

**Labour Market Information Project**  
**for the Canadian Supply Chain Sector Council (CSCSC)**

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# Executive Summary

**Introduction and Background:** A project to assess Labour Market Information (LMI) needs was initiated by the Canadian Supply Chain Sector Council (CSCSC) in December, 2006. The CSCSC is a non-profit, non-governmental organization created in 2006 to enhance the human resources and international competitiveness of the supply chain sector (which involves the supply of materials to manufacturers, the manufacturing process, and the distribution of finished goods, to the distributors, retailers and customers).

The CSCSC brings together key stakeholders of the supply chain sector in industry, government and education, including a number of important professional associations. The goal of the CSCSC is to promote a comprehensive human resources strategy to ensure that the Canadian supply chain sector possesses the skilled labour it requires for this sector of the Canadian economy to be competitive on a global basis.

The CSCSC's LMI Project emerged from a major study of the sector completed in 2005 which identified many labour market issues impeding the competitiveness of the sector. The LMI project was designed to gather stakeholders' input regarding the types of LMI that the sector council should be developing in order to support the people, businesses and organizations involved in supply chain activities in Canada.

**Methodology:** The project centred on five half-day workshops which were conducted in Vancouver, Calgary, Toronto, Montréal and Moncton, with supply chain sector stakeholders. Workshop participants included those in purchasing, transportation, HR and other managers, supply chain consultants, association representatives and educators. All those invited to the workshops were provided with background materials in advance, including a briefing on LMI and a worksheet to be completed by each participant (sometimes with others in their organizations), and submitted at the meeting or at a later date. As well, additional input was provided via an on-line survey implemented by the CSCSC on its web-site. Background research included consultations with representatives from 10 sector councils, held in February, 2007. The consultations focused on identifying lessons learned and best practices in LMI which could benefit CSCSC.

**Key findings** include a high demand/need for LMI, strategies for developing LMI, priority needs in LMI for labour force issues and occupations, non-occupation-related LMI needs, methods of LMI implementation and distribution, and a business case for LMI in the supply chain sector in general.

**Strategic Lessons Learned:** Reflecting current and ongoing HR issues which the supply chain sector faces, workshop participants affirmed that there is indeed *a substantial need for LMI of all types today* and that there is a need to *share this information* with stakeholders. Participants described areas in which the CSCSC could develop specific LMI tools (e.g. on wages, awareness, recruitment and retention). Just as importantly, however, participants noted the need for the CSCSC to define itself and to strategically position the LMI it prepares in a way that will ensure that whatever LMI is produced/made available, it will be relevant, accessible and reliable.

Workshop participants also stressed the importance of increasing the recognized "worth" of the supply chain as a core function in business. It was noted that creating this awareness requires credible LMI to "make the case" for supply chain sector skills to senior management and HR managers in organizations, by demonstrating the value of supply chain skills to the "bottom line."

Participants also emphasized the need for extensive participation on the part of key stakeholders in the development of LMI. In particular, this process should involve HR personnel. Participants noted that it would be important to account for regional differences in the development of LMI and to build on regional networks (either existing, or created by the CSCSC process) to ensure sector buy-in. The importance of LMI being kept up-to-date and having local relevance was also mentioned by participants, which entails securing the appropriate resources. A conclusion was that in developing LMI, assessing the demand for specific LMI products will be very important (assessing the market) for specific LMI. Finally, participants emphasized that LMI produced by the CSCSC will need to take into account what other information is currently available, to avoid "re-inventing the wheel". Participants emphasized that the CSCSC should develop LMI tools in partnership with its associations, other sector councils, various levels of government, etc.

Occupation and Labour Force-Related LMI Products: Needs in this area included broad labour force data, specifically, job descriptions for specific occupations (noting difficulties with the inflexibility of National Occupational Classifications (NOCs), data on supply and demand for specific occupations, broken down by region and function; information on wages, including comparative scales; more detailed, supply-chain specific work descriptions for a common understanding of different jobs in the sector; and guiding information on accreditation and certification to assess the qualifications of job candidates.

Non-occupation related LMI needs identified by participants included information on "best practices" in HR, including employee well-being policies and other recruitment, retention strategies, information on career planning and awareness, for workers who are thinking of "moving up" into higher-level management positions and for students of all ages to learn about the sector. Education and training information was also seen as a priority (validating the wisdom of the CSCSC's conducting its current database project on educational programs), particularly assessments of courses and programs available and access to tools such as e-learning; and co-op and internship programs tailored to the needs of the sector.

LMI Implementation and Distribution Methods: Workshop participants emphasized that channels for distribution of LMI should be wide-ranging, including internet (web-sites), but also print and video materials, and that a key element for sharing information should be through networking (including meetings such as the regional workshops which were held for this project).

