



## Case Study **September 2005**

# The Labour Market Information (LMI) Program Acting on Human Resource Information to Build and Maintain Capacity in the Canadian Construction Sector

This case study looks at the impact and benefits that the Construction Sector Council's (CSC's) Labour Market Information (LMI) program is having on construction companies and the buyers of construction services in Canada. It explores how the LMI program affects the capacity of organizations to maximize their human resource potential, adjust project schedules and make critical business decisions. It also considers the keys to success of the CSC LMI program and offers insights as to how this model might be replicated or adapted by other Sector Council programs.

**T**he Canadian construction industry is a massive, multi-billion dollar industry made up of more than 260,000 contractors. Employing one out of every 20 Canadians and representing almost 12 per cent of Canada's gross domestic product (GDP), the industry includes new home building and renovation,

and industrial, institutional, commercial and civil engineering.<sup>1</sup> The construction sector provides the necessary infrastructure for other industries in Canada to function and remain competitive.<sup>2</sup> For example, consider the importance to Canada's economy of its:

- extensive road and rail networks linking cities and regions and provinces;
- large oil and gas extraction and manufacturing industries, refineries, and pipelines;
- electric power generation facilities;
- skyscrapers that house the country's financial institutions; and
- busy and vibrant ports on the east and west coasts.

The main challenges facing the construction industry (which includes both residential and non-residential construction) include:

- the cyclical (boom-and-bust) nature of the sector, which makes it vulnerable to a high volume of labour turnover;
- an aging workforce and a resulting skills shortage;
- the difficulty of attracting youth to careers in the construction trades;
- barriers to labour mobility; and
- training of workers to effectively assume supervisory roles.

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**The CSC is committed to developing a skilled and knowledgeable construction workforce in Canada.**

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Established in 2001, the Construction Sector Council (CSC) is a national not-for-profit organization committed to developing a skilled and knowledgeable construction workforce—one that will support the current and future needs of the construction industry in Canada.<sup>3</sup> Financed by both government and industry, the CSC is a true partnership between labour and business. It has been able to develop a number of pan-Canadian programs in collaboration with the construction industry to forecast labour demand and supply, increase the mobility of workers, make the most of new technologies and cope with an aging workforce.

This case study looks at the Construction Sector Council's Labour Market Information (LMI) program and the role it plays in cushioning the cyclical nature of the construction industry and in helping construction companies and the buyers of construction make informed business decisions. The study has two objectives:

1. To identify the economic impacts that the CSC LMI program has on construction companies and the buyers of construction.
2. To identify the keys to success of the CSC LMI program and offer insights as to how this labour market model might be replicated or adapted by other Sector Council programs.

Qualitative and quantitative data used in this study were gathered using a number of research techniques, including a review of Sector Council, government and

environmental literature; and a series of in-depth interviews and conversations with nine individuals, including employers, consultants, labour representatives and CSC staff.<sup>4</sup>

## **THE CONSTRUCTION INDUSTRY— A UNIQUE EMPLOYER**

As a major employer, the Canadian construction industry has some unique characteristics, as noted in the CSC pamphlet *The Construction Industry: A Large Workforce, A Lot of Questions*. In most industries, employers hire workers to meet their business cycle demands, usually on a long-term basis. In the construction industry, on the other hand, work is always temporary, sometimes lasting a day, a month, or even a couple of years. Employers therefore are continuously in a hiring mode, particularly during upswings, but even when the economy is in a downswing. Furthermore, although there are numerous construction companies that employ a core workforce on essentially a full-time basis, for the majority of workers the hours worked by a certain trade at a certain date may not add up to a full-time job on a yearly basis. For example, a 500-hour construction job could be three month's work for one person or a week's work for 12 people.

This somewhat idiosyncratic relationship between workers and employers makes answering even the most basic labour market questions an often puzzling and, at times, challenging task.<sup>5</sup> Such questions include:

- What skills are needed to complete a construction job?
- How many workers are needed?
- Where are skilled workers to be found?
- When should a construction project start?
- What other construction projects are underway that might impact the availability of skilled labour?

### **The Labour Market**

The term "labour market" is used to refer to the interactions between those in need of labour (employers and buyers) and those who can supply labour (employees and sellers). The labour market is in a constant state of change as it responds to the needs of employers, who in turn respond to influences in the wider environment (e.g., the closure or opening of an oil refinery).<sup>1</sup>

1 Cambridge Training and Development Ltd., *LMI Matters! Understanding Labour Market Information* (Nottingham: The Department for Education and Skills, 2004), p. 5.

## Construction Sector Council

The Construction Sector Council (CSC) works to identify human resource challenges in the construction industry and find the most effective solutions and approaches. The CSC works in four primary areas:<sup>1</sup>

*Labour Market Information*—making key labour market information available to employers in order to help deal with skills shortages, production cycles, and the aging workforce. Using both regional and industry-based data, the LMI program provides the construction industry, government and others with timely information and analysis by forecasting labour force requirements, assessing and developing training needs, and anticipating the movement of workers across provinces.

*Technology at Work*—using new technologies to help train students, new hires and the current workforce in high-demand trades, and to help improve worker mobility. Three technology-based programs currently underway or in development include: a computer-based safety training program for pipeline construction; an e-learning Gold Seal National Certification Program on communications, negotiation and conflict resolution; project management; and construction law for construction managers, superintendents and estimators.

*Career Awareness Programs*—improving the image of the construction industry and encouraging young people to consider a career in construction. CSC career awareness programs currently underway or under development include: a boilermaker career awareness campaign; an ironworker Aboriginal awareness project; and a construction careers information portal.

*Standards and Skills Development*—ensuring that there is an ongoing and adequate supply of highly skilled workers for the construction industry through skills upgrading programs. CSC standards and skills development programs currently underway or under development include: operating engineers national occupational standards; certification and accreditation for home inspectors and building officials; essential skills; and an impact study on carpenters' standards.

1 For more information on the CSC and the programs that it offers, visit [www.csc-ca.org/english/whatwedo.html](http://www.csc-ca.org/english/whatwedo.html).

Labour market information (LMI) can be tailored to answer these questions and others. It is a decision-making tool that meets the needs of many stakeholders, including employers, buyers of construction services, vocational studies graduates, labour groups, health and safety organizations and all levels of government.<sup>6</sup> LMI, in fact, is increasingly being used by employers and buyers of construction services to guide personnel policies, collective bargaining strategies, the timing and size of investment decisions, and training and retraining policies. LMI is also of use to those individuals—be they students or currently employed individuals—considering a career in the construction industry.

When the Construction Sector Council set out to develop an LMI program in 2002, it had to meet the needs of an exceptionally diverse industry located in different provincial and territorial jurisdictions. The

construction industry includes organized, unorganized and open shop companies, 51 employer associations, 576 labour organizations, and more than 260,000 construction firms (90 per cent of residential firms and 70 per cent of non-residential firms have five employees or less).

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**The LMI program provides the construction industry, government and others with timely information and analysis about labour force requirements, training needs, and the movement of workers.**

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The CSC took a collaborative approach to its LMI program and spent a considerable amount of time in bringing the key stakeholders together to develop a “ground-up” labour market information forecasting capability for the construction industry. After three years of development, the CSC has published its first annual construction labour supply and demand forecast. The Council continues to expand, refine and improve this decision-making tool with the industry’s help.

