent restoration to HRSDC of the functional responsibility for the LMIA's and the establishment of an LMI accountability framework will rectify the problem. However, it is still not clear exactly what will be the ultimate division of responsibilities for local LMI. If Service Canada is to be the chosen instrument to fulfill the demand for more small domain data (at least outside Québec), then the federal government (HRSDC/Service Canada) will have to take the necessary steps to ensure that this is done satisfactorily and efficiently and that the necessary resources are provided. On the other hand, if provinces are going to assume a much greater role under the devolution for providing small domain data, then they will need to quickly mount the required efforts. In either case, it is clear that decisive action is required to fill the glaring gap for local LMI.

9.6 Raising Public Awareness of LMI

In our consultations, we were struck by the low level of awareness among even sophisticated users in large organizations about the availability of LMI. Indeed, some of them told us that they needed information that we knew was already available from Statistics Canada. A good example of this is that many we spoke to want an establishment survey. The fact is that we already have a good one called the Survey of Employment and Hours (SEPH) that has recently been improved. Unfortunately, though many of the potential users, outside the provincial governments who pushed for its expansion and improvement, are not aware of its existence.

And many users seem to be hesitant about trying to get LMI directly from Statistics Canada. We had anticipated it would have been because they did not want to incur the cost of purchasing the data. But as we probed further we learned that this hesitancy stemmed from unfamiliarity with the Statistics Canada information system and a perception that it is very complex to use. Hence many felt intimidated about even trying to conduct data searches.

In many instances, the issue is not the existence of LMI, but rather users' lack of awareness of those LMI sources. Employers, particularly SMEs, often lack the time and resources to search extensively for information. Thus websites and other LMI sources must be actively promoted by their hosts (often but not always governments) using media and other channels that will communicate most effectively to their potential customers. Designing websites to welcome employers is particularly important.

Canadian Manufacturers and Exporters

Another problem identified at the 2008 FLMM LMI annual conference in New Brunswick was that existing LMI products and systems are not necessarily client-centred (meaning designed and developed with the needs and interests of the end user in mind).

For all these reasons, we feel strongly that a major effort needs to be mounted to make LMI users aware both of the large amount of LMI that is already available and of the new LMI that will be made available if our recommendations are accepted. Specifically, we encourage Statistics Canada and HRSDC to:

- Update their user guides (very few of which exist) to LMI;
- Expand their outreach to publicize their LMI products;
- Improve their search engine so that LMI can be more easily found by users;
- Make more LMI available on their websites;
- Make free Statistics Canada's LMI that is already available on CANSIM, the computerized database; and
- Make the information provided by COPS more user-friendly.

And we recognize that realistically there will always be a need to make sure that LMI is not only available on Statistics Canada's system but that it is thoroughly covered in their releases. Statistics Canada could from time-to-time feature different labour market data than the LFS in *The Daily* and provide special analysis of some of the more important sources of labour market data more often in the monthly *Canadian Economic Observer*, both of which receive widespread media coverage. It could also reach out to secondary distributors such as private sector analysts and economists and encourage them to put out analysis using some of the less-well-known sources of labour market information. Once one of the major national organizations comments on the LMI, others would quickly follow and the information would become more generally known.

And as for SEPH, which we mentioned above, it needs to be given a more prominent release by Statistics Canada in *The Daily* like the LFS rather than the four lines it has currently. Statistics Canada needs to make a special effort to make the public aware of the new SEPH and its potential use as a source of LMI and for labour market analysis.

We were encouraged to learn that beginning in the next few months, Statistics Canada will begin producing more substantive analysis in *The Daily*, highlighting data from both SEPH and EI Statistics program. Its plan for the more coordinated release strategy includes:

- LFS being the first out the door, more comprehensive measure of employment, demographic advantage;
- SEPH will follow later in the month, with detail on changes in employment and wages by industry; and
- EI will follow, around the same day as SEPH, with regional detail on where labour markets are improving or weakening.

Granted that before a publicity campaign can be truly successful, we need to develop a good system of LMI that is complete and user-friendly. And to a certain degree, if it is built, users will come. But given the high level of unfamiliarity with LMI revealed by our consultations, there is an obvious need for much more publicity and training on accessing and using LMI information to make sure that users find the LMI they need and can actually make productive use of it. Possible activities that would fall under the rubric of increased publicity include media advertisements, high school guidance courses, and Statistics Canada out-reach programs. More generally, consideration could be given to the possibility of running LMI training programs for intermediaries, which would provide exposure to the full range of available LMI as well as that provided by Statistics Canada. The FLMM LMI Working Group has already developed a LMI Training program for these purposes. The more recently created FLMM Career Development Services Working Group could play a significant role in advancing the interpretation of LMI for different user groups.

The HRSDC Regional LMI Network plays a role in raising the awareness of LMI. Though an outreach function they work with community partners to do this. However, with diminishing resources over the years this function and its accompanying resources have also diminished. The HRSDC Regional LMI Network could once again play a key role in facilitating a raised awareness, provide training, and access to LMI.

9.7 The Need for Better Delivery of LMI

9.7.1 Single Portal Access

There are a plethora of Internet sites operated by the federal, provincial, and territorial governments, and the private sector that provide LMI to Canadians (a background study on online LMI is available on our website – www.lmi-imt.ca). The federal government alone operates ten different websites including: Labour Market Information; Working in Canada; National Job Futures; CanLearn; Apprenticeship; Work Destinations; Job Bank; Career Handbook; and NOC. HRSDC is currently working on a plan to merge several of these LMI websites in order to improve and enhance the user experience and to better meet the needs of specific groups of users like workers, employers, immigrants, and

students. Although some of these sites are old and some of them are new, many of them are built on different technical platforms. And users need to go from one to the other to get the LMI they seek. But two of these websites – Labour Market Information and Working in Canada – function as portals taking users more or less seamlessly to the other sites based on responses to queries such as occupation and desired location.

The first task users looking for specific LMI must perform is finding their way to the appropriate website containing the sought after information. Usually, unless they had visited the appropriate website before and benchmarked it, they rely on a search engine like Google or Yahoo to find it. This may not be easy as the government websites have not been optimized for search engines and do not usually pay to be sponsored websites with higher rankings. Indeed, there are often sponsored links that show up with higher rankings if users put in many commonly used key words that might be utilized in seeking LMI. So the users may end up having to look at a series of websites to find the government site they are looking for.

It is difficult for students to find LMI because it is dispersed across so many venues. There is no centralized portal, which makes it difficult to find the information.

Polytechnics Canada

Finding inexpensive, relevant and timely LMI has always been an issue. At the provincial and federal levels of government, LMI is scattered across many different websites and is tabulated in ways where making comparisons are generally not easily achievable.

Ontario Local Board Network

And once a federal government LMI site is found it is not necessarily linked to other federal, provincial and territorial government sites with prominent user-friendly links. This can make it difficult for users to find their way around the maze of official government LMI.

The federal government has two websites – Labour Market Information, and Working in Canada – that act as portals. After keying in their occupation and preferred locale, individual users, be they Canadian workers or prospective immigrants, are linked to the appropriate LMI in the other databases such as Job Bank, Work Destinations.org or National Job Futures by an intelligent interface.

Of the two, the Working in Canada website, which is designed for prospective immigrants to Canada, has the slickest and most user-friendly interface. The LMI provided for an immigrant client is supplied in a seamless fashion based on an intelligent front-end (called Web 2.0) and specially designed interfaces in the feeder sites. This allows a user to specify one of 520 NOCs and to search 92 (soon to be 138) geographic areas. The tool also allows for the add-in of third party content provided by occupational associations that are based on supplementary occupational classifications that are most meaningful to those in the field and that are subsumed in existing NOC occupations. A prototype website for all Canadians that is

based on the Working in Canada website was ready in January, 2009. Another unique feature of the Working in Canada website that makes it a desirable model is that it can take on the look and feel of a partner's website. This is an option for provinces, several of which are looking at it, and to sector councils, some of which are also considering it. Ontario has a version that was up and running in January, 2009.

As a first step toward a state-of-the-art portal, the Advisory Panel commissioned an independent feasibility study to examine the Working in Canada (WIC) web tool as a potential starting point and to provide recommendations on how best to move forward. The study concluded that the best option would be build a national LMI web portal with its own database drawing on multiple data sources including those used by WIC.

Other considerations for a state-of-the-art portal include: incorporation of a wealth of information without compromising ease of use, appeal to a wide array of users, flexibility for a variety of uses, inclusion of quick links to hot topics and interactive tools, the challenge of designing a portal that can be maintained in a constantly changing environment (changing technologies, changing data sources, changing needs, changing partnerships, etc.), the need for interjurisdictional partnerships to share data, and adequate financial and technical resources to build and maintain such a site. To view the full report entitled, *Feasibility Report on Developing a State-of-the-Art Labour Market Information Portal for all Canadians Based Upon the Working in Canada Web Tool*, visit the Advisory Panel's web-site www.lmi-imt.ca.

But regardless of exactly how it is done, starting from scratch or building on an existing portal, it should be a priority to establish a state-of-the-art single entry LMI portal with seamless links to the other LMI sites that can work in partnership with provincial and territorial governments, sector councils, education, and the private sector (Fig.9.1). This portal needs to use the latest in smart technology to provide users with the high level of personalization with a sign-on required to provide the user with the exact information required and to keep the user informed of any available information on a real time basis if desired. The portal should also have a users' guide up-front customized for the various different types of user (business, workers, immigrants, students, and educators).

A dynamic Internet portal would be a powerful tool that can help students find the information that they need to make informed career decisions...and to attain their career aspirations and dreams.

Ontario School Counsellors' Association

A centralized access point would be very helpful. Links to categorized data would also be beneficial. Reducing the number of LMI Internet access points would be helpful.

Ontario Local Board Network

Regarding the need for a one-stop shop for LMI on the Internet, I am absolutely in favour of having one. Otherwise, I would never have become involved in Canada workinfontet. However, my experience [with workinfontet] makes me very leary of supporting such a notion again. It takes money and it takes time to build it properly.

Jobmatics

The LMI portal would contain links to all the other FPT websites. The objective would be to try to achieve compatibility, consistency and quality largely through exposure (embarrassment not to be able to keep up with everyone else) and example (competitive pressure) rather than imposing mandatory requirements on existing website providers, especially when they be provinces/territories.

Statistics Canada's website would continue to be the main source of basic data on the labour market. It would also need to be linked to the single LMI portal using an intelligent interface.

There is the issue of who should assume overall responsibility for the development, operation, and ongoing maintenance of the single LMI portal. We strongly believe that since it is to be a tool utilized by all governments in Canada to meet the LMI needs of their clients, and since LMI is a shared jurisdiction, it should be the FLMM. And accordingly it would be appropriate that more detailed operational input and guidance be provided at the operational level by the FLMM Working Group on LMI.