The Business Case for LMI in the Supply Chain Sector: In all of the workshops, an underlying theme developed around the need to increase the value of supply chain skills in the corporate view -- as seen by senior managers and HR personnel. Participants argued that only if the value of supply chain to the bottom line were more clearly respected could professionalism and skill levels be significantly increased. The researchers saw this as pointing to the potential value of a background research report on the profit-driving value of supply chain skills, as an important LMI tool for sector stakeholders.

**Conclusions:** There is a substantial need and a great deal of interest in the development of LMI in today's society. Priorities were noted regarding specific LMI for particular occupations (standards, wages, etc.), and broader HR strategies for improving recruitment and retention in general (including increasing the awareness of supply chain careers among youth). As well, a stronger case for supply chain skills (and its business case) should be made among CEOs and HR managers. The need was identified to better define the goals and strategic positioning of the CSCSC.

**Recommendations:** The CSCSC should develop a regionally-based network to aid the development of LMI and sector HR generally; LMI products should be developed to increase the current level of awareness of LMI and identify any gaps which should be filled (this report could be one tool); the CSCSC should begin to develop key tools in areas such as project supply and demand for specific occupations, occupational (skill profile and wage) data, and promotion of awareness. While the key goal is to develop a plan for LMI with broad partner buy-in, this report outlines suggestions for a number of lead products which CSCSC could develop.

# 1. Introduction and Background

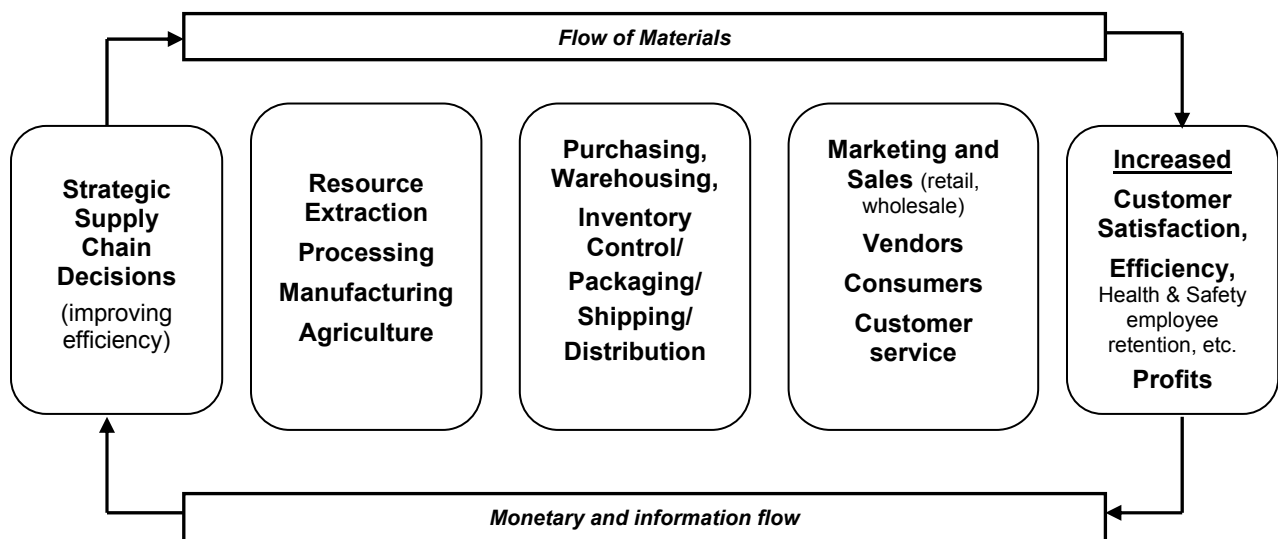
In December 2006, the Canadian Supply Chain Sector Council (CSCSC) contracted SPR Associates Inc.<sup>1</sup> to conduct a project to determine how the supply chain sector could best structure a labour market information (LMI) system. The project was to engage in a consultative process to identify strategies which the supply chain sector could use to attract, develop and retain potential employees with certain skill sets currently in high demand. Results from the project were to identify LMI priorities and to aid the CSCSC in developing a plan for LMI to aid the sector in meeting HR challenges.

## 1.1 THE SUPPLY CHAIN SECTOR<sup>2</sup>

**Overview:** The supply chain sector involves the supply of materials to manufacturers, the manufacturing process, and the distribution of finished goods to the distributors and retailers and, eventually, to the customer. It is often thought of as a continuous loop process, or pipeline process, linking all industry sectors and processes, from resource extraction to consumers, as suggested in Figure 1 below. Generally, it is thought that the supply chain aids efficiency of the economy in a substantial manner where operational and HR managers apply appropriate supply chain expertise.

**Figure 1:  
Closed Loop Supply Chain**

How Strategic Decisions Made by Management, Applying Supply Chain Human Resources Maximize Customer Satisfaction, Efficiency, Profits, etc.  
(SPR Associates Inc., 2007)



<sup>1</sup> SPR Associates Inc. is a national research company located in Toronto and Ottawa.