## VALUING LABOUR MARKET INFORMATION

A useful labour market information system—one that is rigorous, accurate and representative of the industry—is nothing short of a business lifeline to many companies. By taking labour market statistics and other relevant facts and information and converting them into answers to questions about the construction industry’s future labour needs, LMI can provide businesses with critical information needed to assess the state of the labour market.<sup>7</sup> In particular, LMI:

- assists companies in identifying and evaluating business opportunities and helps minimize business risks by providing timely information and regular updates for key human resource indicators;
- helps companies make sound budgetary and planning decisions based on detailed labour market insights;
- allows stakeholders to respond quickly to, and overcome, short-term human resource challenges; and
- offers businesses and governments the medium- and longer-term information they need to make program and policy changes in order to rectify issues before they occur (e.g., labour market shortages).<sup>8</sup>

The CSC LMI program helps construction companies and buyers of construction anticipate labour demand levels, ascertain how easily the labour supply will

adjust to that demand, approximate how tight labour market conditions are likely to be, and implement strategies to address identified shortages. These measures are of paramount importance when:

- construction companies are bidding on additional work; and
- buyers of construction services are working on their business plans and deciding on the time schedule of a potential major new project.

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LMI also assists the country's various public and private agencies that train construction workers (such as Alberta's Apprenticeship and Industry Training System) and that determine training needs, learning resource requirements, and the most effective way to utilize these resources (e.g., where and when to offer training programs).

## **EFFECTIVE LMI PROGRAMS**

While there is increasing recognition of the importance and impact of LMI as a basis for business decision-making practices and policy formulation, it is imperative that LMI programs be diligent in the ways they collect, capture and coordinate data, and prudent in the ways they analyze, assess and disseminate information. Some of the major obstacles or stumbling blocks that preclude LMI programs from being as effective and meaningful as they could be include:<sup>9</sup>

- a limited capacity and instruments to gather, process, analyze and distribute relevant and reliable LMI in an effective, regular and timely manner;
- an inability to combine labour market information from various sources;
- the inability of LMI producers to coordinate efforts or share information effectively;
- the inability of users to specify needs and translate these needs to LMI producers;
- the lack of a culture of information use and lack of a clear mandate on who should do what; and finally
- a lack of assessment on the relevance and usefulness of labour market information to various users.

The Construction Sector Council's LMI program receives top marks in its initiatives and efforts to avoid these major pitfalls. By communicating and collaborating with construction companies and buyers of construction, governments and regional and provincial labour market information groups from across Canada; and by using the latest technology and Internet-based applications in order to make the gathering, analysis and sharing of labour market information a seamless, confidential and straightforward process, the CSC has developed an LMI program that has garnered the attention, respect and notice of the construction industry and government.

One company interviewed for this study noted that the CSC, as a neutral, independent organization with a well-grounded knowledge and interest in the construction industry, is one of the only organizations in Canada capable of achieving a pan-Canadian construction LMI system. The CSC LMI program houses information gathered from a range of sources in a single, central location for easy access and quick updating. In this way, it can ensure that construction industry stakeholders have access to the latest information, and that the data are consistent from region to region, and from one province or territory to another.<sup>10</sup>

## **THE CSC LMI PROGRAM**

The LMI program is the cornerstone of the Construction Sector Council's activities and is a key driver of all of the CSC's future work because it:<sup>11</sup>

- provides the industry with information and tools to assist in human resource decision-making;
- assists government in policy-making; and
- supports career awareness and selection.

The strength of the CSC LMI program lies in the fact that it strives to be inclusive, practical and purposeful. The program includes both the supply and demand sides of the labour equation in its analysis of Canada's construction industry. In this way, the program can significantly enhance the way companies schedule projects, make project decisions based on an assessment of labour-supply risk, identify sources of labour from across the country, facilitate worker mobility, identify training requirements, and influence the way supply-side solutions (e.g., apprenticeship training programs) are developed and implemented.<sup>12</sup>

### THREE MAJOR LMI COMPONENTS

There are three major components to the CSC LMI program—all of them considered to be keys to success, and essential to the LMI program's effectiveness and long-term sustainability. They are:

- establishing a collaborative approach to LMI through the formation of the National Owners' Forum, LMI Regional Networks, and industry focus groups;
- building an accurate and timely profile of the labour supply within the construction industry; and
- constructing an easy-to-use and relevant workforce demand forecasting tool based on knowledge of major construction projects in Canada.

On its own, each initiative offers the construction industry and its companies valued insights and opportunities. However, together they offer construction industry stakeholders an opportunity to become engaged and empowered users of supply- and demand-side labour market information. Intertwined throughout all three stages of the LMI program is the need for CSC to continually promote the value of its labour market information and to get more organizations and governments involved in the program (e.g., as providers of information, users of the data analysis).

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**The CSC must continually promote the value of its labour market information.**

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#### ESTABLISHING A COLLABORATIVE APPROACH TO LMI

One of the main goals of the CSC LMI program is to connect with as many sources of information as possible. For example, the greater the number of construction projects entered into the CSC LMI system—with project start and end dates, and estimated number of workers required—the more accurate and valuable the LMI forecasts will be. To this end, the CSC LMI program is creating, soliciting and refining information from as many different regions, sectors and stakeholder groups as possible.<sup>13</sup>

To expedite this engagement process, the CSC has established three working groups that help bring construction, government and other stakeholders into the CSC LMI fold.

#### The National Owners' Forum

The National Owners' Forum (NOF) brings together buyers of construction from different segments of the construction industry, including utilities, public and private partnerships, resources, oil and gas, commercial, residential, transportation and industrial.<sup>14</sup> The NOF engages construction owners in the development and use of LMI as a tool to facilitate human resource and project planning, and is one of the primary catalysts through which meaningful collaborations and sharing of information takes place.

The NOF gives those companies interested in construction LMI a venue to:<sup>15</sup>

- identify and discuss their priority human resources issues;
- receive and share labour market information;
- recommend initiatives that the CSC LMI program might undertake to address a particular human resource issue; and
- provide advice and guidance to the CSC.

As well, the NOF offers the CSC a continuum through which the broader owner community can be engaged in the LMI system. Owners who are a part of the NOF are asked to champion the LMI program, assist the CSC in gaining broader owner buy-in into the LMI system, and increase owner awareness of the Sector Council's activities. (See the accompanying text box, earlier in this report, for a brief description of some of the major CSC initiatives.)

#### LMI Regional Networks

The CSC has established LMI Regional Networks across the country to ensure that its forecasts reflect regional realities.<sup>16</sup> These networks work with the CSC to develop and validate labour market information within their jurisdictions by providing local intelligence on labour market issues; collecting regional LMI data, large project costs and labour requirements; and validating the Sector Council's LMI program outputs.

There are seven CSC LMI Regional Networks, one in each of the following: British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec and the Atlantic region. With representation from nearly 100 businesses; construction, trades, owners' and labour associations; federal and provincial government departments; community colleges; and training centres across the country,

these networks help keep the CSC on top of regional and local labour market activities, initiatives and challenges. Appendix 1, at the end of this report, lists the seven networks and their participating organizations. It is an impressive group, and one that speaks volumes about the importance that these organizations place on the CSC LMI project and the value that it offers them.