But it must be stressed that the FLMM would require a larger permanent secretariat if it were going to assume responsibility for building and maintaining the single portal. While this would not require a huge staff – 4 or 5 staff in addition to the 2 currently should suffice – it would have to be permanent and would have to be independent of policy processes. By this we mean that the maintenance and updating of the LMI portal could not be timed to when the FLMM meet, influenced by policy direction, and always changing depending upon what province is the co-chair.

For a one-stop-shop portal to work, it is necessary to engage provinces/territories in its development, or it will not get used once established. That is why it is so important that the FLMM have overall responsibility. The process is probably as important as the product.

It will also be necessary to do a needs analysis of the potential users. But this report has already laid much of the groundwork.

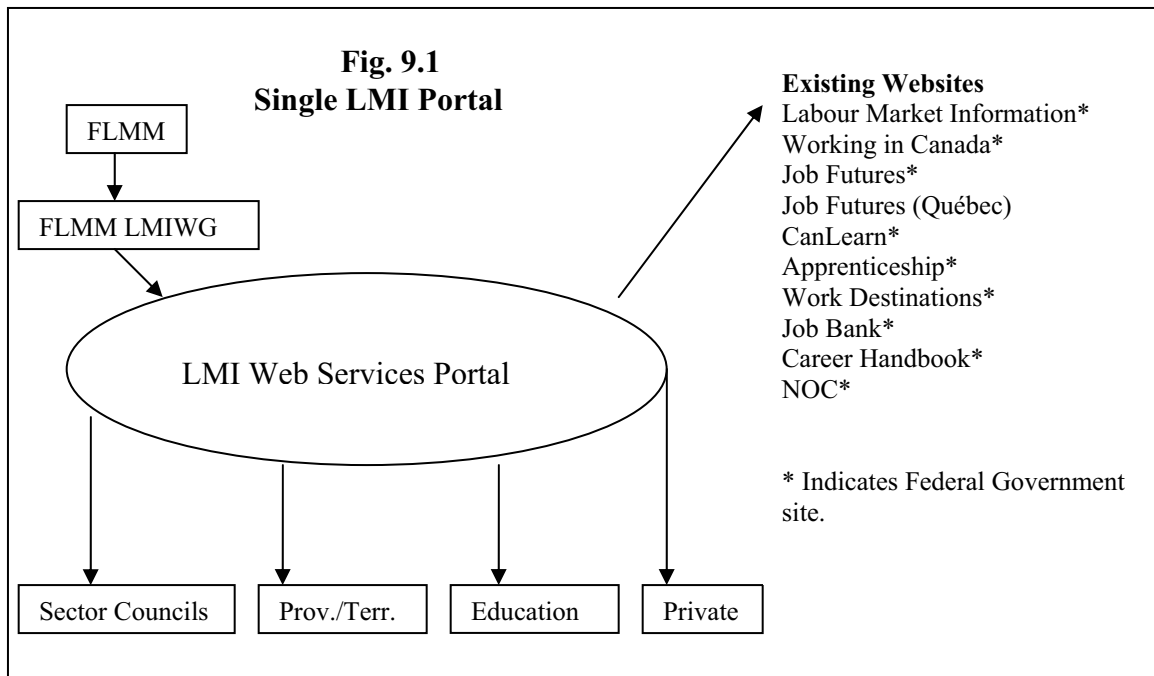
Building and supporting a state-of-the-art LMI portal will cost money. It could run as much as \$21 million, offset by some savings on development on existing websites. The cost of maintaining the portal would be around \$1 million per annum, again offset by some saving on existing sites. The funding estimate provided here should cover the technical modifications and content improvements that will have to be made to the feeder sites (\$7 for modernization of Job Bank and \$9 million for modernization of other HRSDC national LMI foundational systems) to make them compatible with, and improve the quality of, the single portal. It does not, however, cover the modifications to provincial or territorial sites necessary to tap into the portal if desired.

A skeleton in the closet that provides a cautionary tale is workinfont, which was a recent effort to establish a portal. It brought all the players together to develop a single portal that operated like a library directing people to different websites depending on their need. After several years, the funding (from HRSDC) to support this was pulled leaving a bad taste in the mouths of all those who had helped build the site. The lesson we draw from this story is that things will fall apart if funding is not settled at the outset. Any resistance to renewed efforts to establish a single portal caused by this episode will have to be overcome.

Moreover, even if access is established at a national level through the establishment of a single national portal, each province can still move toward single portal access for their provincial LMI. For example, we heard frequently in Québec consultations that there was general satisfaction with the LMI provided by Emploi-Québec. While it would be useful if Québec LMI could feed into the national portal, it would not be desirable to try to replace the Québec LMI system, or indeed that of any other province, with a national one. For one thing, the Québec labour market is distinct and Québecois are less mobile than other Canadians. For another, “if it ain’t broke, don’t fix it.” Each province should be free to establish their own LMI portal(s), hopefully learning from observing best practices of their fellow provinces.

The FLMM could play a facilitation role in this - creating the information/dialogue on such best practices. Where appropriate formulating guidelines (to be helpful rather than interfering with each province's ability to deliver LMI in a way they see best fit to their interests). This clearly requires a governance structure to oversee the development and maintenance of the single national portal.

We have placed considerable emphasis on improving various websites that provide LMI. However, we heard throughout our consultations that users of LMI seek information from a variety of sources. For example, it was pointed out that many young people access information as much through social networking as from formal websites. Therefore LMI providers will need to be sufficiently flexible to ensure that information is tailored to the needs of the various user groups.



9.7.2 LMI Website Enhancements

9.7.2.1 Job Bank

The granddaddy of LMI systems Job Bank, which has been around for a quarter century, began on an old-style mainframe computer before the Internet became popular with the general public. It provided a labour exchange function that allowed employers to post jobs and that was originally available to job seekers in Canada Employment Centres. Following the Government Online Initiative (GOL) in 2000-01, funds were made available for enhancements and training and the service was made available online over the Internet. And subsequently additional services like job match, job alert, career navigator and resume builder were added on to its capabilities. Information on federal government jobs from the Public Service Commission website job.gc.ca were also made available.

The increased functionality was done in a piecemeal fashion on top of the old legacy computer system. There never was a fundamental redesign and rebuilding of the system. The Job Bank thus became an increasingly cumbersome system that does not work as seamlessly as most users would like. And it is incapable of producing analytical reports on jobs posted and job searches that are essential to properly manage the site. But it must be admitted that Job Bank still does get the job done of providing invaluable LMI to job seekers and enabling employers to find workers. It also provides the useful notifications and career development tools.

In the fiscal year ending March 31, 2008, there were 113 million visits to the Job Bank and 1.2 million jobs posted during the year. This sounds like a lot, but it means that at any time there may only be around 45,000 jobs on the system (recently the level has fallen below 30,000). On average a job stays on the system for around two weeks.

Unfortunately, it is impossible to be much more precise than this because of the inadequacy of the Job Bank's statistical tracking package called Web Trends.

An important feature of Job Bank is that, unlike private sector labour exchanges, it is free to employers, which probably encourages a higher proportion of small and medium-sized employers to post jobs than might be found on other labour exchanges. Given Job Bank's current usage and popularity within the Canadian labour market, current usage cost estimates are calculated at approximately 10 cents per user session. For many employers, private sector job sites are expensive. As an example, Workopolis.com charges \$610 per job posting, Job Shark charges \$575 per job posting and Monster.ca charges \$375. These charges represent significant sums of money for small business owners who may not be able to afford these services on a regular basis. Small employers (less than 20 employees) are also more prone to high turnover of staff and they are the ones most in need of free job posting services. They represent over 90 per cent of employers in Canada and are a critical component of job creation.

While it is difficult to make precise comparisons of traffic with the private job matching services, it is worth noting that Workopolis claims that at 1.375 million it has more unique Canadian job searchers than its top 3 competitors combined (698 thousand for Monster.ca, 376 thousand for working.com, and 206 thousand for careerbuilder.com). But this suggests that their job searches are only a small fraction of those on Job Bank.

A longstanding criticism of the Job Bank is that it tends to have mainly entry level jobs in construction and the service industries. But in recent years it has come to include more professional and higher level jobs. The Temporary Foreign Worker Program has tended to encourage use of the Job Bank because it is an easy way for employers applying for an Labour Market Opinion (LMO) to demonstrate that they have advertised for the job in Canada. Nevertheless, the criticism of the basic nature of the jobs on Job Bank still has a certain validity. In addition, there is some suspicion that a significant number of the jobs on Job Bank are posted by agents such as recruiters, temp firms and head hunters and that they may not represent bona fide jobs.

Another problem with the Job Bank is that it is still based on the 2001 NOC. This means that its job classifications are becoming increasingly out of date.

Finally, many employers are not familiar with the Job Bank and do not realize how much traffic the site gets. But they do know that it does not have direct links to their own websites like Workopolis and monster.ca. The availability of such links would make some employers more likely to use the Job Bank.

Responsibility for the Job Bank was transferred to Service Canada in September 2005. An early challenge was responding to the Official Language Commissioner's criticisms about the availability of job postings in French. The problem stemmed from the lack of resources available to translate the postings. It contributed to additional delay in posting jobs that made the labour exchange service less useful. Recently, though, the delay in posting jobs has been reduced to less than 4 or 5 days.

The decentralization of the responsibility for processing job allowed under the LMDA made it more difficult to keep the postings up to date. Several provinces including Québec, Saskatchewan, Alberta and British Columbia have already implemented their own job boards that allow employers to input jobs. These jobs postings are also provided by the province to Service Canada for inclusion in the Job Bank. But there are problems. Québec has a policy that employers should post all jobs on its website Placement en Ligne, but allows them to use free text job descriptions. Saskatchewan also permits free text submissions instead of following the template used by the federal government and other participating provinces. The large volume of postings combined with the requirement of translations has caused the system to choke up and created delays.

The delays have been alleviated for Saskatchewan by posting the job title and summary on Job Bank and permitting the job searcher to click on the title and go to the Saskjob.ca website for the full information on the job in English. For job searchers wanting the information in French, they can click on a button on the site which sends an e-mail requesting a translation, which will be prepared for next day delivery.

The trend towards decentralization in the responsibility for the labour exchange function is a source of some concern. It could lead to a fragmentation of the system. There is currently no link on the Job Bank site to the Québec Government's Placement en Ligne site, which has a more up to date listing of jobs posted in French in Québec.

While it is clear to us that the Job Bank will long remain a basic building block of Canada's system of LMI, it is also evident that much needs to be done to improve it. A major revamping of the whole system is in order to make the system more flexible and to provide the seamless service required by users. Major efforts, including more marketing, are also needed to get a larger proportion of available jobs posted and to bolster Jobbank's presence. Partnerships with provincial and territorial governments and private sector recruiters who maintain their own sites provide one possible way to get more high-end and professional jobs posted.