<sup>2</sup> Adapted from CSCSC's website, [http://www.supplychaincanada.org/assets/sector\\_facts\\_and\\_figures.pdf](http://www.supplychaincanada.org/assets/sector_facts_and_figures.pdf)

**Economic Significance:** The supply chain sector is of great significance in the Canadian economy. As of 2004, there were over 700,000 people working in the Canadian supply chain sector (excluding truck drivers), a workforce which is expected to grow by approximately 1.7% per year, due to new job creation. The total annual demand for supply chain employees is expected to be over 86,000 employees annually over the next 3-5 years, and the total value of supply chain to the economy is estimated at between \$140-\$180 billion, based on key reports comparing the value of the supply chain in the U.S. and factoring in the higher costs in supply chain in Canada.<sup>3</sup> The sector operates in all regions and internationally, and is as a result affected by regulations under NAFTA and the Customs-Trade Partnership Against Terrorism, further adding to its complexity.

**Previous Research on HR in the Sector:** The benchmarking study *Strategic Human Resources Study of the Supply Chain Sector* (2005) provides an important overview of the sector. The goals of the LMI Project, as cited above and in SPR's proposal, were derived from this key study which was also the "launching pad" for the creation of the CSCSC. Many challenges were identified in the 2005 study, including the need to adapt to new technologies and new demands in the supply chain sector internationally, the lack of awareness of supply chain careers and the need to broaden the workforce supply.<sup>4</sup> The supply chain sector is facing growing shortages in skilled labour, together with a lack of awareness of the jobs in the sector, among potential employees/labour pool. Thus, the sector has to develop strategies that work to attract, develop and retain the labour force it requires.

Competition and customer expectations have also significantly increased pressure for speed and quality, which impacts small and medium-sized enterprises (SMEs) as well as large firms. The integration of technological tools to help supply chain management represents another challenge. This includes the integration of information management technology, enhanced technical skills development, and the building of academic/institution alliances. Accordingly, the sector, due to such rapid changes and the sophistication of its needs, increasingly relies on "knowledge workers" with business and technological skills. The sector therefore faces the challenge of attracting, developing and retaining such workers. Importantly, as well, the sector's needs for personnel span a wide range of occupations, including managerial and professional positions and "blue collar" occupations. Occupational trends indicate the continuing or growing need for logistics information systems positions, corporate management positions, sales, marketing and accounting managers, sales representatives and customer service agents, and instructors. There is also a growing demand in operational areas such as materials handlers (e.g. forklift and Raymond reach operators), and related occupational groups (see *Appendix B: National Occupational Classifications (NOCs)* covered by the CSCSC).

*Providing LMI for this broad range of occupations was seen as a key challenge for the CSCSC. As well, producing new LMI requires a highly strategic approach (since LMI already exists) which can be adapted or extended, but which should not merely be duplicative. For example, the workshops pointed towards the need to develop awareness tools for high schools, but a number of "local" tools of this type already exist which could be adapted, such as videos that have been developed by the Calgary Board of Education and by HEC in Montréal.*

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<sup>3</sup> Philippe Richer and David Long. "Supply Chain Cost and Agility: How do you Measure Up?" Presentation prepared for Industry Canada and Supply Chain and Logistics (SCL) Canada. Toronto, January 19, 2007. Council of Supply Chain Management Professionals. "Embracing Security as a Core Business Function". Presentation for the 17<sup>th</sup> Annual State of Logistics Report, Washington, D.C., June 19, 2006.

<sup>4</sup> *Strategic Human Resources Study of the Supply Chain Sector* (2005), [http://www.supplychaincanada.org/assets/CLSC\\_full\\_report.pdf](http://www.supplychaincanada.org/assets/CLSC_full_report.pdf)

## 1.2 THE CSCSC

The CSCSC is a non-profit, non-governmental organization created in 2006 to aid the supply chain sector in meeting HR challenges. The creation of a supply chain sector council was the result of the principal recommendation of the human resources study conducted by the Canadian Logistics Skills Committee.

The CSCSC is one of about 33 sector councils currently serving various industry sectors (trucking, environment, steel, tourism, etc.) funded by Human Resources and Skills Development Canada. Their purpose is to aid Canada's skills agenda and international competitiveness by developing human resources strategies, reducing Canada's gaps in skilled labour, etc. The work of all sector councils is aided by an umbrella group, *The Alliance of Sector Councils*.