### Industry Focus Groups

Recognizing the importance and value of having regional input into the pan-Canadian LMI program, the CSC hosted a series of industry focus groups across the country to define industry supply-side information requirements by province and region.

The CSC also used these focus groups to introduce its LMI program plans to different regions of the country, to consult with industry on its design, and to get buy-in and support for the program. Each of the focus groups was planned in cooperation with local construction industry partners, such as industry associations and labour organizations.

In total, more than 100 different construction industry partners, including owners, contractors, labour groups and government representatives from all provinces and sectors of the industry, have worked with the CSC on its LMI program—each bringing its own unique and relevant information to the table. The CSC Labour Co-Chair and Director of Canadian Affairs for the Building and Construction Trades Department of the AFL-CIO notes that “bringing together such a large network of stakeholders and key information like major projects, workers’ age demographics and available training is a groundbreaking initiative for the construction industry.”<sup>17</sup>

### BUILDING A PROFILE OF THE CONSTRUCTION INDUSTRY’S LABOUR SUPPLY

Over the past three years, the Construction Sector Council has commissioned a number of research projects to better understand the supply of labour available in the construction industry.<sup>18</sup> The findings from these reports, along with data from existing sources, have helped the Sector Council build a framework that provides labour supply information to interested stakeholders on an ongoing basis. Key elements of the framework include:

- *Labour Force Profiles* for up to 30 occupations, including trades, managers and related groups, by province or territory. These will provide information

on age, education, occupation, mobility, training, income, immigrant status, gender, labour force activity and other relevant categories.

- *Labour Mobility Profiles* to better understand worker migration patterns, within Canada, the United States and other countries. These will identify potential local labour market barriers to internal and external migration.

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### CONSTRUCTING A WORKFORCE-DEMAND FORECASTING TOOL

The CSC has been instrumental in overseeing the development and launch of a forecasting tool to help predict labour market trends and requirements for the Canadian construction industry. By doing so, the CSC continues to help the construction industry guide its human resource planning and policy development activities, its training curricula and its career planning initiatives. According to the CSC Business Co-Chair and President of John Flood and Sons Ltd.—a commercial, industrial, institutional and residential construction company in St. John, New Brunswick—“this industry has long needed a sophisticated economic forecasting tool like this to help us with the why, where and when of on-time, on-budget project planning. These projections are an excellent starting point for analysis that can be refined with updated information—a new sharp tool for the risk management tool box.”

The national summary forecast, *Construction Looking Forward*, was released on June 21, 2005, followed by the launch of provincial construction labour market forecasts.<sup>19</sup> In less than a month, the CSC received approximately 650 requests for reports, and initial feedback from government and industry has been positive—with a clear message that the first iteration of the forecasting tool is providing useful insights. Even before the reports were released, requests to use the labour market information for planning purposes were made by Citizenship and Immigration Canada, the Vancouver Organizing Committee for the 2010 Olympics, Manitoba Floodway and Manitoba Hydro.<sup>20</sup>

Not surprisingly, the forecast shows a growing need for a workforce that can move between industries and provinces to match demand for skilled trades workers as the economic environment in different regions of the country accelerates or cools down. For example, over the long term, Ontario and British Columbia are expected to have the strongest growth in Canada—with a recovery of the manufacturing sector driving growth in Ontario, and the 2010 Olympics assisting British Columbia achieve higher growth rates than it might have experienced otherwise. In the medium term, on the other hand, Alberta is expected to register the strongest growth rates on account of the oil sands investments.<sup>21</sup> The box “Construction Looking Forward: 2005 to 2013” lists some of the findings found in the report.

### DEVELOPING LMI BASED ON MAJOR CONSTRUCTION PROJECTS

Major construction projects of \$100 million or more, such as new developments in the oil sands or the Vancouver Olympics, often require the services of a large number of construction workers within a specific jurisdiction. Although of great value for a regional economy, these major projects can wreak havoc on regional labour markets. Additionally, current economic models tend to have difficulties in predicting the occurrence of major projects, the timing of their construction expenditures and their employment impacts.<sup>22</sup>

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The CSC, in collaboration with the Construction Owners Association of Alberta (COAA), has implemented a pilot project to collect information on major construction projects. The Major Projects initiative is intended to facilitate greater owner involvement in the LMI process and improve the reliability of major project information. The CSC is also looking at establishing a second pilot initiative on major projects in Ontario, and is about to promote it through the province’s five regional committees. It is anticipated that the majority of companies involved in major construction projects in both provinces will participate in the pilots.<sup>23</sup>

### Construction Looking Forward: 2005 to 2013<sup>1</sup>

The CSC labour market forecasting model report, *Construction Looking Forward*, highlights the construction labour requirements for Canada and the provinces and territories for the next eight years. The report creates scenarios of construction activity from 2005 to 2013 for 38 trades and occupations in all the provinces and territories, and is complemented by 10 companion provincial studies.

*Construction Looking Forward* focuses its attention on a number of key indicators of provincial and territorial economic conditions, including: construction activity by province and sector; labour requirements by trade and occupation; the availability of workers by trade and occupation; opportunities for market adjustments; implications for training and certification systems; and market rankings and implications for human resources management.

The forecasting model will help meet the labour requirements of the industry, and will be updated on a regular basis to adjust for changes in the economic environment of the country and provinces, investment opportunities and the changing construction industry.

Some key findings include:

- Construction activity was strong, and led other industries across Canada from 2001 to 2004.
- Low unemployment rates in many occupations have raised concern about skills shortages in some sectors, trades and occupations.
- With a projected shift from housing to non-residential construction between 2005 and 2008, new pressures on specialty trades serving industrial- and engineering-type construction will grow.
- Market adjustments from 2005 to 2008 will require extensive labour movement between provinces, industries and sectors.
- Training and certification programs will need to expand to meet industry needs.

1 Construction Sector Council, *Construction Looking Forward*, p. 2. Available from [http://www.csc-ca.org/pdf/National\\_Summary\\_E.pdf](http://www.csc-ca.org/pdf/National_Summary_E.pdf).

### LMI ONLINE: CSC’S LABOUR MARKET LINK

The critical elements of the Major Projects initiative include owner participation, confidentiality, ease of use, and accurate and timely information updated on a regular basis. To address many of these features, the CSC and COAA have established a web-based platform called *Labour Market Link*. This program allows owners to easily and quickly input and maintain labour market data on current and proposed major construction projects on a regular and confidential basis, and to retrieve summary information on the total construction labour requirements for projects in the region.<sup>24</sup>

### IMPACT OF THE CSC LMI PROGRAM ON THE CONSTRUCTION INDUSTRY

#### MINIMIZING PROJECT RISKS

Labour market information is essential knowledge for all construction companies, regardless of their size or sector. Without accurate and relevant information, these companies simply cannot plan properly. Real-time workforce information helps mitigate risks and ensure success

in project design, project development and project execution. A major construction project can cost billions of dollars to see through to completion. Part of the project planning process includes some assurance that there is a skilled and competent workforce available to complete the work on time and on budget. The CSC LMI program helps owners identify labour market challenges and opportunities, and has the potential to save them, or earn them, significant amounts of capital.

In Alberta, for example, there are tens of billions of dollars targeted for major construction projects over the next five years. Given a looming labour crunch, oil companies like Shell Canada and Suncor Energy may not have enough skilled, qualified workers to complete projects (let alone start them), or they may have to budget for increased labour costs for local skilled workers, overtime, or workers recruited from out of province.