9.7.2.2 National Job Futures

National Job Futures (NJF), which is produced by HRSDC using COPS, needs to be improved. The biggest problem from our point of view is that it is not kept right up to date. For instance, the occupational demand and other information currently up on the JobFutures.ca website and presented in the publication *Job Futures: World of Work* is based on the 2004 COPS exercise. This was bad enough through mid-2008 when labour markets were tighter than anticipated, but now following the financial crisis in 2008 and the sharp run-up in unemployment, it was even worse. But this, of course, is not entirely HRSDC's fault that the most recent 2008 COPS projection is badly off track as virtually all Canadian economic forecasters did not anticipate the current recession. In periods like the present, where economic prospects change dramatically and forecasts are drastically revised, it may be necessary to redo the COPS exercise more frequently than indicated by the normal annual cycle and then to use it to produce a more realistic NJF. It is also

important that the occupational classification used in NJF be kept up to date. The latest NJF is still based on the 2001 NOC.

A root cause of the NJF's problems is its current support by an outdated database. The present database does not comply with existing government platforms nor the NJF website itself. As a consequence of this non-compliance, the database cannot be modified without an external contract and website updates must be made independently of the database. Our recommended investment to modernize HRSDC national LMI foundational systems would alleviate these issues.

Curiously, there is a second website maintained by HRSDC and populated by Service Canada called Labour Market Information (www.labourmarketinformation.ca) that also provides occupational forecasts disaggregated by province and local area, but they are for an unspecified time horizon, and have one-word descriptors with no supporting analysis or justification. It also provides projections for the year 2015 through a 2006 *Looking Ahead* report available on the HRSDC website. The LMI website, however, does not appear to have the same level of detail as some of the provincial websites. For example, a search for the occupational prospects for “financial auditors and accountants” (NOC 1111) in Alberta produced a five-year demand forecast on the Alberta Labour Market Forecasts website. A search for the same occupation on the LMI website yielded a page stating that “no information is available.”

The relationship between these two Government of Canada websites presenting occupational forecasts is unclear. They seem to provide similar, and in some cases overlapping, information.

9.7.2.3 Working in Canada

The Working in Canada site is an excellent source of information for new immigrants. It won the bronze medal in its category at the GTEC 2008 Distinction Awards for its use of technology to improve government services. And we were very impressed by it in the demonstration we were given. Nevertheless, there is always room for improvement. One feature we would like to see added to the website is information that would show prospective immigrants the proportion of previous immigrants with their occupational qualifications that were able to successfully pursue their occupation in Canada. This would let professionals know that they may not end up actually practicing their profession in Canada, but that they may end up having to settle for alternative employment. While this would not eliminate disappointment, it would at least help give some immigrants more realistic assessments of their employment prospects in Canada.

9.8 The Need for Free Labour Market Data

Canadians should in principle have easy access to the LMI produced by Statistics Canada given that they pay for the collection of the data through their taxes and devote much time and effort responding to Statistics Canada surveys. In addition, once the data are gathered and the data distribution system set up, the marginal cost of data dissemination

is virtually zero. Indeed, it could be argued that the very act of charging for the data has costs of its own that waste resources and time.

In many cases data dissemination is restricted. For instance, due to the pricing strategies of Statistics Canada (special tabulations can be very expensive and redistribution constraints complicate shared cost arrangements) many groups cannot afford to get the data they need.

Toronto Region Research Alliance

It's not just the charge from Statistics Canada for data. It takes 15-20 minutes just to complete the process to be able to download CANSIM series. So in reality, the actual cost to data users far exceeds the revenue Statistics Canada collects.

Canadian Federation of Independent Business

Statistics Canada, after long lagging the United States and most other OECD countries, has been instituting a policy of free data access. Many time series are now available at no charge on the Statistics Canada website. Most Statistics Canada publications are now posted online for free access by the public. Statistics Canada plans to make available to all researchers without charge micro-data file (currently, only university-based researchers enjoyed free access under the Data Liberation Initiative). And it is currently looking at ways to provide more free access to its data through various means.

The final barrier to complete free access to all Statistics Canada time series data (excluding of course special runs or custom tabs where a case can be made that the user should pay the cost) is CANSIM, Statistics Canada's system for providing online data, which remains costly to access.. It was felt that the organization would have difficulty absorbing the loss in gross revenues from CANSIM and other web based or web-advertised products estimated to be around \$4 million⁵, although the actual cost of collecting the revenues may mean that net revenues are somewhat lower. It is unclear what proportion of this amount represents an intergovernmental transfer whereby federal government departments and agencies purchase Statistics Canada data, but it is likely a significant proportion of the total. The net cost to the federal government may therefore be less than \$4 million⁶. And a good deal of the revenue is probably, either directly or indirectly, from provincial and local governments, another kind of intergovernmental transfer, making the loss to the taxpayer even less.

In our view, it is very important that Statistics Canada proceed with its intention of making access to CANSIM free. It is just not acceptable that Canada is the only OECD country that does not make basic labour market data available online. Statistics Canada should be a strong advocate of the view that statistics are a public good and contribute importantly to the health and vibrancy of the body politic. A key message that the agency should articulate is that free and easy access by the public to data is strongly in the public interest. In this vein, the federal government should realize the importance of free data

⁵ This pertains to making all data free on the website, not just LMI.

⁶ This pertains to making all data free on the website, not just LMI.

access and provide Statistics Canada at least part of the resources needed to complete its free data access policy and make CANSIM available at no charge to all Canadians.

9.9 Government Spending on LMI

Although we were unable to obtain a precise overall estimate, it is undeniable that there already is substantial spending on LMI by FPT governments. A large portion of this spending is done by Statistics Canada, which produces most of the basic data used by governments. In the 2008-09 fiscal year, \$45.5 million was budgeted for its labour statistics programs, including the LFS, SEPH, the Census (education and labour components of the 2B Census form, but excluding a \$15 million per year for two years during the period that the Census is collected and processed), the Centre for Tourism, Culture and Education Statistics (education component), Labour and Household surveys analysis, and special labour surveys. Of this, \$1.8 million is not part of its regular budget, but is paid for on a contractual basis by HRSDC. This latter department is the federal government department responsible for LMI. HRSDC's Skills and Labour Market Information Division in the Labour Market Integration Directorate is responsible for: the Essential Skills Research Project, National Occupational Classification, Functional Direction to the Regional LMI Network, functional guidance for Job Bank, two FLMM Working Groups, LMI dissemination (7 websites) and content research (to feed those websites for public and policy decisions), small scale research contracts on LMI, and a program policy function. Its budget as reported in the past two years are: \$4.6 million in 2007-08 (as reported in the 2007-08 Departmental Performance Report); and \$5.6 million in 2008-09 planned spending (as reported in the 2008-09 Reports on Plans and Priorities). Other groups in HRSDC also spend on LMI, but their budgets vary more from year to year. They include groups like COPS, and the Knowledge and Data Management Directorate that purchase data and Strategic Policy, and Policy Research that also provide support for LMI.

Provincial and territorial governments also spend significantly on LMI. Some have provided us with estimates of their spending.

British Columbia reported that previously its Ministry of Advanced Education had an annual LMI budget of \$250,000 and that BC Statistics also spent an unspecified amount on LMI. Also since British Columbia has recently expanded the mandate of the Ministry of Advanced Education explicitly to include Labour Market Development (forming the Ministry of Advanced Education and Labour Market Development), they are working on building BC's LMI System and expect to see significantly more investment in the future.

Saskatchewan reported that its Ministry of Advance Education, Employment and Labour has allocated an estimated \$900,000 to LMI products, services and staff, including the Saskatchewan Labour Market Commission. This does not include LMI-related expenditures in other Ministries.

Québec reported that Emploi-Québec had an annual budget of about \$7.5 million in 2008 for LMI. This includes its spending on: human resources at the national, regional, and

local level; and purchasing data and running national surveys. And that it was spending an additional \$3 million (one-off) for the development of the first two stages of LMI online. It also estimated that about \$10 million has been invested since 2001 in Placement en ligne, the other universal service of Emploi-Québec, of which \$6 million was for original implementation.

Nova Scotia reported that its Department of Labour and Workforce Development spent \$525,000 (including staff, research/analysis, product development and dissemination, etc.) on LMI in 2008. It noted that other Departments/Agencies of the Government of Nova Scotia also fund various labour market related initiatives, which may incorporate LMI and that these LMI expenditures are not included in this estimate.

9.10 Cost and Funding of Proposed Improvements in LMI

By this point, it should be quite evident that additional resources are going to be required to improve LMI. Nothing comes without a price tag. And besides the problem that the level of LMI funding is inadequate to meet all the needs that have been identified, there is an additional problem with the way the funding of labour market data is provided to Statistics Canada. It is that the core funding is insufficient to finance the production and dissemination of the existing range of labour market data and that some of the surveys that supply the required data are funded on a one-off basis by HRSDC. This means that surveys have had to be suspended or discontinued once the funding provided by HRSDC was terminated. For instance, WES has been terminated because of lack of funding and the NGS is in limbo pending the identification of funding. It is an unfortunate fact of life that Statistics Canada does not have the stable basis of funding required to plan the sort of LMI program required to meet the labour market data needs of its customers going forward.

Yet on the other hand, individual sector councils have been getting money from HRSDC for special surveys. It would make more sense to provide this money directly to Statistics Canada for surveys that would benefit all the sector councils.

It is clear that Statistics Canada needs to be provided with core budgetary funding that is sufficient to finance the production and dissemination of the existing range of labour market data and that it will require more funding to pay for the recommended improvements in labour market data identified in this report. And Statistics Canada would have to be compensated for the revenue lost if it were to agree to put its “core” LMI up on CANSIM on its website and allow it to be downloadable for free. But it would not have to be compensated for the work it does to produce “special” data as that would still be fully cost recovered.

The costs of these proposals are summarized in Table 9 under these broad headings: the establishment of an adequately-funded permanent secretariat for the FLMM; the general strengthening of Statistics Canada labour data program; establishing a new vacancy rate survey; establishing a new labour cost survey; retaining and improving the Workplace and Employee Survey; strengthening of the local labour market analysis function at

Service Canada (this function seems to be already well-served in Québec by Emploi-Québec); retaining the National Graduates Survey; secure funding for other education surveys; improving COPS and enhancing its provincial projection capabilities; raising the public awareness of LMI through advertising and outreach; the establishment of a state-of-the-art LMI portal; the modernization of the Job Bank and HRSDC national LMI foundational systems; and making Statistics Canada “core” CANSIM data free. We estimate that an initial cost of \$21 million would be incurred to implement our proposals, and that the ongoing cost would be \$49.4 million per year. Of this additional money, \$41 million would go to Statistics Canada.