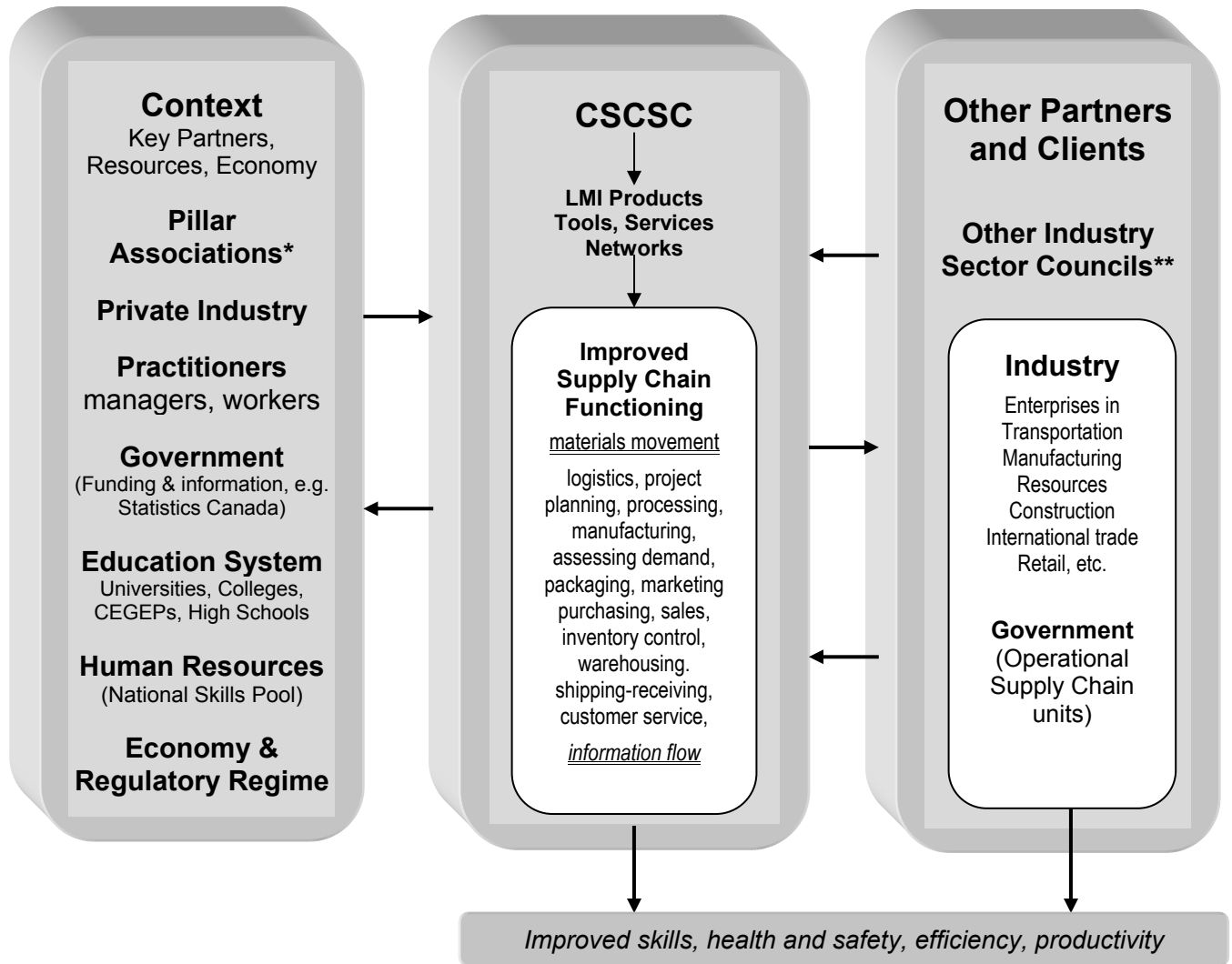
The CSCSC brings together key stakeholders of the supply chain sector in industry, government, education and professional associations. The goal of the CSCSC is to promote a comprehensive human resources strategy to ensure that the Canadian supply chain sector possesses the skilled labour it requires to be competitive on a global basis. This is not an easy task because the supply chain sector is comprised of many different components and activities -- purchasing, transportation, production planning, warehousing, distribution, retail, etc. Each of these activities has its own specific needs, but all benefit from the efficiency and integration of the supply chain as a whole.

Reflecting this complexity, the CSCSC collaborates with a number of important partner associations which are key to the sector. Pillar associations of the sector which support the CSCSC include: The Canadian Institute of Traffic and Transportation (CITT); the Association for Operations Management (APICS); the Canadian International Freight Forwarders Association (CIFFA); the Purchasing Management Association of Canada (PMAC); the Association of Community Colleges (ACCC); the Supply Chain & Logistics Association Canada (SCL); and the Forum for International Trade Training (FITT).

As well, each region in Canada has its own network of stakeholders (universities and colleges, provincial chapters or sections of associations, projects, committees and government agencies) that play a part in the development of human resources through research, education and training activities. Among these, local committees may also provide special projects or services, as diverse as career days in schools or educational videos designed to enhance awareness of supply chain careers. Thus, the overall network of partner activities and linkages underlying the work of the CSCSC is vast, as shown in Figure 2, next page

Figure 2 shows the broader environment for CSCSC (partners and others it works with) and the broader operation of the supply chain sector in relationship to industry, associations and the economy.