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**All of the companies interviewed for this case study were quick to point out that using LMI as a critical component of their strategic decision-making process is a “no-brainer.”**

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One major oil sands company interviewed for this study noted that LMI gives perspective on its labour market situation and aids in the process of deciding whether to go ahead with a project or make adjustments. At Suncor Energy, for example, LMI is used as a strategic business tool to address labour issues. It is a tool that the company depends on regularly, as its board of directors is reluctant to approve new major projects without having addressed any and all potential labour issues. In the end, the savings to a company of acting on accurate and timely labour market information can be in the millions of dollars, depending on the size of the project.

“Manitoba Hydro uses Labour Market Information to assist in planning for potential future hydro electric generating station developments. An understanding of LMI is a critical component for assessing and forecasting the importance of the construction trades capacities on training, employment and the capital costs of projects.”

—John Markowsky, Manager, Major Projects, Manitoba Hydro<sup>1</sup>

<sup>1</sup> CSC brochure, *In Canada, We Have No Shortage of Great Ideas*. LMI: *Just One More Great Canadian Idea*. [www.csc-ca.org/english/whatwedo\\_1.html](http://www.csc-ca.org/english/whatwedo_1.html).

None of the companies interviewed for this study formally measure the return on investment of using LMI; it would be very difficult and costly to directly correlate LMI to savings, productivity or profitability because there are far too many other factors that come into play. However, all of the companies interviewed for this case study were quick to point out, without any hesitation, that using LMI as a critical component of their strategic decision-making process is a “no-brainer.” An executive of major projects at one of the big oil companies aptly noted that “if we know in July or August that the labour supply for a particular occupation is tapped out, we will delay setting up the project until later.” It just makes good business sense.

### **IMPROVING PLANNING CYCLES AND AVOIDING SCHEDULING DELAYS**

LMI helps construction companies and the purchasers of construction forecast the short-, medium- and long-term supply of labour. Matched against their labour demand estimates, companies are able to make informed decisions about investing in a project at any given time. If LMI forecasts a shortage of workers in the skilled trades, a company may decide to hold off or delay starting up a large construction project in order to mitigate any downturns in their production cycles.

A \$4.5-billion construction project, for example, typically includes approximately \$900 million in wages and benefits (or 20 per cent of the total costs of a project). If the human resources costs of a project were to increase by 1–2 per cent, on account of unforeseen labour shortages, retention issues or skills gaps, a company would be looking at an increase to their operating costs of \$900,000–\$1.8 million. This is a cost that cuts straight into the bottom line. LMI helps mitigate or alleviate these added human resources costs by giving companies the information they need to make appropriate decisions.

Manitoba Hydro is in the midst of planning two or three new hydro electric projects, each lasting upwards of four to five years and costing anywhere from \$1 billion–\$4 billion. During peak construction times, a project might require anywhere from 500 to 1,500 construction trades workers. The trades people required to complete a project are not always available when required.

Manitoba Hydro is therefore carefully planning the timing of its projects, noting the other major projects that are taking place in the province and elsewhere, and assessing when human resource capacity might be available (among many other inputs). LMI is helping Manitoba Hydro get the answers it needs in order to make informed and calculated business decisions about the timing of projects.

It is important to note that LMI is not a panacea for companies. It is one source of often very valuable information about human resource trends that companies, regions and governments can use to their advantage as part of a bigger planning and development strategy.

Suppose, for example, an LMI forecast estimates a shortage of pipefitters for Ontario starting in 2008. Companies, regions, associations, educational institutions, governments and others then have to decide, individually or in partnership, if an intervention to address this shortage is necessary, what the intervention might be, and who would be responsible for it. LMI is the stepping stone from which actions are taken (e.g., implementing apprenticeship training programs, importing labour from other provinces, recruiting young people into specific trades through a career awareness program) in order to alter predicted trend lines. Interestingly, even a seemingly small intervention can dramatically change the future workplace three to five years down the road. An apprenticeship career awareness program, for example, that draws 10, 20, or 30 new students into a trade—which on the grand scale of things may seem like small potatoes—might very well be enough of a boost to overcome a forecasted skills shortage. Addressing critical labour shortages is not always about drawing in large numbers of individuals. (Think of the heady days of the high-tech industry when shortages resulted in predictions that thousands of workers would be needed.) More often than not, what is needed is to identify the right workers with the appropriate skills sets. LMI is an effective tool that addresses the reality of the construction industry's human resource needs from both a quality and quantity perspective, providing information which can then be used by training organizations and learning institutes as well as industry.

## **REDUCING STRAIN ON LABOUR SUPPLY IN HIGH DEMAND AREAS**

The CSC's labour requirement forecast report *Construction Looking Forward, 2005–2013* notes that between 2005 and 2009, workers in several trades—including steam, pipe and gasfitters, insulators, industrial electricians and boilermakers—will be in high demand in several provinces, including Alberta, British Columbia, New Brunswick and Manitoba. The increased demand will have the potential to draw workers from related or adjacent markets.

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### **LMI is an effective tool that addresses the reality of the construction industry's human resource needs from both a quality and quantity perspective.**

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Construction companies in these high-growth regions that are aware of the forthcoming shortfalls in the labour supply are clearly one step ahead of those companies that are unaware. The CSC LMI pan-Canadian labour market forecasting tool arms them with valuable knowledge that can be used to adjust to and overcome these labour deficits. For example, at the same time that the CSC LMI forecast predicts labour shortages in the above four provinces, it also notes that there is an opportunity to bring in trades workers from those regions of the country where fewer big projects are expected to take place between 2005 and 2009—notably Saskatchewan, Newfoundland and Labrador, and Nova Scotia. The CSC LMI data also point out that the number of available skilled workers in these provinces falls short of the needs in Alberta, British Columbia, New Brunswick and Manitoba. However, bringing in these workers is one option that can be combined with other initiatives, such as attracting skilled workers from other non-construction industries (e.g., manufacturing, utilities, maintenance and repair) where weaker markets might make construction employment attractive.<sup>25</sup>

## **RESOLVING LABOUR INEFFICIENCIES**

Interestingly, a number of companies interviewed for this case study noted that when companies are required to offer overtime to workers, it may cost them more in terms of both hourly wage rates and lost productivity. This is because overtime workers have the real potential to be somewhat less productive because they are working longer hours in often physically and mentally demanding occupations.

Furthermore, as noted in the interviews conducted for this study, if a construction company runs into labour shortages on a major project, it may find it necessary to turn to less knowledgeable and lower-skilled trades people. Unfortunately, yet often inevitably, with a drop in skill level comes the potential for an increase in the accident rates, which translates into more downtime and a loss in productivity. As well, with less skilled employees working on a job site, the working environment often deteriorates as the level of trust and respect between workers lessens. This leads to poor retention rates, the need for ongoing recruitment activities, and additional project costs. Using LMI helps companies avoid or greatly reduces their likelihood of having to hire less experienced and lower-skilled workers.