9.11 Priorities

There is a danger in providing rankings of priorities. It gives governments and the other stakeholders an easy way to simply ignore recommendations below a certain cut-off. We certainly hope that this will not be the case. We have essentially applied a cut-off ourselves. We have not put forward any recommendations we do not feel are important or could not fairly readily be implemented. New procedures and additional funding would be needed. But these requirements are relatively modest in the scale of governments and compared to the benefits of a better LMI system. In short, we believe all the recommendations can and should be acted upon.

Nevertheless, we have understood the message that priorities should be identified. So with some trepidation we do so.

Our top priority must be to ensure the preservation of what we already have by way of LMI system. And, let there be no doubt that it is under severe pressure. It is threatened by cutbacks at Statistics Canada and HRSDC that have led and may lead to the elimination of critical surveys and valuable programs and services. The two main surveys at issue are the Workplace and Employee Survey and the National Graduates Survey. But others including a whole range of education surveys are also at risk. In addition, the funds allocated to local labour market analysis in Service Canada offices across the country have been continually squeezed, undermining their ability to provide desired services.

In addition, the LMI system could be threatened by the very devolution of responsibilities that is ongoing. It does not need to be that way. We have made the case that provincial governments should be well suited to meet the labour market requirements of their province. But we have also warned that much will be lost if there is not effective national coordination. That is why we believe that having the FLMM step up to the role of catalyst, coordinator and monitor is a top priority. In our view, much else that we call for will fall into place if this is done.

In order to preserve the LMI system we have and to support the policy devolution, a top priority must be to ensure we have good data at the national and provincial level. Some provinces, if they are small, and all territories are justifiably concerned about the reliability of labour market data, particularly the LFS for their province as a whole. This must be

addressed as a top priority. And this should be as an integral part of the national statistical system. It is not right in a federation where the provinces and territories increasingly have the labour market policy responsibilities that they should be charged extra for over-sampling to get the adequate, reliable coverage they need to do their job. In effect, this amounts to a penalty on their relatively small size. Provinces and territories should only be charged for data that goes beyond the requirements of a national statistical system.

And provinces are not the only ones who should not be charged for available publicly funded data. We attach a very high priority on making all the labour market data on CANSIM available free of charge. We believe that this is critical to ensure the greater and more efficient use of LMI by all players.

The priorities discussed so far only cover making sure the existing system continues to function as it should. They do not reflect what we hope to see accomplished to improve LMI. And this was the mandate the FLMM gave us - to advise on how to make a BETTER system. It would thus be irresponsible for us to draw a line at this point and let everything else slide simply because they somehow might be lower priorities. So we must turn to the key questions we were asked: how do we build a better system?

We have provided a lot of suggestions. Obviously, they are not all of sufficiently similar import that they can be placed into a hat for selection. We have recommendations for improving the national system and we have recommendations for small domain data. It does not really make sense to consider one general area a higher priority than another. But we can perhaps offer some suggestions on priorities within each category.

A high priority has to be put on dealing with obvious data gaps. We have already talked about the need to preserve data which have been dropped or are threatened, like the WES and the NGS. This is necessary to prevent new data gaps from emerging. But we need to do much more than this; we need to close existing data gaps. Our suggested priorities can be viewed in blocks. In our first, and highest priority, block would be vacancy rates, gross flows, Aboriginal peoples, immigrants, and educational data. In our second, and lower priority, block would fall the labour price index, layoff data, and working conditions.

And the single highest priority identified by users was better small domain data. We thus think it is absolutely essential that Service Canada/local provincial offices draw on Statistics Canada and their own local intelligence networks to produce and make available the small domain LMI products and services demanded by users. From our point of view, further work on Small Area Estimation by Statistics Canada, though, should be a lower priority.

Another priority should be making more analysis available at the provincial and local level. The COPS system has much to offer in terms of information on occupational demand. It should be a priority for HRSDC to make sure that the information provided to the provinces and other stakeholders is timely and up-to-date and meets their needs.

And finally we regard it to be a very high priority for governments to improve the dissemination and awareness of LMI. Our chief recommendation here is for the establishment of a single portal that provides seamless access to all the available LMI. This means that a greater degree of rationalization, integration and linkage has to be established for what has become to many users a bewildering array of government websites.

9.12 Implementation

In this chapter, we have presented many conclusions flowing out of our review of LMI. Many of these recommendations can be implemented by various LMI agents, such as HRSDC, CIC, Statistics Canada, the provincial and territorial governments, and sector councils, all acting on their own initiatives. We hope they will see wisdom in what we propose and take the initiative on their own without further prodding. But many recommendations will require co-ordination. It is always more likely that individual agents will act when they are part of a cohesive, coordinated movement with a catalyst and champion. The FLMM can play this important role.

We hope FLMM will deliberate on our report and use it to map out where it would like to see the Canadian LMI system go. And we hope that the FLMM will work with the various agents to deal with the LMI issues that arise in their respective domain and to provide the required coordination.

This would be greatly facilitated if the FLMM were to commit itself to prepare an assessment on the first anniversary of receiving our report. This assessment would indicate what they agree with and what the status of change is. If recommendations have not been implemented, they could detail what are the obstacles and how might they be removed.

We see this is an example in action of what we are recommending on governance, namely that the FLMM take the bull by the horns and be front and centre in shaping a better LMI system for the benefit of all Canadians.

Table 9**Estimated Cost of Our Proposals to Improve LMI**

	Initial	Ongoing
Permanent Secretariat for the FLMM		\$1.5 million
10% general increase in Statistics Canada funding for labour data		\$5 million
New Vacancy Survey		\$8 million*
Labour Price Index		\$5 million*
Retain and Improve Workplace and Employee Survey		\$5 million
Strengthening local labour market analysis by Service Canada		\$4.6 million
Retain National Graduate Survey		\$1.5 million
Secure Funding for Other Education Surveys**		\$13.5 million
Improve COPS and enhance its provincial projection capabilities		\$0.3 million
Raising public awareness of LMI		\$1 million
Establishment of an FLMM Portal	\$5 million	\$1 million
Modernization of Job Bank	\$7 million	\$0
Modernization of HRSDC national LMI foundational systems	\$9 million	\$0
Making Statistics Canada Web-site Data Free of Charge		\$3 million***
Total	\$21 million	\$49.4 million

Note: All federal, provincial, and territorial governments will need to increase funding for the proposed improvements to the LMI system. There will also be a need to improve many aspects of provincial and territorial LMI that are not listed but which will require additional provincial and territorial funding.

* Ramped up over 4 years to equal this amount when fully implemented.

** Existing educational surveys include: Programme for International Student Assessment (PISA), Youth in Transition Survey (YITS), Access and Support to Education and Training Survey (ASETS), Postsecondary Student Information System (PSIS), Registered Apprenticeship Information System (RAIS), National Apprenticeship Survey (NAS), and Survey of Earned Doctorates (SED) and Programme for the International Assessment of Adult Competencies (PIAAC).

*** This pertains to making all data free on the website, not just LMI.

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Appendix A: People Consulted

Abbott-Lennox, Lynn	Aztec Software Canada
Abdi, Farhia	City of Ottawa
Afridi, Nafeesa	Skills for Change
Ahmed, Sultan	Human Resources and Skills Development Canada (HRSDC)
Albert, Annette	New Brunswick Community College (NBCC), Saint John
Arboine, Ingrid	JVS Toronto
Archer, Kelly	Human Resources and Skills Development Canada (HRSDC)
Arnone, Mark	Ontario Power Generation
Arsenault, Jean-Francois	Centre for the Study of Living Standards
Arsenault, Sandra	Ontario Network of Employment Skills Training Projects (ONESTEP)
Ayles, James	New Brunswick Department of Health
Azoulay, Audrey	Canadian Federation of Independent Business
Bachiu, Vern	Saskatchewan Labour Market Commission (SLMC)
Baltzer, Clyde	Digby Area Learning Association
Barakat, Nabila	London Public Library
Baril, Guylaine	Ministry of Employment and Social Solidarity of Québec
Baudouin, Robert	University of Moncton
Bear, Janice	A&W Food Services of Canada Ltd
Beatty, Perrin	Canadian Chamber of Commerce
Beaupre, Stephen	Skills for Change
	Saskatchewan Department of Advanced Education, Employment and Labour
Beckman, Lorraine	Workforce Sectoral Committee - Personal Care Services
Bédard, Sylvie	Service Canada
Bélisle, Sylvain	New Brunswick Population Growth Secretariat
Bell, Lindsay	Aboriginal Community Careers Employment Services Society (ACCESS)
	Sheet Metal Workers International Association
Bellerose, Blair	Agence Ometz
Belleville, Terry	Service Canada
Ben Hayoun, Marlene	The Conference Board of Canada
Benaschak, Bart	The Conference Board of Canada
Bernabo, Maureen	Human Resources and Skills Development Canada (HRSDC)
Bernard, Marie-Christine	New Brunswick Community College (NBCC)
Bérubé, Gilles	University of Alberta
Best, Bill	Alberta Ministry of Employment and Immigration
Betke, Carl	Olds College
Bezuko, Barry	Information and Communications Technology Council (ICTC)
Bidart, Patricia	Workforce Sectoral Committee - Social Economy and Community Action
Biernacki-Dusza, Tracy	Ministry of Education, Recreation and Sports of Québec
	Saskatchewan Apprenticeship and Trade Certification Commission (SATCC)
Binhas, Lynda	Ministry of Immigration and Cultural Communities of Québec
Bissonnette, Julie	New Brunswick Department of Post-Secondary Education, Training and Labour
Black, Joe	Federation of Cegeps
Boilard, Diane	
Bouchard, Hélène	
Boucher, Gaëtan	