**Figure 2:  
CSCSC and Supply Chain Functioning  
in Terms of Partners, Context and Industry Impacts**



\* *Pillar associations* which support the CSCSC include: The Canadian Institute of Traffic and Transportation (CITT); the Association for Operations Management (APICS); the Canadian International Freight Forwarders Association (CIFFA); the Purchasing Management Association of Canada (PMAC); the Association of Community Colleges (ACCC); the Supply Chain & Logistics Association Canada (SCL); and the Forum for International Trade Training (FITT).

\*\* *Key Sector Council bodies* include: The Association of Sector Councils (TASC); Canadian Trucking Human Resources Council (CTHRC); Canadian Printing Industries Sector Council (CPISC); Canadian Council of Professional Engineers (CCPE); Information and Communications Technology Council (ICTC); Canadian Food Industry Council (CFIC); Canadian Plastics Sector Council (CPSC); Construction Sector Council (CSC); Electricity Sector Council (ESC); Petroleum Human Resources Council of Canada (PHRCC); the Canadian Tourism Human Resource Council (CTHRC), and some twenty other sector councils.

### 1.3 SPECIFIC GOALS, DEFINITIONS OF LMI AND LMI PROCESSES

**Overall Goal:** The LMI Project of the CSCSC was designed to gather cross-Canada stakeholders input regarding the types of LMI which the sector council should be developing in order to support the people, businesses and organizations involved in supply chain activities in Canada.

**The Definition of LMI:** LMI was broadly defined for purposes of this study, as including virtually any type of information that would aid employers or workers in improving their skills or productivity.<sup>5</sup>

**LMI Processes and Impacts:** The process of creating LMI is complex, with important impacts on both employers, and workers, as suggested in Figure 3, next page.

**Key Questions/Issues:** As stated in the RFP for the study, key project questions/issues were:

What kind of tools can be developed to document and share information recruitment and retention practices for senior managers, technical and tactical professionals, including search mechanisms, incentives, etc.?

Can a network be developed with a view to creating and utilizing a database or matrix of information on successful approaches, pools of expertise and development of innovative tools, and what would it look like?

Is there support for CSCSC's facilitating a process to research and assess existing information, as well as products and services relating to business and human resources best practices or standards across Canada and elsewhere?

How can the sector assess the supply and demand of skilled workers and professionals and what are the appropriate tools?

How can non-traditional sources of human resources help the industry and how do we encourage their participation?

Does the concept of co-op or apprenticeship help the industry in recruitment, retention and human resources development and what mechanisms are needed?

What is the most effective way to increase supply chain career awareness among elementary and secondary school students?

How should a national, industry-responsive LMI program be structured?