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**Oil companies have used LMI supply data to increase their retention rates and on-site productivity rates by concentrating their recruitment activities in the smaller centres and towns of Alberta.**

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Certain oil companies use the LMI program to identify and recruit the right workers from the right regions. With many of their work sites in rural and remote locations, oil companies have used LMI supply data to increase their retention rates and on-site productivity rates by concentrating their recruitment activities in the smaller centres and towns of Alberta where desirable new hires may be located. This targeted approach results in the recruitment of individuals who have a better appreciation and respect for working in rural and remote sites.

### **PROMOTING INVESTMENT IN HUMAN RESOURCE DEVELOPMENT**

The CSC LMI program offers construction companies and the purchasers of construction a reality check in terms of understanding the labour market situation during a particular time frame. By looking into the future, companies are able to make proactive decisions about their human resource strategies (as do governments and industry associations). When a shortage in a particular trade or skill is forecast, investments in apprenticeships, training programs, university, and college courses can be adjusted accordingly.<sup>26</sup>

If purchasers of construction, such as Manitoba Hydro, know that they will be starting up a major project in two to three years, and are also aware of potential labour shortages within particular trades or occupations (based on LMI supply forecasting data), they will often approach training organizations and boards to discuss ways of addressing and rectifying the anticipated shortages.

Although the short-term skills shortages may not necessarily be addressed right away, the medium- and long-term savings and economic advantages to companies of investing in human resource developments can be in the hundreds of thousands to millions of dollars, in terms of productivity gains and the ability to bid on projects and work to schedule.

### **IMPACT ON WORKERS**

Current and future trades workers can take advantage of labour market information and determine what skills are expected to be in high demand, and where. They can also use LMI to help with their career-planning

#### **Association of Canadian Community Colleges**

Education and training feed the labour market, and changes in supply or in policy affect the labour market pool. If there are too few trained individuals, skills shortages result; if there are too many, surpluses will result and individuals will not find work in their chosen trade. Canadian community colleges have close ties to the construction industry and work collaboratively with key stakeholders on curricula, program design and trades and apprenticeship models.

The CSC works closely with the Association of Canadian Community Colleges' (ACCC) Construction Affinity Group. The Affinity Group brings together individual colleges with an interest in construction-related studies to discuss common interests, ideas, challenges, best practices, effective programs, advocacy concerns and recent developments. The Construction Affinity Group consists of 40 colleges and satellite campuses from all of the provinces and territories, including seven in British Columbia and Yukon; seven in Alberta and the Northwest Territories; four in Saskatchewan, Manitoba and Nunavut; 14 in Ontario; two in Quebec; and six in the Atlantic Provinces. Representation includes deans of trades, directors of major projects, instructors, chairs of construction trades and others. The Affinity Group uses CSC LMI data to help assess the potential number of students interested in specific trades, and has helped keep courses open and running. The Group is also kept informed by the CSC about career promotional materials and suggested new college programs.

In addition to the Construction Affinity Group, the ACCC also runs an Apprenticeship Affinity Group with 47 participating colleges and satellite campuses; a Mining Affinity Group with 24 colleges and satellite campuses; and a Steel Affinity Group with 25 colleges and satellite campuses—all with vested interests in the construction sector and the workings of the CSC.

decisions and long-term work plans by determining if a region is expected to have meaningful and sustainable work for six months or five years.

In 2003, for example, a number of major projects were finishing up simultaneously in Alberta, with few new major projects ramping up. For a number of skilled trades, this turned out to be a challenging year, and many workers left the province for other work, thinking that this was a longer-term trend. However, LMI was able to determine that this downturn was only temporary—six months to a year at most—and that there were many major projects in different stages of development. The industry was told about this economic blip, and many workers decided to stick it out in anticipation of the upcoming work. LMI, therefore, assisted the province, its workers and its construction industry.

Benefits that LMI offers individuals include:

- identifying where the jobs are—the sectors, occupations and localities where job opportunities are on the increase, and what skills are needed for them;
- identifying the skills they might require in the future, as job tasks and functions change to keep pace with new products and technology;
- identifying factors such as pay levels, job security and local prospects when attempting to make realistic and informed career decisions;
- broadening their aspirations to include similar occupational areas in the event that their first choice is not possible or not available in a region; and
- identifying unforeseen events and external factors that might affect an industry or occupational area.

## CHALLENGES

### REMAINING RELEVANT, CREDIBLE AND UP-TO-DATE

A forecasting system is successful when a company, industry or sector is able to use information to its competitive advantage. LMI demonstrates its value when things are operating on a “business-as-usual” basis: when companies, industries, sectors and regions experience no major labour-related production challenges; and when they are able to avoid unaccounted-for labour costs and unnecessary downtimes for a project.

The success and longevity of the CSC LMI program will be fully realized when construction companies and buyers of construction use LMI data and analyses in their planning and production cycles. According to one company interviewed for this study, owners will take some time to get comfortable with and have confidence in the CSC LMI labour supply and demand data before the program truly establishes itself. Clearly, there is a bit of a Catch-22 continuum in play here. Companies will commit to the program and use the CSC LMI data once they have confidence in the labour forecasts. However, in order for the CSC to build relevant and reliable forecasts, it needs accurate and up-to-date data from construction owners on their labour supply and demand needs—and the sooner the better.

### MAINTAINING BUY-IN AND INTEREST

To be truly effective and of real value, the CSC LMI must continuously work with the buyers of construction, construction companies, governments and other stakeholders to ensure that the data and analysis coming from the labour market information tools address real challenges and real needs of the industry, and offer practical decision-making solutions to overcome crucial business pressures and labour market gaps. The success of any LMI program lies in its truthful analysis of the current and future labour market trends—not in arbitrarily inflating needs or in presenting subjective perceptions of the needs or human resources challenges of a region.

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**The success of any LMI program lies in its truthful analysis of the current and future labour market trends.**

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In a perfect world, all buyers of construction services and construction companies would feed their labour resource information into the CSC LMI program on a regular and timely basis. However, this is not a perfect world, and not all companies will participate in the program. One employer interviewed for this study suggested that having 20 per cent of the construction companies or buyers of construction services who hire 80 per cent of the workers would be a good target for the CSC LMI to reach for. Having this level of buy-in and support would ensure that the LMI data were representative of the construction industry in Canada.

In addition to getting companies on board, it is imperative that the outputs of the CSC LMI program—including reports, charts, analysis and recommendations—reach key public bodies. Knowledge and information is valuable only if it is shared and acted upon. Governments, learning organizations and others need to be able to access the information and understand what it is saying in order to design policy, implement programs, establish standards and develop common approaches to training and apprenticeship that will overcome the labour challenges identified through the LMI data.

## **KEYS TO SUCCESS**

### **INSTIGATING A COMPREHENSIVE APPROACH WITH REGIONAL INPUT**

The CSC LMI program is based on inclusiveness, mutual benefit and cooperation with provincial LMI initiatives. By leveraging its national reputation, federal government support, diversity of participants and independent standing, the CSC has been able to ensure that construction companies and industry representatives trust and believe in the value of the program.