Boucher, Sylvie	John Abbott College
Bouliane, Christine	Workforce Sectoral Committee - Logging
Bourbonnais, Pierre	Workforce Sectoral Committee - Railways
Bowbly, Geoff	Statistics Canada
Bradbury, Kathleen	Newfoundland and Labrador Employers' Council
Brankrick, Mike	Airdie Chamber of Commerce / Palliser Lumber Sales Ltd
Brauen, Lori	Nexen
Bray, Kevin	Ontario School Counsellors' Association
Briggs, Geri	Human Resources and Skills Development Canada (HRSDC)
Bringloe, Janine	New Brunswick Department of Finance
Brisson, Dan	Boreal College
Brokenshire, Larry	Aecon Group Inc.
Brown, Alan	Petro-Canada
Brown, Geoff	Human Resources and Skills Development Canada (HRSDC)
Brown, Malcolm	Human Resources and Skills Development Canada (HRSDC)
Bruce, Linda	Videoconferencing Coordinator
Bruce, Marion	Centre for Education & Training
Brunette, Micheline	Treasury Board of Canada
Buckle, Amanda	Southern Labrador Development Association
Buckle, Kimberly	Nova Scotia Department of Labour and Workforce Development
Burkett, Gary S.	Federal Express Canada Ltd.
Burnette, Stacey	Manitoba Ministry of Competitiveness, Training and Trade
Burton, Crystal	YMCA-YWCA of Northeast Avalon
Burton, Todd	Protegra
Bushfield, Danna	London Public Library
Button, Brett	Multilingual Orientation Service Association for Immigrant Communities (MOSAIC)
Byers, Barb	Canadian Labour Congress
Capobianco, Antonio	Bantrel Constructors
Cappon, Paul	Canadian Council on Learning
Cardozo, Andrew	The Alliance of Sector Councils (TASC)
Carrier, Charles A.	Association of the Economists of Québec (ASDEQ)
Carrier, Gérard	Ministry of Education, Recreation and Sports of Québec
Carson, Andy	Irving Oil
Carter, Diana	Child Care Human Resources Sector Council
Caseley, Tammy	New Brunswick Population Growth Secretariat
Cauchon, Pierre	Ministry of Economic Development, Innovation and Exporting of Québec
Caul, Brenda	Newfoundland and Labrador Department of Human Resources, Labour and Employment
Chahal, Rita	Manitoba Chamber of Commerce
Charette, Janice	Human Resources and Skills Development Canada (HRSDC)
Charlebois, Diane	Centrale des syndicats du Québec
Charrette, Mario	Ordre des conseillers et conseillères d'orientation et des psychoéducateurs et psychoéducatrices du Québec
Chase, Heather	Enterprise Saint John
Chesney, Veronica	Human Resources and Skills Development Canada (HRSDC)
Cheung, Ansar	SUCCESS
Chisholm, Robert	Canadian Union of Public Employees

Chornobay, Yvonne	Donald A. Wilson Secondary School
Chouinard, Claude	Workforce Sectoral Committee - Highway Transportation
Churchward, Lisa	Protegra
Clarke, Rick	Nova Scotia Federation of Labour
Cochrane, Don	Service Canada
Cocksedge, Maureen	Dubai Women's College
Colasante, Samantha	Engineers Canada
Colpitts, Terry	Human Resources and Skills Development Canada (HRSDC)
Conrad, Alexis	Human Resources and Skills Development Canada (HRSDC)
Cörvers, Frank	Maastricht University
Cossaboom, Heather	Work Safe New Brunswick
Côté, Jenny	Employment Québec
Côté, Nathalie	Workforce Sectoral Committee - Maritime Fisheries
Cottingham, Catherine	Electricity Sector Council
Craig, Kathryn	Fundy Linen Service Inc.
Cranley, Helen	Ontario Ministry of International Trade and Investment
Crews, Joanne	YMCA-YWCA of Northeast Avalon
Crockett, Ted	International Union of Operating Engineers
Cudmore, Don	Tourism Industry Association of Prince Edward Island
Cunningham, Michelle	Employment and Education Centre
Currelly, Madelaine	Community Training and Development Centre
Curzon, Donald	Sheridan Institute of Technology and Advanced Learning
Cyrenne, Lynda	Workforce Sectoral Committee - Textile Québec
Daly, Rob	Human Resources and Skills Development Canada (HRSDC)
Dancy, Evelyn	Economic Development and Corporate Finance
Dea, Christian	Human Resources and Skills Development Canada (HRSDC)
Dee Sproule, Lyne	Human Resources and Skills Development Canada (HRSDC)
Delisle, Denis	Private Colleges Association of Québec
Dempster, Lisa	Labrador Metis Nation
d'Entremont, Carmelle	Nova Scotia Office of Immigration
Deptuck, Ken	Teamsters Canada
DeSilva, Sange	Statistics Canada
Dillon, Patrick	Ontario Provincial Building Trades Council
Dixon, Allison	Human Resources and Skills Development Canada (HRSDC)
Dodier, Dominique	Workforce Sectoral Committee - Environment
Doiron, Martin	Ministry of Education, Recreation and Sports of Québec
Dorn, Tammy	Service Canada
	Ordre des conseillers et conseillères d'orientation et des psychoéducateurs et psychoéducatrices du Québec
Dorval, Marjolaine	Ontario Federation of Labour
Downey, Terry	Literacy Nova Scotia
Downie, Ann Marie	Akwesasne Area Management Board
Doxtator, Dean	Nova Scotia Community College (NSCC)
Drapeau, Sue	Trent University
Drewes, Torben	New Brunswick Department of the Executive Council's Office
Dube, Norma	Federation of Québec Chambers of Commerce
Duchaine, Jean-Guy	Maritime Provinces Higher Education Commission
Duguay, Mireille	Information and Communications Technology Council (ICTC)
Dupuis, Diane	Lethbridge Chamber of Commerce
Dunford, Clint	

Durjan, Jean	Industry Canada
Dybwad, Ted	Saskatchewan Department of Advanced Education, Employment and Labour
Dyck, Shaun	Saskatchewan Labour Market Commission (SLMC)
Edwards, John Hugh	Canadian Labour Congress
Eerkes, Ken	Christian Labour Association of Canada
Egorova, Elena	Agence Ometz
Elliott, Albert	Total E&P Canada
Elliott, Doug	Saskatchewan Trends Monitor
Ellis, Gordon	Department Holland College
Embree, Rick	Humber College
Ennis, Craig	St. John's Board of Trade
Eveline, Marie	Canadian Printing Industries Sector Council
Exell, Oksana	Asia Pacific Gateway Skills Table
Fadden, Richard	Citizenship and Immigration Canada (CIC)
Faille, Martine	Ministry of Immigration and Cultural Communities of Québec
Fanelli, Tony	Bantrel Constructors
Fatica, Natalie	Human Resources and Skills Development Canada (HRSDC)
Fehr Barkman, Deborah	Manitoba Ministry of Competitiveness, Training and Trade
Fention, Paul	Bank of Canada
Fernandes, Alan	Canadian Revenue Agency
Fines, Don	Region of York
Finlay, Karen	New Brunswick Department of Post-Secondary Education, Training and Labour
Finlayson, Margaux	British Columbia Ministry of Advanced Education and Labour Market Development
Finnegan, Greg	Yukon Bureau of Statistics
Firminger, Pat	Alberta Ministry of Employment and Immigration
Fisher, Bob	Correctional Services of Canada
Florkow, Ken	British Columbia Institute of Technology (BCIT)
Flynn, Valerie	YMCA Employment & Enterprise Services
Foote, Carla	Association for New Canadians
Forsey, Rod	Newfoundland and Labrador Department of Finance
Forward, William	Ontario Ministry of International Trade and Investment
Frank, Jim	JGF Economics
Franke, Sandra	Human Resources and Skills Development Canada (HRSDC)
Franklin, Linda	Colleges Ontario
Frappier, Martin	Coalition of Community Organizations for Workforce Development (COCDMO)
Fraser, Dan	New Brunswick Community College (NBCC)
Fullerton, Gordon	Saint Mary's University
Furlan, Daniel	Human Resources Strategies
Gagnon, Louis	Workforce Sectoral Committee - TechnoCompétences
Gagnon, Sandra	Statistics Québec
Gagnon, Sylvie	Workforce Sectoral Committee - TechnoCompétences
Galarneau, Christian	Workforce Sectoral Committee - Doors and Windows, Furniture and Kitchen Cabinets
Galarneau, Nicole	Québec Alliance of Employability Development Organizations
Gambino, Jack	Statistics Canada

Garcia-Orgales, Jorge	United Steelworkers
Gauthier, Patrice	Statistics Québec
Gendron, Christian	Workforce Sectoral Committee - Graphic Communications
	Conference of Rectors and Principals of Québec Universities (CREPUQ)
Girard, Guy	Service Canada
Girard, Sylvie	New Brunswick Department of Post-Secondary Education, Training and Labour
Godfrey, David	Human Resources and Skills Development Canada (HRSDC)
Goodyear, Darren	British Columbia Ministry of Housing and Social Development
Gordon, Laurel	Symcor Inc.
Gorelle, Cindy	Ontario Ministry of Training, Colleges & Universities
Gormley, Ray	Ryerson University
Goss, Allen	Enterprise Greater Moncton
Gougen, Patrick	Progressive Conservative Caucus
Gould, William	Nova Scotia Department of Labour and Workforce Development
Gourley, Stu	New Brunswick
Grace-Scott, Pam	Citizenship and Immigration Canada (CIC)
Grant, Cheryl	Service Canada
Gravel, Marie	Newfoundland and Labrador Oil & Gas Industries Association
Greene, Deirdre	Memorial University
Greenwood, Rob	Human Resources and Skills Development Canada (HRSDC)
Grenier, Mathieu	Construction Sector Council
Grenier, Michel	Human Resources and Skills Development Canada (HRSDC)
Grignon, Louis	Construction Sector Council
Gritziotis, George	First Nations Employment Society
Guerin, Norma	The Alliance of Sector Councils (TASC)
Guilfoyle, Shelley	Chevron
Guillies, Dianna	Service Canada
Haché, Christina	Statistics Canada
Hale, Alison	Human Resources and Skills Development Canada (HRSDC)
Halliwell, Cliff	Association of Atlantic Universities
Halpin, Peter	University of New Brunswick (Saint John)
Hamilton, James	Enterprise Chaleur
Hammond, Donald	Human Resources and Skills Development Canada (HRSDC)
Hamory, Clara	St. Thomas University
Hansen, Garry	Citizenship and Immigration Canada (CIC)
Harder, Sandra	Workforce Development Board
Harrington, Jennifer	Newfoundland and Labrador Department of Education
Harris, Erika	Department of Finance Canada
Hartin, John	Atlantic Provinces Economic Council
Hattie, Chris	Celtic Business Development
Hawkins, Marie	British Columbia Ministry of Advanced Education and Labour Market Development
Hazemi, Leila	Saskatchewan Chamber of Commerce
Heatherington, Holly	Economic Council of New Brunswick (CENB)
Hébert, Anne	Seneca College
Henry, Carol	Workforce Sectoral Committee - Food Processing
Héroux, Marie-France	Nova Scotia Community College (NSCC)
Hill, Mike	