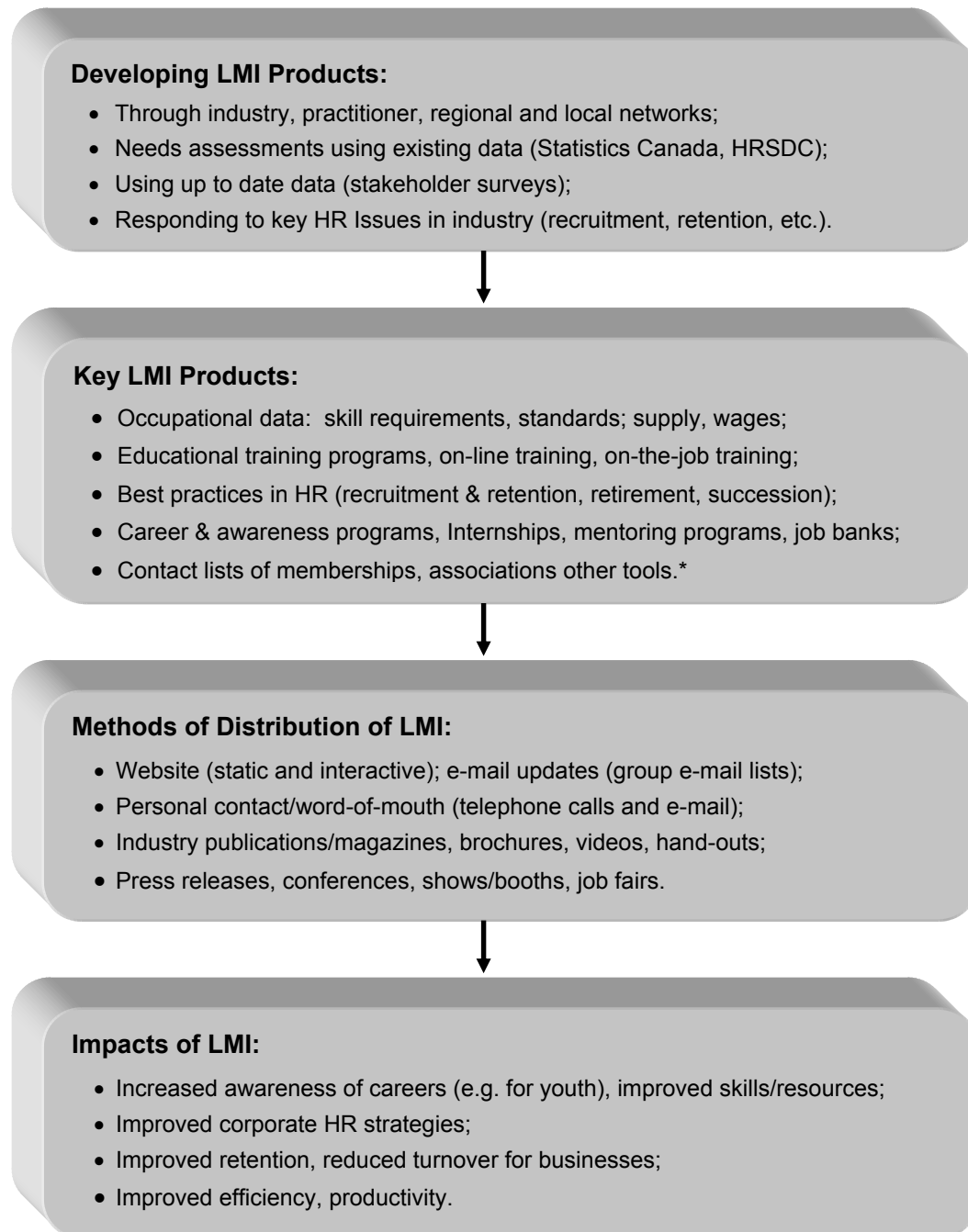
What would a comprehensive supply chain human resources strategy look like and what are the major elements and how do we ensure regional differences are accommodated?

***More generally, the goal of the project was to assess the priorities for future programs of the CSCSC. This goal was to be aided by obtaining insights from background research, but more importantly, by obtaining the perspectives of "on-the-ground" supply chain practitioners from across Canada.***

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<sup>5</sup> For example, a definition of LMI provided by HRSDC is: "Labour Market Information or LMI is the information we need to make better decisions about our jobs and throughout our work or business lives. This information assists career practitioners, employment service providers [employers], job seekers, career decision-makers, and workers by providing (for example) information on job descriptions, employment prospects, wages/salaries, potential employers, industries, economic outlooks, local events and community information." *HRSDC Website* ([http://www.hrsdc.gc.ca/en/gateways/nav/top\\_nav/program/lmi.shtml](http://www.hrsdc.gc.ca/en/gateways/nav/top_nav/program/lmi.shtml))

**Figure 3:**  
**Labour Market Information Processes: Development Processes, Illustrative Product Types, Distribution Methods, Impacts**



\* Other LMI products, such as: guides to evaluate the credentials of immigrants/foreign workers, information legislation and regulations.

## 1.4 METHODOLOGY

**Background Research Conducted for this Project:** An examination of current LMI products and resources on the supply chain sector was conducted to provide additional context for the project, and for the preparation of the workshop guides/materials. Sources examined included: LMI products from other sector councils, including the Canadian Tourism Human Resource Council's HR Tool Kit, the Construction Sector Council's labour requirements forecasting studies and the Canadian Plastics Sector Council's Virtual HR Department; documents and websites, for example, the Joint Learning Initiative, Women in Logistics, the Canadian Materials Handling and Distribution Society, etc.; and documents from other organizations, such as the U.S.-based Council of Logistics Management and the Alliance of Ontario Food Processors.

In addition, in February 2007, a workshop was held in Ottawa with representatives from 10 sector councils,<sup>6</sup> to hear about their experiences with the development of LMI to-date and identify best practices. This meeting was followed-up with telephone interviews to further expand on lessons learned. These sector council representatives suggested several key approaches which would ensure that any LMI which is developed is tailored to the needs of the sector. This included the importance of regular communication and consultation, and a reliance on regional networks to develop and disseminate LMI effectively. The results of this workshop were incorporated into the materials for the subsequent workshops with supply chain stakeholders. The meeting and the interviews validated, to some extent, that LMI priorities go beyond any one individual sector.

**Five Workshops with Stakeholders Across Canada:** The second (main) methodological step involved a series of workshops which were conducted in five Canadian cities (Toronto, Montréal, Calgary, Vancouver and Moncton). Discussions at the workshops centred around stakeholders' views on the identification of human resource and labour market issues facing the sector today. Participants were largely from the private sector (both major companies and SMEs, including consulting and third-party service providers) and education institutions. As well, at some of the workshops, public sector bodies were represented (for example, in transportation and health services).