The CSC LMI program also reflects the realities found within different regions of the Canadian economy. In order to make informed decisions, construction companies working in Newfoundland or Alberta need to know that the data and information they are using are relevant to their immediate environments, and that they also reflect the broader macro-economic and national LMI realities. For example, construction projects being planned in the Mackenzie Delta and for the Vancouver Olympics will invariably impact Alberta and its construction industry. The CSC LMI program has been successful in integrating both perspectives.<sup>27</sup>

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### **The CSC is committed to making its LMI forecasts as accurate, credible and meaningful as possible.**

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The formation of the National Owners' Forum and LMI Regional Networks across Canada assists the CSC in its ability to develop accurate and timely labour market information by assessing key economic assumptions, establishing regional lists of major projects, reviewing and validating forecasts to ensure they reflect regional realities, and identifying trades and human resource

issues that need further analysis. Feedback from users of LMI is also very important. Regular studies, workshops and other methods of evaluation are necessary to assess existing systems, to identify new indicators and new sources of information, and to discard existing ones that may have fallen out of favour.

By reaching out to the construction industry on a regular basis, the CSC is committed to making its LMI forecasts as accurate, credible and meaningful as possible. If they are not getting things right, they want to hear about it, and most importantly, they want to know how they can make things better—be it through an outcome (e.g., a forecast) or an approach (e.g., data collection mechanism).

### **BUILDING ON PAST LMI SUCCESSES**

The CSC has built its LMI program in a holistic manner, and rather than attempting to replace regional and provincial LMI initiatives, it complements them. Regional and provincial LMI programs feed into the CSC LMI program and vice versa—adding to the richness, depth and breadth of information and analysis available. For example, the work that the Alberta Construction Workforce Development Forecasting Committee (CWDFC) and the Construction Owners Association of Alberta (COAA) has done in developing labour supply and demand forecasts greatly influenced the way in which the Construction Sector Council developed its LMI model.

The CSC also recognizes that it should take full advantage of different data sources. Too much is often expected from one source of information, which may not produce the best results given the increasing diversity of labour markets. By incorporating information from different sources, the CSC has been able to build a more accurate, reliable and comprehensive picture of developments and trends in the labour market.

### **Customizing LMI Assessments**

The CSC recognizes the value and importance of analyzing labour market information to suit the needs of specific users, in a language that can easily be understood and used. It also recognizes the importance of disseminating the results of its LMI analysis in a timely fashion, using a coordinated strategy of press releases, summaries, publications, technical and non-technical papers, ministerial statements, presentations and Internet-based services.

The availability of comprehensive information that appeals to a wide range of users is a prerequisite in efforts to develop a culture of information use. Complementing this comprehensive service with customized LMI services to meet the specific needs of the construction industry or the needs of specific construction companies is a good example of how the CSC has been able to maintain and increase support for its national and regional LMI products and services.

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### **The availability of comprehensive information that appeals to a wide range of users is a prerequisite.**

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Individual labour supply assessments for companies such as Canada Natural Resources Limited (CNRL), Shell, Opti-NEXEN and Suncor help them assess specific labour availability risks when they are considering investing in major new projects.<sup>28</sup>

### **Offering LMI Analysis That Speaks to the Needs of Different Users**

The CSC combines both quantitative and qualitative approaches in its LMI analysis and reporting of results. This allows it to meet the needs of construction company statisticians, policy-makers, project designers and strategic decision-makers, and contribute to the development of a culture of information use and sharing.

People with different interests and backgrounds are interested in different LMI results; as well, their ears for LMI language and analysis tend to differ greatly. For example, in some situations, a user of LMI may be interested in some very specific, highly technical and complex statistical LMI tables only. In other situations, a user may be interested only in a broader context that includes the social, economic and demographic changes taking place within a region or locality. The CSC is working hard to ensure that the interests of all users are met through its analyses.

### **Establishing a Neutral and National Clearing House**

Labour market information can be seen as misleading, dubious or even deceptive unless the group that produces it is perceived to be unbiased. For example, it would probably not serve the Alberta oil sands industry well if a major oil sands company were the keeper of the

industry's LMI data. Similarly, having a provincially based LMI group manage and maintain a national LMI database would quickly arouse doubts and suspicions. As well, it is likely that a provincially run national LMI program would quickly run into financial difficulties. The CSC is ideally positioned to administer, manage, coordinate and operate the national LMI program, supported by industry and government funds. This is an efficient, inclusive and cost-effective model.

### **Implementing Easy-to-Use Web-based LMI Applications**

The CSC is looking for ways to make the collection and input of LMI data an easier and more efficient process. A pilot initiative in Alberta has brought together the CSC and the COAA to design and develop a web-based data input mechanism to collect information on major projects. Online access should facilitate greater owner involvement in the LMI process and improve the reliability of major project information. When fully functional, the web-based major project information interface will identify the project's name, status, type, location, capital costs, start and end dates, total manpower requirements and, eventually, manpower requirements by trade and occupation.<sup>29</sup>

In addition to developing a web-based LMI application for major project information, the CSC is also looking into building web-based:

- maintenance/shutdown schedule information—which has a significant effect on construction labour supply;
- communications tools with LMI Regional Networks to share information within and across regions; and
- dissemination tools to distribute labour supply and demand forecasts using password-protected and public domain areas.

### **Developing and Increasing Institutional and Political Support for LMI**

In order to establish and maintain a credible and valued pan-Canadian LMI construction program, the CSC knows that it must have the support of industry and governments (both federal and provincial). While it continues to work hard at achieving this objective, and has succeeded in large part, the CSC must find a balance between responding to the needs and priorities of users and maintaining fiscal responsibility. As well, the CSC must ensure that the integrity of the program remains intact.

## CONCLUSION

The CSC LMI program offers the construction industry a proactive labour market forecasting tool that can be used effectively when scheduling work projects and production cycles. Whereas in the past the industry has had to react to labour challenges—often too little, too late, and at considerable expense—LMI gives construction companies and the buyers of construction the ability to anticipate and carefully consider their current and projected labour demands against current and expected labour supplies. If there is a critical skills gap, companies can adjust their work schedules, bring in experienced and skilled workers from different regions, or implement training programs to address the future supply demands.

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**Getting the right people, with the right skills, at the right time and in the right place is what LMI is all about.**

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Although it is rare to find a company within the industry that has done a true cost-benefit analysis of using LMI—none of the companies interviewed for this study had completed one—many did indicate that they would not move ahead on a major project without a review of LMI. Getting the right people, with the right skills, at the right time and in the right place is what LMI is all about, and is something that the construction industry and all of its stakeholders are interested in developing to ensure a stable, healthy and competitive economy.

LMI can minimize the risks associated with a project, reduce overall project costs, help in identifying appropriate training programs and allow for a more efficient use of resources. LMI is not the panacea for all construction project risks and challenges, as labour is only one part of the construction equation, but it does give companies an understanding and appreciation of the possible risks of implementing a project at a certain time, and in a particular location in terms of labour supply and demand. Critical next steps will include ways of getting construction owners and buyers of construction to use the LMI analysis effectively and cooperate in the scheduling of their projects to avoid simultaneous demands for the same trades workers.

The Construction Sector Council offers users a national LMI perspective as well as provincial and regional perspectives. In fact, the LMI program is the only construction labour market forecasting tool of its kind in Canada with a pan-Canadian view, and is seen by the industry as being critically important, given today's integrated economy and mobile labour force. The program is a good example of a collaborative approach between a national body and regional counterparts, working together for the betterment of the construction industry.

The CSC LMI program continues to gain notice and achieve success by addressing the concerns and needs of the construction industry, and by ensuring that the data collection, analysis and delivery platform is easy to use, confidential, efficient and effective.