Hilts , Jamie	Nova Scotia Community College (NSCC)
Hodgkinson, Amanda	Council of Ministers of Education (CMEC)
Hogan, Donald	Atlantic Canada Opportunities Agency
Hollett, Alton	Newfoundland and Labrador Department of Finance
Horne, Willard	Aerospace Human Resource Sector Council
Hosein, Judy	Statistics Canada
Howes, Hillary	Construction Association of New Brunswick
	Saskatchewan Federation of Labour and Saskatchewan Labour
Hubich, Larry	Market Commission (SLMC)
Hudson, Margo	Opportunity Place
Hunter, Gord	Saskatchewan Labour Market Commission (SLMC)
Huton, Annette	Human Resources and Skills Development Canada (HRSDC)
Hynes, Hillary	DFB Group
Ileso, Samuel	Service Canada
Jackson, Andrew	Canadian Labour Congress
Jackson, Karen	Human Resources and Skills Development Canada (HRSDC)
Jacobs, Lee	Information and Communications Technology Council (ICTC)
	New Brunswick Department of Post-Secondary Education, Training
James, Byron	and Labour
Jamin, Crit	Esdoorn
Jarvis, Phil	National Life/Work Centre
Jenney, Cote	Employment Québec
Jensen, Cheryl	Mohawk College of Applied Arts and Technology
Jessome, Joan	Nova Scotia Government and General Employees Union
Johnston, Nancy	Prince Edward Island Association of Sector Councils
Johnstone, Patricia	Service Canada
Jones, Mike	Caledonia Senior Secondary, Terrace, British Columbia
Jung, John	Canada's Technology Triangle
Justus, Martha	Citizenship and Immigration Canada (CIC)
Kabar, Rana	COSTI ProConnect
Kamal, Kevin	World Education Services (WES)
Kelly, Nora	New Brunswick
Kelly-Freake, Eileen	Association for New Canadians
Kennedy, Gayle	Northern Ireland Department for Employment and Learning
Kennedy, Sheryl	Bank of Canada
Khoury, George	The Alliance of Sector Councils (TASC)
Kidane, Ambaye	Ontario Ministry of Finance
Kirby, Barbara	Mining Industry Human Resources Council
Kirkpatrick, Aubrey	New Brunswick School District 2
Knight, Cheryl	Petroleum Human Resources Council of Canada
Knubley, John	Privy Council Office
Koslowsky, Ron	Canadian Manufacturers and Exporters
Kothiringer, Ed	COSTI Immigrant Services
Kozachenko, Shayne	Connections Career and Safety Services
Kuta, Jennifer	Blue Topaz Solutions
	Ordre des conseillers et conseillères d'orientation et des
Lacharité, Martine	psychoéducateurs et psychoéducatrices du Québec
LaHaye, Jacques	Ministry of Education, Recreation and Sports of Québec
Lahiri, Partha	Forum of Labour Market Ministers - LMI Secretariat (Newfoundland)

Lajoie, Lynn	Correctional Services of Canada
Lam, Michael	SUCCESS
Lamarche, Sylvie	Workforce Sectoral Committee - Tourism
Lamarre, Andr��e	Career and Job Search Centre of Estrie
Lamarre, Christiane	Statistics Qu��bec
Lamontagne, Francois	Human Resources and Skills Development Canada (HRSDC)
Lamoureux, Jos��	Qu��bec Confederation of National Trade Unions
Lancastle, Keith	Forest Products Sector Council
Landry, Ald��a	Landal Inc.
Lane, Janet	Literacy Alberta
Langlais, Gail	Manitoba
Langlois, Stephanie	Nunavut Bureau of Statistics
Lanteigne, Cindy	New Brunswick Department of Post-Secondary Education, Training and Labour
Lapierre, Patricia	Workforce Sectoral Committee - Retail Trade
Larocque, Yves	Employment Qu��bec
Lavoie, Claude	Department of Finance Canada
Lavoie, Guylaine	Workforce Sectoral Committee - Plastics and Composites
Le Petit, Christel	Statistics Canada
LeBlanc, Genevi��ve	Employment Qu��bec
Leblanc, Jacques	Council of Employers of Qu��bec
LeBlanc, Jean-Paul	City of Ottawa
LeBreton, Helene	New Brunswick Department of Social Development
LeClair, Marc	LeClair Infocom (on behalf of M��tis National Council)
Leclerc, Gaston	Qu��bec Association of School and Career Information
Leen, Jo	KW YMCA
Leesti, Tracy	Statistics Canada
Leighton, Colleen G.	Bank of Canada
Lemaire, L��o	Ministry of Immigration and Cultural Communities of Qu��bec
Lemieux, Richard	Ministry of Education, Recreation and Sports of Qu��bec
LePage, Claire	New Brunswick Department of Energy
Linklater, Les	Citizenship and Immigration Canada (CIC)
Litun, Barry	Lethbridge School District No. 51
Locatelli, Chantal	Ontario Ministry of Education
Lomond, Ted	Newfoundland and Labrador Regional Economic Development Association
London, Susan	JVS Toronto
Lopes, Sandra	Maytree
Louiseize, Hannah	New Brunswick Regional Health Authority - B
Luijjs, Marty Van	Economic Development & Tourism
Lyon, Andrea	Citizenship and Immigration Canada (CIC)
MacAulay, Jeanette	University of Prince Edward Island
MacDermott, Bonnie	FutureWorx Job Search Centre
MacDonald, Margaret	Nova Scotia Department of Labour and Workforce Development
MacDonald, Rod	Human Resources and Skills Development Canada (HRSDC)
MacDougall, Lisa	Nova Scotia Community College (NSCC)
MacKinnon, Birt	Prince Edward Island Department of Innovation and Advanced Learning
MacKinnon, Robert	University of New Brunswick (Saint John)

MacLean, Heather	Prince Edward Island Trucking Human Resource Sector Council
MacLellan, Charlie	Northside Entrepreneurial & Resource Centre
MacNabb, Larry	Statistics Canada
MacNair, Linda	Manitoba Rural Adaptation Council
MacWilliam, Monica	New Brunswick Department of Post-Secondary Education, Training and Labour
Madigan, Sharyl	Warehousemate & Calgary Chamber of Commerce
Madro, Laurel	Bow Valley College
Mailloux, Claude	Workforce Sectoral Committee - Shipping
Mallory, Dennis	Newfoundland and Labrador Business Coalition
Malone, Nancy	Canadian Association of Oilwell Drilling Contractors (CAODC)
Maloney, Sharon E.	Polytechnics Canada
Manning, Bob	Benefits Blueprint
Marchand, Shannon	Alberta Ministry of Employment and Immigration
Marchewa, George	Yukon Department of Economic Development
Marful, Charles K.	Ernst & Young LLP
Mark Hopkins	Human Resources and Skills Development Canada (HRSDC)
Martell, James Douglas	University Presidents' Council of British Columbia
Masterson, John	Canadian Association of Petroleum Producers
Matte, Laurent	Ordre des conseillers et conseillères d'orientation et des psychoéducateurs et psychoéducatrices du Québec
Matteau, Martine	Workforce Sectoral Committee - Ornamental Horticulture (HortiCompétences)
Matthew, Martha	Central Interior Partners in Aboriginal Human Resource Development
Mattioli, Robert	Service Canada
Mavin, Walt	Forum of Labour Market Ministers - Provincial Co-chair (Newfoundland)
May, Doug	Memorial University
Maya, Rattan	Skills for Change
Maynard, Kevin A.	Canadian Supply Chain Sector Council
Mayne, Michael	Prince Edward Island Department of Innovation and Advanced Learning
McClellan-Moody, Cheryl	Service Canada
McKenna-Farrell, Shannon	Maritime Provinces Higher Education Commission
McKinnon, Kerri	Concordia University College of Alberta
McLachlan, Doug	College of the Rockies
McLachlan, Manley	British Columbia Construction Association
Mclellan, Steve	Saskatchewan Chamber of Commerce
McRae, Don	British Columbia Ministry of Labour and Citizens' Services - BC Stats
McRae, Ian	Human Resources and Skills Development Canada (HRSDC)
Mehrer, Elsbeth	Calgary Economic Development
Mercer, Brenda	Health Canada
Merner, Paul	Camosun College, Interurban Campus
Messier, Sonia Del	Cambrian College of Applied Arts and Technology
Metropolit, Jean	Service Canada
Michaud, Sylvie	Statistics Canada
Mihychuk, MaryAnn	Manitoba Mining Association
Mijatovic, Bane	New Brunswick Department of Health
Miller, Donna	Contact Centre Canada
Miller, Louise	Québec Workers Federation

Millington, Janet	Dixie Bloor
Milton, Scott	Yukon Department of Economic Development
Milton-Lomax, Sarah	St Stephen's Employment Resource Centre
Mitter, Vikram	Skills for Change
Mix, Maureen	Vector Aerospace
	Ordre des conseillers et conseillères d'orientation et des psychoéducateurs et psychoéducatrices du Québec
Moisan, Mireille	City of Toronto
Molotkow, Wendy	Louis Bull Tribe
Monterrosa, Sylvia	Louis Bull Tribe
Moonias, Frankie	Louis Bull Tribe
Moonias, Tammy	Council for Automotive Human Resources
Moore, Nancy	New Brunswick Department of Post-Secondary Education, Training and Labour
Moore, Raphael	Halifax Employers Association
Moore, Richard	New Brunswick Department of Post-Secondary Education, Training and Labour
Moore, Terry	Prior Learning Assessment (PLA) Centre
Morrissey, Mary	Ontario Ministry of Training, Colleges & Universities
Mowat, Vicki	Western Pizza
Muhr, Stephanie	New Brunswick Department of Health
Mulholland, Donna	New Brunswick Department of Post-Secondary Education, Training and Labour
Murphy, F. Patrick	Forum of Labour Market Ministers - LMI Secretariat (Newfoundland)
Murphy, Nicole	New Brunswick Department of Finance
Murphy, Stephen	Saint Mary's University
Murphy, Terry	Saskatchewan Labour Market Commission (SLMC)
Murray, Derek	Newfoundland and Labrador Federation of Labour
Murray, Kerry	Prior Learning Assessment (PLA) Centre
Myers, Doug	Canadian Manufacturers and Exporters
Myers, Jayson	New Brunswick Department of Post-Secondary Education, Training and Labour
Nadeau, Gerald	British Columbia Office of the Premier and Cabinet Office
Napen, Deanna	Statistics Canada
Nault, Francois	Life Strategies
Neault, Roberta	Stó:lō Nation Human Resources Development
Ned, Murray	Job Search Centre of Pointe-Claire
Neveu, Daniel	Skills for Change
Newton, Rebecca	Xerox Canada Ltd.
Normand, Martine	YMCA-YWCA of Northeast Avalon
Norton, Suzanne	New Brunswick Chamber of Commerce
O'Driscoll, Paul	Saskatchewan Ministry of Advanced Education, Employment and Labour
Oke, Yetunde	Service Canada
Olney, Alison	Labour Force Adjustment Committee (CAMO) Immigrants
Opula, Lambert	Human Resources and Skills Development Canada (HRSDC)
Orser, George	Dalhousie University
Osberg, Lars	Service Canada
O'Toole, Cheryl	Human Resources and Skills Development Canada (HRSDC)
Ouellet, Sylvain	