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<sup>6</sup> Sector councils represented were the Canadian Printing Industries Sector Council, Canadian Council of Professional Engineers, Information and Communications Technology Council, Canadian Food Industry Council, Plastics Sector Council, Construction Sector Council, Electricity Sector Council, Canadian Trucking Human Resources Council, Petroleum Human Resources Council of Canada and the Canadian Human Resource Council.

Within each city, the CSCSC identified a "local champion" who was to be responsible for: suggesting names of invitees (based on their business connections); encouraging participation; and placing follow-up phone calls. Meetings were mainly organized by these local "champions", however, invitations were also sent out by the CSCSC by E-mail to key individuals involved in the supply chain sector. The CSCSC also asked its partner associations to forward invitations to selected members through their own internal E-mail lists.<sup>7</sup>

As well, the CSCSC LMI Committee provided the contact information of persons involved in supply chain-related education and business leaders, who could be potential invitees to the workshops. Subsequently, invitees were contacted by email and phone to confirm attendance. Selection of workshop participants depended largely on the CSCSC's capacity to encourage (mainly through personal contacts), busy managers and professionals to attend. Invitees to the workshops were provided with the workshop materials in advance (via E-mail).<sup>8</sup> This included a description and purpose of the LMI Project, a brief definition of LMI and the CSCSC, and a list of the topics/questions which would be discussed during the workshop. Invitees were also asked to complete an *HR-LMI Issues worksheet in advance of the workshop, in collaboration with others in their organization*.

A number of participants completed their worksheets in advance of the workshops (often in collaboration with others in their organization with whom they consulted) and approximately half of these also "checked-off" their LMI priorities for specific LMI products and preferred methods of LMI distribution.<sup>9</sup> Additional worksheets and priority lists were collected by the CSCSC throughout May and June, by fax, e-mail or through other meetings. Additional input was also provided through an on-line survey, posted by the CSCSC on their web-site.

All of the workshops were moderated by Dr. Ted Harvey, President, SPR Associates, with assistance from Dr. Morley Gunderson. Dr. Jacques Roy co-facilitated the workshop which was held in Montréal. Workshops began with a presentation (15-20 minutes in length), explaining the purpose of the LMI Project and the workshops themselves. Information was also provided about LMI and the ways in which it can work best for the supply chain sector. This included a definition of LMI, how to ensure that LMI makes the most "difference" in success for organizations, and specific examples of existing LMI (e.g. HRSDC, Plastics Sector Council and others). Each workshop lasted 3.5 hours. Detailed notes were taken at each workshop and *summarized*, with a focus on participants' *suggested priorities*.

Workshops dealt with topics such as: learning about participants' past experiences with HR issues and management decisions and their specific LMI needs; and prioritizing LMI products, to help guide the CSCSC's future development of LMI. Workshop discussions ranged from the development of in-house company policies to foster employee retention and performance to wider issues, including international trade regulations, and trends in the supply chain sector.

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<sup>7</sup> A total of 63 supply chain (logistics) managers, educators involved in teaching supply chain courses, HR managers, consultants, third party logistics providers, transportation managers, purchasing managers, etc. participated in the workshops. Additional to direct participation in the workshops, stakeholders provided written assessments of HR issues in their firms and LMI solutions, and stakeholders provided additional information regarding priorities for LMI products.

<sup>8</sup> See Appendix A for workshop materials.

<sup>9</sup> After the first workshop in Toronto, SPR compiled a short-list of LMI products to aid the assessment of priorities and methods of distribution of LMI. The list was added to the materials for subsequent workshops, to enable participants to indicate their preferences more easily.

These issues were discussed from a *career and skill set* perspective and also from a *strategic business decision and company competitiveness* perspective. As well, extensive discussion centred around the issue of raising the profile of supply chain skills and professions in companies, particularly with senior managers and HR managers.

**Strengths and Limitations of the Methodology:** The methodology drew its greatest strength from the wide variety of supply chain perspectives and regional viewpoints. Participants provided extensive and insightful input from their own organization's experiences, and important illustrations of regional and local issues which would be important considerations for the CSCSC when they are considering future LMI products/tools. *A limitation, however, was that no statistical data could be generated on the ranking of LMI priorities.*<sup>10</sup>

## 1.5 ORGANIZATION OF THIS REPORT

The remainder of this report is organized into two main sections. Below, in Section 2, we address findings in terms of strategic or broad lessons indicated for LMI. Next, we examine LMI products relating to occupations which were identified as priorities by the workshop participants (a range of other "non-occupation" oriented LMI products are also assessed). Findings are presented in relation to the distribution of LMI and the business case for the supply chain sector. The reports concludes with SPR's conclusions and recommendations (Section 3).