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1 Construction Sector Council, *Training Canada's Construction Workforce: Meeting the Industry's Needs* (Ottawa: Construction Sector Council, Winter 2004), p. 2. [www.csc-ca.org/english/whatsnew\\_2.html#LMI](http://www.csc-ca.org/english/whatsnew_2.html#LMI).

2 Construction Sector Council, *The Construction Industry: A Large Workforce, A Lot of Questions. One Solution: The Labour Market Information Program*. Available at [www.csc-ca.org/pdf/LMI\\_brochure\\_e.pdf](http://www.csc-ca.org/pdf/LMI_brochure_e.pdf).

3 The CSC is governed by a board of directors that represents a variety of interests within the construction industry, both union and non-union. Board members are nominated by the construction sector they represent—and currently represent more than 40 national and provincial construction organizations. Early partners of the CSC include: the National Construction Labour Relations Alliance, the Building and Construction Trades Department and its affiliates, Association de la Construction du Québec, Human Resources and Skills Development Canada, and the Canadian Construction Association. Today the CSC represents an even broader base of expertise.

4 Information for this case study was also gathered at the CSC National Owners meeting, held in Toronto, Ontario, April 7, 2005, through presentations, discussions, and interviews.

5 Buyers of construction include, for example, the Alberta oil sands projects, utility companies across all provinces, all levels of government, and the 2010 Olympics in British Columbia.

6 It is important to note that the usefulness of LMI depends on the ability of the stakeholder to differentiate between accumulation of information and its effective use in policy-planning and decision-making processes. Why information is collected, as well as the application of this information, is very important.

7 Nicholas Mangozho, *Current Practices in Labour Market Information Systems Development for Human Resources Development Planning in Developed, Developing and Transition Economies* (Geneva: International Labour Office, Working Paper No. 13), p. 9. [www.ilo.org/public/english/employment/skills/download/lmi.pdf](http://www.ilo.org/public/english/employment/skills/download/lmi.pdf).

- 8 The main goal of the CSC LMI program is to increase the productivity of the construction industry over the long term. See [www.csc-ca.org/english/whatwedo\\_1.html#profile](http://www.csc-ca.org/english/whatwedo_1.html#profile).
- 9 Mangozho, p. 58.
- 10 See [www.csc-ca.org/english/whatwedo\\_1.html#profile](http://www.csc-ca.org/english/whatwedo_1.html#profile).
- 11 Presentation made to the CCA Labour Relations Conference, November 4–5, 2004, Montréal, Quebec, *Working with the Construction Industry, An Update on the CSC LMI Program*. For example, CSC LMI identified shortages in the boilermaker and ironworker sectors of the construction industry. Through this analysis, the CSC implemented a Boilermaker Career Awareness program and an Ironworker Career Awareness program—aimed at Aboriginal youth—in partnership with the Aboriginal Human Resource Development Council of Canada (AHRDCC).
- 12 From a presentation on the Construction Sector Council's LMI Program—Update given by George Gritziotis to the National Owners' Forum, April 7, 2005, in Toronto.
- 13 Labour market information used in the CSC LMI program comes from industry and government representatives; large project lists (through co-operative agreements with organizations in each province/territory); focus groups with key stakeholders; traditional statistical sources, such as census data; LMI Regional Networks; and the National Owners' Forum. See [www.csc-ca.org/english/whatwedo\\_1.html#profile](http://www.csc-ca.org/english/whatwedo_1.html#profile).
- 14 The CSC also encourages participation in the National Owners' Forum from existing provincial owner associations, including, for example, the Construction Owners Association of Alberta and the Ontario Construction User Council.
- 15 See [www.csc-ca.org/english/whatwedo\\_1.html#profile](http://www.csc-ca.org/english/whatwedo_1.html#profile).
- 16 The LMI Regional Networks are provincial/territorial or regional industry committees, formed either from existing labour/management structures or specifically for the LMI initiatives of the Sector Council. They are also representative of the segments of construction within their jurisdictions (e.g., new home building and renovation, renovation, and institutional, commercial, industrial, and civil engineering). As well, the LMI Regional Networks include representation from the Canadian Council of Directors of Apprenticeship, Canada Mortgage and Housing Corporation and other appropriate government departments or education and training organizations.
- 17 As cited in a June 21, 2005, press release: *Construction industry welcomes long-awaited tool to project, labour requirements*. The AFL-CIO is the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO)—a voluntary federation of 56 national and international labour unions.
- 18 Recent research projects include *Future Supplies for Canada's Construction Industry; Emerging Trends in Management, Supervision and Mentoring in the Construction Industry; Training Canada's Construction Workforce: Meeting the Industry's Needs*; and *The Impact of Technology on the Construction Labour Market*. All of these studies can be found at [www.csc-ca.org/english/whatwedo\\_1.html#profile](http://www.csc-ca.org/english/whatwedo_1.html#profile).
- 19 Provincial reports were released in Manitoba, Saskatchewan and Ontario in late June 2005. The British Columbia and Alberta reports were released in late July 2005, and the Atlantic report was released shortly thereafter.
- 20 Construction Sector Council, *Construction Looking Forward*. [www.csc-ca.org/pdf/National\\_Summary\\_E.pdf](http://www.csc-ca.org/pdf/National_Summary_E.pdf).
- 21 CSC, *Construction Looking Forward—National Summary*, 2005, p. 3. The national summary report (and companion provincial reports) can be found on the CSC website [www.csc-ca.org/pdf/National\\_Summary\\_E.pdf](http://www.csc-ca.org/pdf/National_Summary_E.pdf).
- 22 Bob Collins and Steve Etlinger, *Major Projects, Web-Based Data Input Mechanism*, Presentation to the Construction Owners' Forum (Toronto, April 2005).
- 23 The CSC intends to implement this program nationally upon completion of the pilot study.
- 24 Labour Market Link, <https://lcmis.csc-ca.org/lmi/index.php>, is a pilot project that will be ramped up if successful.
- 25 Construction Sector Council, *Construction Looking Forward* (Ottawa: CSC, June 2005), p. 8. [www.csc-ca.org/pdf/National\\_Summary\\_E.pdf](http://www.csc-ca.org/pdf/National_Summary_E.pdf).
- 26 Colleges, universities and training centres are all interested in labour market information, as it can be helpful in setting curricula, defining courses and establishing programs.
- 27 There is no fee or cost for companies, learning institutions or government in receiving the LMI data/analysis made available through the *Construction Looking Forward* provincial forecast reports. The LMI forecasting service is currently supported primarily by government funding, with some support (mostly in-kind) leveraged through the LMI Regional Networks.
- 28 Individual companies wishing to have the CSC conduct a customized LMI assessment are required to pay for this service. The cost is dependent on the nature of the customization required.
- 29 Bob Collins, Construction Sector Council, and Steve Etlinger, TableFive Web Solutions, Presentation to the National Owners' Forum, *Major Projects Web-Based Data Input Mechanism* (Toronto, April 2005).