Overend, Valerie	Saskatchewan Institute of Applied Science and Technology (SIAST)
Pacella, Marcia	Skills Manitoba
Pageau, Jean	Human Resources and Skills Development Canada (HRSDC)
Palmer, Lynn	Canadian Council of Human Resources Association
Pankratz, Harley	AMEC
Paquette, Éric	Québec Alliance of Young Chambers of Commerce
Paradowski, Cheryl	Canadian Food Industry Council
Pardy, Trina	YMCA-YWCA of Northeast Avalon
Park, Danny	Service Canada
Pauch, Leanne	Manitoba
Paul, Diane	Alberta Ministry of Employment and Immigration
Peapell, Mark	Peapell & Associates/Supertemp
Pearson, Cindy	British Columbia Technology Industry Association
Peeris, Vishni	Northwest Territories Bureau of Statistics
Pelletier, Jacques	Nova Scotia Department of Labour and Workforce Development
Pelletier, Pauline	Community Adult Learning Services
Penney, Kelli	Forum of Labour Market Ministers - LMI Secretariat (Newfoundland)
Penney, Susie	Labrador Metis Nation
Penney, Wayne	Newfoundland and Labrador Department of Human Resources, Labour and Employment
Pépin, Claire	Employment Québec
Peraro, Eric	Health Employers Association of British Columbia
Peters, Barry	Forum of Labour Market Ministers - LMI Secretariat (Human Resources and Skills Development Canada)
Pfeiffer, Susan	University of Toronto
Pisarzowski, Gerry	Greater Toronto Marketing Alliance
Plante, David	Canadian Manufacturers and Exporters
Poirier, Guy	Ontario Ministry of International Trade and Investment
Poirier, Jean-François	Workforce Sectoral Committee - Electrical and Electronics Industry
Pollett, Craig	Municipalities Newfoundland and Labrador
Posyniak, Len	Insurance Corporation of British Columbia (ICBC)
Prefontaine, Jay	Manitoba Ministry of Competitiveness, Training and Trade
Prince-St-Amand, Corrine	Citizenship and Immigration Canada (CIC)
Provencher, Claudine	Saskatchewan Ministry of Advanced Education, Employment and Labour
Rattan, Maya	Skills for Change
Reding, Brendan	Saskatchewan Labour Market Commission (SLMC)
Reinbold, Sandy	Petro-Canada
Ren, Feng	British Columbia Ministry of Advanced Education and Labour Market Development
Renault, Pierre	New Brunswick Department of Post-Secondary Education, Training and Labour
Reoch, Shaneq	Service Canada
Richard, Patricia	Jobboom
Rinehart, Shelly	New Brunswick Department of Energy
Ritchie, Laurell	Canadian Auto Workers
Roberts, Mike	Bruce Power
Robertson, David	Canadian Auto Workers

Rocheleau, Ron	Human Resources and Skills Development Canada (HRSDC)
Rodgers-Sturgeon, Kelly	New Brunswick Department of Post-Secondary Education, Training and Labour
Rogers, Kristina	New Brunswick Aboriginal Peoples Council
Rose, Graham	Department of Finance Canada
Rosseker, Alana	Saskatchewan Department of Advanced Education, Employment and Labour
Rougeau, Allison	Canadian Apprenticeship Forum
Rousseau, Alain	Ministry of Education, Recreation and Sports of Québec
Roy, Denis	Union des producteurs agrocoles
Roy, Marlene	Service Canada
Roy, Normand	Employment Québec
Salmon, Bernadette	Brampton Employment Resource Centre
Samson, Andre	University of Ottawa
Sanford, Shannon	Business New Brunswick
Sangster, Derwyn	Work and Learning Knowledge Centre
Sankey, Barry	Irving Oil
Santos, Iris C.	Immigrant Services Society of British Columbia
Sauvé, Monique	Réseau des carrefours jeunesse-emploi du Québec
Savard, Martin	Ministry of Immigration and Cultural Communities of Québec
Savoie, Edith	Work Safe New Brunswick
Schausberger, Eva	Canadian Tourism Human Resource Council
Scherger, Melinda	Devon Canada
Schetagne, Sylvain	Canadian Labour Congress
Schwann, Pam	Saskatchewan Mining Association
Séguin, Jean	Citizenship and Immigration Canada (CIC)
Selby, Todd	New Brunswick Department of Finance
Semianiw, Walter	Department of National Defense (DND)
Shaver, Alan	Dalhousie University
Sheehan, Humphrey	New Brunswick Population Growth Secretariat
Shepard-Kutcher, Jan	Metropolitan Immigrant Settlement Association (MISA)
Shuttleworth, Beverly	Manitoba Tourism Education Council
Sliter, Melissa	Alberta Ministry of Employment and Immigration
Smith, Jeremy	Ontario Ministry of Training, Colleges & Universities
Smith, Scott	Neo Insight Inc.
Snyder, Paul	Correctional Services of Canada
Southwell, Rustum	Black Business Initiative
Standford, Jim	Canadian Auto Workers
Stark, Allan	Department of Finance Canada
Stark, Wendy	Windsor Essex Development Commission
Stead, Brenda	Service Canada
Stecher, Carolina	Manitoba
Steeves, Jennifer	Canadian Automotive Repair and Service Council
Stephens, Alex	Work and Learning Knowledge Centre
Stephenson, Meghan	Imperial Oil
Stevens, Joy	Capital District Health Authority
Stewart, Melanie	British Columbia Ministry of Advanced Education and Labour
Stiles, Aaron	Market Development
	Business New Brunswick

Stiles, Brandon	First Nations Employment Society
Stirling, Bill	Canadian Manufacturers and Exporters
Stock, Cathy	British Columbia Ministry of Labour and Citizens' Services - BC Stats
Stone, Susan	Possibilities Online Employment Resource Centre
St-Pierre, Danielle	Department of National Defense (DND)
Stuart, Beverlie	Manitoba Sector Training Network (MSTN)
Sturk, Melanie	Mining Industry Human Resources Council
Sullivan, Jean	Canadian Agricultural Human Resource Council
Surette, Mark	Robertson Surette
Sutherland, Allen	Human Resources and Skills Development Canada (HRSDC)
Swedlove, Wendy	Canadian Tourism Human Resource Council
Tait, Evelyn	Alberta Ministry of Employment and Immigration
Tayalan, Varni	Skills for Change
Taylor, Christina	Irving Oil
Tétrault, Aurora	Health Canada
Théberge, Raymond	Council of Ministers of Education (CMEC)
Thomas, Janet	New Brunswick Department of Social Development
Thorngate, Warren	Carleton University
Thrower, Judy	Yukon Department of Education
Timbrell-Muckle, Nancy	Human Resources and Skills Development Canada (HRSDC)
	Newfoundland and Labrador Department of Human Resources Labour and Employment
Toope, Pamela	City of Brandon
Trudel, Sandy	Newfoundland and Labrador Business Coalition
Tucker, Marilyn	Human Resources and Skills Development Canada (HRSDC)
Turcotte, Michel	Vancouver Economic Development Commission
Tylee, John	Québec Confederation of National Trade Unions
Vachon, Sylvie	Nova Scotia School Counsellors Association
Van Snick, Wade	Workforce Sectoral Committee - Agriculture
Varvaressos, Hélène	Ontario School Counsellors' Association
Verhoeve, Marc	Human Resources and Skills Development Canada (HRSDC)
Vermaeten, Frank	Manitoba Chamber of Commerce
Vialoux, Dean	Skills for Change
Vikram, Mitter	Social Research Development Corporation
Vincent, Carole	Grant MacEwan College
Vladicka, Alan	Ministry of Economic Development, Innovation and Exporting of Québec
Voisard, Michel	Newfoundland and Labrador Building and Construction Trades Council
Wade, David	London Economic Development Corp.
Wallace, Jeny	Statistics Canada
Wannell, Ted	Devon Canada
Warreallow, Colleen	Living Sky Solutions (on behalf of Métis National Council)
Watteyne, Wenda	Prince Edward Island Agriculture Sector Council
Weatherbie, Wendy	Dalhousie University
Wein, Fred	Association of Service Providers for Employability and Career Training (ASPECT)
West, Barbara	New Brunswick Association of Career Colleges
Wetmore, Rob	Infrastructure Ontario
Wheeler, Stacey	

White, Lynn	Aboriginal Community Careers Employment Services Society (ACCESS)
Whiteduck, Judy	Economic Development Assembly of First Nations
Williams, Donna	Ontario School Counsellors' Association
Williams, Lois	Service Canada
Williams, Michael	Toronto Region Research Alliance
Williams, Rick	PRAXIS Research & Consulting Inc.
Williams, Sarah	Opportunity Place
Willox, Michael	Economist, Economic Analysis and Forecasting Division
Wilson, Rupert	Alberta Ministry of Employment and Immigration
Witter, Susan	Douglas College
Wolfleg, Adrian	Alberta Native Friendship Centres Association
Wong, Ed	Business Council of British Columbia
Woodward, Shirley	College of North Atlantic Employment Services
Woolcott, Donna	Mount Saint Vincent University
Wright, Sandra	1000 Islands Region Workforce Development Board
Wyrwas, Kathy	New Brunswick Department of Finance
Xei, Wei	Systemway Consulting on behalf of Métis National Council
Young, Fred	Saskatchewan Ministry of Finance
Zentner, Gustavo	Interpoc - International Business
Zert, Laurence	Workforce Sectoral Committee - Food Services
Zielke, Jessi	Industry Training Authority

Appendix B: Groups Consulted

1000 Islands Region Workforce Development Board
A&W Food Services of Canada Ltd
Aboriginal Community Careers Employment Services Society (ACCESS)
Aecon Group Inc.
Aerospace Human Resource Sector Council
Agence Ometz
Airdie Chamber of Commerce / Palliser Lumber Sales Ltd
Akwesasne Area Management Board
Alberta Ministry of Employment and Immigration
Alberta Native Friendship Centres Association
AMEC
Asia Pacific Gateway Skills Table
Association for New Canadians
Association of Atlantic Universities
Association of Service Providers for Employability and Career Training (ASPECT)
Association of the Economists of Québec (ASDEQ)
Atlantic Canada Opportunities Agency
Atlantic Provinces Economic Council
Aztec Software Canada
Bank of Canada
Bantrel Constructors
Benefits Blueprint
Black Business Initiative
Blue Topaz Solutions
Boreal College
Bow Valley College
Brampton Employment Resource Centre
British Columbia Construction Association
British Columbia Institute of Technology (BCIT)
British Columbia Ministry of Labour and Citizens' Services - BC Stats
British Columbia Ministry of Advanced Education and Labour Market Development
British Columbia Ministry of Housing and Social Development
British Columbia Office of the Premier and Cabinet Office
British Columbia Technology Industry Association
Bruce Power
Business Council of British Columbia
Business New Brunswick
Caledonia Senior Secondary, Terrace, British Columbia
Calgary Economic Development
Cambrian College of Applied Arts and Technology
Camosun College, Interurban Campus
Canada's Technology Triangle
Canadian Agricultural Human Resource Council
Canadian Apprenticeship Forum
Canadian Association of Oilwell Drilling Contractors (CAODC)