## APPENDIX 1

# List of CSC LMI Regional Network Representation

<b>CSC LMI Regional Networks</b>	
<b>Province</b>	<b>Regional Representation</b>
<b>British Columbia</b>	<ol style="list-style-type: none"> <li>1. Construction Association</li> <li>2. BC Ministry of Skills Development and Labour</li> <li>3. BC Yukon Territory Building and Construction Trades Council</li> <li>4. British Columbia Institute of Technology</li> <li>5. Canadian Home Builders' Association—BC</li> <li>6. Construction Labour Relations Association of BC</li> <li>7. Farmer Management Inc.</li> <li>8. Human Resources and Skills Development Canada—BC/Yukon Region</li> <li>9. Industry Training Authority</li> <li>10. International Association of Ironworkers Local 97</li> <li>11. IUOE Local 115</li> <li>12. Vancouver Regional Construction Association</li> </ol>
<b>Alberta</b>	<ol style="list-style-type: none"> <li>1. Construction Workforce Development Forecasting Committee (CWDFC)</li> <li>2. Construction Owners Association of Alberta (COAA)</li> <li>3. Alberta Economic Development</li> <li>4. Alberta Construction Association</li> <li>5. Alberta Building and Construction Trades Council</li> <li>6. Alberta Human Resources and Employment</li> <li>7. Construction Labour Relations</li> <li>8. Alberta Advanced Education</li> <li>9. Syncrude Canada</li> <li>10. Kiewit Industrial Construction</li> <li>11. Progressive Contractors Association</li> <li>12. Alberta Apprenticeship and Industry Training</li> <li>13. Merit Contractors Association of Alberta</li> </ol>
<b>Saskatchewan</b>	<ol style="list-style-type: none"> <li>1. Construction Labour Relations of Saskatchewan Inc.</li> <li>2. Fries Tallman Lumber (1976) Ltd.</li> <li>3. Human Resources and Skills Development Canada—SK Region</li> <li>4. Nu-Fab Burton Ltd.</li> <li>5. Road Builders &amp; Heavy Construction Association of Saskatchewan</li> <li>6. Saskatchewan Apprenticeship &amp; Trade Certification Commission</li> <li>7. Saskatchewan Construction Association</li> <li>8. Saskatchewan Department of Industry and Resources</li> <li>9. Saskatchewan Department of Learning</li> <li>10. Saskatchewan Home Builders Association</li> <li>11. Saskatchewan Labour</li> <li>12. Saskatchewan Provincial Building &amp; Construction Trades Council</li> <li>13. SaskPower</li> </ol>

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**CSC LMI Regional Networks (cont'd)**

Province	Regional Representation
<b>Manitoba</b>	<ol style="list-style-type: none"> <li>1. Comco Pipe &amp; Supply Co.</li> <li>2. Labour Market Information Unit, Manitoba Advanced Education &amp; Training</li> <li>3. Manitoba Apprenticeship, Advanced Education and Training</li> <li>4. Manitoba Bldg. and Const. Trades Council</li> <li>5. Manitoba Construction Labour Relations Assoc.</li> <li>6. Manitoba Floodway Authority</li> <li>7. Manitoba Heavy Construction Assoc.</li> <li>8. Manitoba Hydro</li> <li>9. Operating Engineers Training Institute of Manitoba</li> <li>10. Winnipeg Construction Association</li> </ol>
<b>Ontario</b>	<ol style="list-style-type: none"> <li>1. Canada Mortgage and Housing Corporation</li> <li>2. Canadian Masonry Contractors Association</li> <li>3. Canadian Roofing Contractors Association</li> <li>4. Carpenters District Council of Ontario</li> <li>5. Christian Labour Association of Canada</li> <li>6. Construction Labour Relations Association of Ontario</li> <li>7. Greater Toronto Home Builders Association &amp; C.R.E.W.S.</li> <li>8. Human Resources and Skills Development Ontario Region</li> <li>9. I.U.E.C. Local 50</li> <li>10. IBEW Construction Council of Ontario</li> <li>11. Industrial Contractors Association of Canada</li> <li>12. International Union of Bricklayers and Allied Crafts</li> <li>13. IUOE Local 793</li> <li>14. LIUNA Ontario Provincial District Council</li> <li>15. Ministry of Economic Development and Trade</li> <li>16. Minto Developments Inc.</li> <li>17. Ontario Pipe Trades Council</li> <li>18. Ontario Construction Secretariat</li> <li>19. Ontario Power Generation Inc.</li> <li>20. Ontario Provincial Building Trades Council</li> <li>21. Ontario Road Builders Association</li> <li>22. Ontario Sheet Metal and Air Handling Group</li> <li>23. Pipeline Contractors Association of Canada</li> <li>24. Residential Construction Council of Central Ontario</li> <li>25. Sudbury Construction Association</li> </ol>
<b>Quebec</b>	<ol style="list-style-type: none"> <li>1. Commission de la construction du Québec (CCQ)</li> </ol>
<b>Atlantic Provinces</b>	<ol style="list-style-type: none"> <li>1. Council of Atlantic Premiers</li> <li>2. Atlantic Apprenticeship Council</li> <li>3. Apprenticeship &amp; Occupational Development</li> <li>4. Carpenters Training Centre of New Brunswick Inc.</li> <li>5. Construction Association of New Brunswick</li> <li>6. Department of Training and Employment Development</li> <li>7. J.D. Irving, Limited</li> <li>8. New Brunswick Building Trades Council</li> <li>9. New Brunswick Community College</li> <li>10. Road Builders' Association of New Brunswick—Atlantic Road Builders' Association</li> <li>11. Saint John Construction Association</li> <li>12. New Brunswick Department of Education</li> </ol>

*(cont'd on next page)*

**CSC LMI Regional Networks (cont'd)**

<b>Province</b>	<b>Regional Representation</b>
<b>Atlantic Provinces</b>	<ul style="list-style-type: none"> <li>13. Department of Human Resources and Employment</li> <li>14. Human Resources and Skills Development Canada—Newfoundland and Labrador</li> <li>15. International Union of Operating Engineers</li> <li>16. Newfoundland &amp; Labrador Construction Association</li> <li>17. Newfoundland and Labrador Hydro</li> <li>18. U.A. Training Centre</li> <li>19. Atlantic Provinces Community Colleges Consortium</li> <li>20. Atlantic Home Building &amp; Renovation Sector Council</li> <li>21. Atlantic Provinces Economic Council</li> <li>22. CMHC Atlantic Business Centre</li> <li>23. Construction Association of Nova Scotia</li> <li>24. Human Resources and Skills Development Canada—NB</li> <li>25. Human Resources and Skills Development Canada—NS</li> <li>26. Mainland Nova Scotia Building and Construction Trades Council</li> <li>27. Nova Scotia Community College</li> <li>28. Nova Scotia Construction Sector Council</li> <li>29. Nova Scotia Department of Education—Skills and Learning</li> <li>30. NSHBA Integrity Homes</li> <li>31. Construction Association of P.E.I.</li> <li>32. Department of Education—Continuing Education and Training</li> <li>33. Human Resources and Skills Development Canada—PEI</li> <li>34. International Union of Operating Engineers</li> <li>35. Sherwood TimbRMart</li> <li>36. Trades Training Strategy Project, Holland College</li> </ul>



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Construction Sector Council; Shell Canada Limited; GO Transit; Suncor Energy Inc.; Canada Natural Resources Limited (CNRL); Manitoba Hydro; Construction Labour Relations (CLR), An Alberta Association; and the Building and Construction Trades Department of the AFL-CIO.

### The Labour Market Information (LMI) Program: Acting on Human Resource Information to Build and Maintain Capacity in the Canadian Construction Sector

by *Douglas Watt*

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