Canadian Association of Petroleum Producers
 Canadian Auto Workers
 Canadian Automotive Repair and Service Council
 Canadian Chamber of Commerce
 Canadian Council of Human Resources Association
 Canadian Council on Learning
 Canadian Federation of Independent Business
 Canadian Food Industry Council
 Canadian Labour Congress
 Canadian Manufacturers and Exporters
 Canadian Printing Industries Sector Council
 Canadian Revenue Agency
 Canadian Supply Chain Sector Council
 Canadian Tourism Human Resource Council
 Canadian Union of Public Employees
 Capital District Health Authority
 Career and Job Search Centre of Estrie
 Carleton University
 Celtic Business Development
 Central Interior Partners in Aboriginal Human Resource Development
 Centrale des syndicats du Québec
 Centre for Education & Training
 Centre for the Study of Living Standards
 Chevron
 Child Care Human Resources Sector Council
 Christian Labour Association of Canada
 Citizenship and Immigration Canada (CIC)
 City of Brandon
 City of Ottawa
 City of Toronto
 Coalition of Community Organizations for Workforce Development (COCDMO)
 College of North Atlantic Employment Services
 College of the Rockies
 Colleges Ontario
 Community Adult Learning Services
 Community Training and Development Centre
 Concordia University College of Alberta
 Conference of Rectors and Principals of Québec Universities (CREPUQ)
 Connections Career and Safety Services
 Construction Association of New Brunswick
 Construction Sector Council
 Contact Centre Canada
 Correctional Services of Canada
 COSTI Immigrant Services
 COSTI ProConnect
 Council for Automotive Human Resources
 Council of Employers of Québec
 Council of Ministers of Education (CMEC)
 Dalhousie University

Department Holland College
Department of Finance Canada
Department of National Defense (DND)
Devon Canada
DFB Group
Digby Area Learning Association
Dixie Bloor
Donald A. Wilson Secondary School
Douglas College
Dubai Women's College
Economic Council of New Brunswick (CENB)
Economic Development and Corporate Finance
Economic Development and Tourism
Economic Development Assembly of First Nations
Electricity Sector Council
Employment and Education Centre
Employment Québec
Engineers Canada
Enterprise Chaleur
Enterprise Greater Moncton
Enterprise Saint John
Ernst & Young LLP
Esdoorn
Federal Express Canada Ltd.
Federation of Cegeps
Federation of Québec Chambers of Commerce
First Nations Employment Society
Forest Products Sector Council
Forum of Labour Market Ministers - LMI Secretariat (HRSDC / Newfoundland)
Fundy Linen Service Inc.
FutureWorx Job Search Centre
Grant MacEwan College
Greater Toronto Marketing Alliance
Halifax Employers Association
Health Canada
Health Employers Association of British Columbia
Human Resources and Skills Development Canada (HRSDC)
Human Resources Strategies
Humber College
Immigrant Services Society of British Columbia
Imperial Oil
Industry Canada
Industry Training Authority
Information and Communications Technology Council (ICTC)
Infrastructure Ontario
Insurance Corporation of British Columbia (ICBC)
International Union of Operating Engineers
Interpoc - International Business
Irving Oil

JGF Economics
 Job Search Centre of Pointe-Claire
 Jobboom
 John Abbott College
 JVS Toronto
 KW YMCA
 Labour Force Adjustment Committee (CAMO) Immigrants
 Labrador Metis Nation
 Landal Inc.
 LeClair Infocom (on behalf of Métis National Council)
 Lethbridge Chamber of Commerce
 Lethbridge School District No. 51
 Life Strategies
 Literacy Alberta
 Literacy Nova Scotia
 Living Sky Solutions (on behalf of Métis National Council)
 London Economic Development Corp.
 London Public Library
 Louis Bull Tribe
 Maastricht University
 Manitoba Chamber of Commerce
 Manitoba Mining Association
 Manitoba Ministry of Competitiveness, Training and Trade
 Manitoba Rural Adaptation Council
 Manitoba Sector Training Network (MSTN)
 Manitoba Tourism Education Council
 Maritime Provinces Higher Education Commission
 Maytree
 Memorial University
 Metropolitan Immigrant Settlement Association (MISA)
 Mining Industry Human Resources Council
 Ministry of Economic Development, Innovation and Exporting of Québec
 Ministry of Education, Recreation and Sports of Québec
 Ministry of Employment and Social Solidarity of Québec
 Ministry of Immigration and Cultural Communities of Québec
 Mohawk College of Applied Arts and Technology
 Mount Saint Vincent University
 Multilingual Orientation Service Association for Immigrant Communities (MOSAIC)
 Municipalities Newfoundland and Labrador
 National Life/Work Centre
 Neo Insight Inc.
 New Brunswick Aboriginal Peoples Council
 New Brunswick Association of Career Colleges
 New Brunswick Chamber of Commerce
 New Brunswick Community College (NBCC)
 New Brunswick Department of Energy
 New Brunswick Department of Finance
 New Brunswick Department of Health
 New Brunswick Department of Post-Secondary Education, Training and Labour

New Brunswick Department of Social Development
 New Brunswick Department of the Executive Council's Office
 New Brunswick Population Growth Secretariat
 New Brunswick Regional Health Authority - B
 New Brunswick School District 2
 Newfoundland and Labrador Building and Construction Trades Council
 Newfoundland and Labrador Business Coalition
 Newfoundland and Labrador Department of Education
 Newfoundland and Labrador Department of Finance
 Newfoundland and Labrador Department of Human Resources, Labour and Employment
 Newfoundland and Labrador Employers' Council
 Newfoundland and Labrador Federation of Labour
 Newfoundland and Labrador Oil & Gas Industries Association
 Newfoundland and Labrador Regional Economic Development Association
 Nexen
 Northern Ireland Department for Employment and Learning
 Northside Entrepreneurial & Resource Centre
 Northwest Territories Bureau of Statistics
 Nova Scotia Community College
 Nova Scotia Department of Labour and Workforce Development
 Nova Scotia Federation of Labour
 Nova Scotia Government and General Employees Union
 Nova Scotia Office of Immigration
 Nova Scotia School Counsellors Association
 Nunavut Bureau of Statistics
 Olds College
 Ontario Federation of Labour
 Ontario Ministry of Education
 Ontario Ministry of Finance
 Ontario Ministry of International Trade and Investment
 Ontario Ministry of Training, Colleges & Universities
 Ontario Network of Employment Skills Training Projects (ONESTEP)
 Ontario Power Generation
 Ontario Provincial Building Trades Council
 Ontario School Counsellors' Association
 Opportunity Place
 Ordre des conseillers et conseillères d'orientation et des psychoéducateurs et psychoéducatrices du Québec
 Peapell & Associates/Supertemp
 Petro-Canada
 Petroleum Human Resources Council of Canada
 Polytechnics Canada
 Possibilities Online Employment Resource Centre
 PRAXIS Research & Consulting Inc.
 Prince Edward Island Agriculture Sector Council
 Prince Edward Island Association of Sector Councils
 Prince Edward Island Department of Innovation and Advanced Learning
 Prince Edward Island Trucking Human Resource Sector Council
 Prior Learning Assessment (PLA) Centre

Private Colleges Association of Québec
 Privy Council Office
 Progressive Conservative Caucus
 Protegra
 Québec Alliance of Employability Development Organizations
 Québec Alliance of Young Chambers of Commerce
 Québec Association of School and Career Information
 Québec Confederation of National Trade Unions
 Québec Workers Federation
 Region of York
 Réseau des carrefours jeunesse-emploi du Québec
 Robertson Surette
 Ryerson University
 Saint Mary's University
 Saskatchewan Apprenticeship and Trade Certification Commission (SATCC)
 Saskatchewan Chamber of Commerce
 Saskatchewan Federation of Labour
 Saskatchewan Institute of Applied Science and Technology (SIAST)
 Saskatchewan Labour Market Commission (SLMC)
 Saskatchewan Mining Association
 Saskatchewan Ministry of Advanced Education, Employment and Labour
 Saskatchewan Ministry of Finance
 Saskatchewan Trends Monitor
 Seneca College
 Service Canada
 Sheet Metal Workers International Association
 Sheridan Institute of Technology and Advanced Learning
 Skills for Change
 Skills Manitoba
 Social Research Development Corporation
 Southern Labrador Development Association
 St Stephen's Employment Resource Centre
 St. John's Board of Trade
 St. Thomas University
 Statistics Canada
 Stó:lō Nation Human Resources Development
 SUCCESS
 Symcor Inc.
 Systemway Consulting on behalf of Métis National Council
 Teamsters Canada
 The Alliance of Sector Councils (TASC)
 The Conference Board of Canada
 Toronto Region Research Alliance
 Total E&P Canada
 Tourism Industry Association of Prince Edward Island
 Treasury Board of Canada
 Trent University
 Union des producteurs agrocoles
 United Steelworkers

University of Alberta
 University of Moncton
 University of New Brunswick (Saint John)
 University of Ottawa
 University of Prince Edward Island
 University of Toronto
 University Presidents' Council of British Columbia
 Vancouver Economic Development Commission
 Vector Aerospace
 Warehousemate & Calgary Chamber of Commerce
 Western Pizza
 Windsor Essex Development Commission
 Work and Learning Knowledge Centre
 Work Safe New Brunswick
 Workforce Development Board
 Workforce Sectoral Committee - Agriculture
 Workforce Sectoral Committee - Doors and Windows, Furniture and Kitchen Cabinets
 Workforce Sectoral Committee - Electrical and Electronics Industry
 Workforce Sectoral Committee - Environment
 Workforce Sectoral Committee - Food Processing
 Workforce Sectoral Committee - Food Services
 Workforce Sectoral Committee - Graphic Communications
 Workforce Sectoral Committee - Highway Transportation
 Workforce Sectoral Committee - Logging
 Workforce Sectoral Committee - Maritime Fisheries
 Workforce Sectoral Committee - Ornamental Horticulture
 Workforce Sectoral Committee - Personal Care Services
 Workforce Sectoral Committee - Plastics and Composites
 Workforce Sectoral Committee - Railways
 Workforce Sectoral Committee - Retail Trade
 Workforce Sectoral Committee - Shipping
 Workforce Sectoral Committee - Social Economy and Community Action
 Workforce Sectoral Committee - TechnoCompétences
 Workforce Sectoral Committee - Textile Québec
 Workforce Sectoral Committee - Tourism
 World Education Services (WES)
 Xerox Canada Ltd.
 YMCA Employment & Enterprise Services
 YMCA-YWCA of Northeast Avalon
 Yukon Bureau of Statistics
 Yukon Department of Economic Development
 Yukon Department of Education

Appendix C: Available Background Papers

An Overview of Online LMI

Guide To Labour Market Information

The LMI Needs of Different Constituents

Note: These background papers are available on our website (www.lmi-imt.ca)