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<sup>10</sup> The methodology for the project involved gathering extensive qualitative data in the form of workshops around the theme of LMI that can assist the supply chain sector in addressing HR challenges. The results are therefore only *indicative* and do not represent a statistically relevant sample of stakeholders' views on LMI priorities or statistical indicators of priorities.

## 2. Key Findings

### 2.1 STRATEGIC LESSONS LEARNED

Strategic and specific lessons were identified in areas such as overall need for LMI, approaches to the development of LMI, and specific LMI products. These are outlined below, along with specific illustrations.

**Recognize the Substantial Unmet Need for Supply Chain LMI:** Workshop participants referred to numerous challenges they face on a daily basis which they felt could be alleviated by well-designed, up-to-date LMI. They felt that the CSCSC should promote the development and sharing of LMI information among companies, educational and training institutions, and among HR practitioners. LMI should be locally relevant, accessible and up-to-date. *The existence of a substantial "gap" in LMI was underlined by the fact that few participants were able to cite specific sources of LMI which they were able to refer to which directly relate to their company's needs.*

Some illustrations of these needs were clear. From a broader supply chain perspective, it was noted at all of the workshops that LMI was needed to determine wage differentials between the different regions of Canada (e.g. Calgary as opposed to Montréal). The HR turnover rate was also perceived as a major issue. LMI which will assist organizations to deal with early retirement and an aging workforce was also a concern. Participants were interested in learning more about practical recruitment and retention strategies. (SPR notes that one of the featured topics at the upcoming *Conference of Supply Chain Management Professionals* to be held in October 2007 will deal with the implications of a "greying" population which is having a profound impact on the way supply chains are managed. The conference might present an opportunity for the CSCSC to address some of these issues.)

**Emphasize the Importance of (and Current Gaps in) LMI:** Workshop participants generally emphasized the need for a common understanding of LMI. Participants cited the need for strategies to deal with labour market and human resources issues, as illustrated by the following comment: "labour market information of all types is used daily in our roles to verify skills, needs, wages and more." (*Participant working with HR consulting firm specialized in recruitment outsourcing including for the supply chain*). However, few mentioned specific sources of LMI, such as technical data on the labour market which they would have been using on a regular basis. Many reported that they relied on in-house company policy and strategies, for example, to figure out how to increase retention ("good employee" policies), or relied on word-of-mouth or other networking strategies to hire new workers. Some participants indicated that they used HRSDC NOC codes and the Federal Government Job Bank. Generally, however, participants were not totally satisfied with the current LMI tools which they have access to now. Sharing of information was seen as one remedy for this gap, so that workshop participants wanted to learn from each other and take this information back to their own organizations. *This motivation of sector stakeholders can be a key element to drive the sector's response to needs for LMI.*

**Clearly Define the Goals of the CSCSC to Stakeholders:** Participants expressed interest in attending the workshops in order to learn more about the CSCSC (including its mandate). Participants began many workshops by discussing the terms used within the supply chain sector and asking questions about the CSCSC. They were also interested in learning more about the LMI Project specifically. At all of the workshops, but in Montréal in particular, participants indicated that the CSCSC should clearly explain to sector stakeholders what exactly LMI is, so that discussions can take place within a common framework of understanding. Discussions focused on clarifying the understanding of LMI as it relates to the supply chain sector and the CSCSC's potential role. *The clarification of the CSCSC's role and the scope of the sector council's LMI efforts and capacity were*

*seen as an important priority for the CSCSC, in order to establish itself as a credible organization that can work together with the sector.*

Participants generally agreed that the supply chain sector is changing rapidly and with it, the terminology and "language" of the sector. They wanted to learn more about how the CSCSC "fit" in as regards the changes affecting the sector. They wanted to know how the CSCSC could be an effective force to mobilize resources and interest in supply chain thinking across companies, labour, educational institutions and government.

From a broader supply chain perspective, the role of the CSCSC is still not uniformly known across key stakeholders, particularly in business. This lack of knowledge of the sector council was an important topic of discussion at the Montréal workshop. For example, a warehouse manager in third-party supply chain services said that he could not make specific suggestions regarding LMI products without knowing more about the CSCSC's capacity to help supply chain managers and the sector as a whole: *"I'm not familiar with the CSCSC and their mandate, nor [its] output (past [LMI] products)."*

In addition to the issue of awareness of the CSCSC among supply chain professionals, participants noted that defining the sector in clear terms is also very important to allow effective promotion of supply chain careers (videos, documentation, etc.). For example, one participant mentioned how poorly understood the supply chain sector is, both in the private as well as the public sector (e.g. it is often confused as being limited to transportation): *"I think that the 1<sup>st</sup> [LMI product] needed is [to show] what this industry is all about and how important it is to our economy. [CSCSC needs to] develop a clear definition of supply chain, one that is accepted and used industry wide and used for recruiting. Standardize educational material."* (*Consultant and community college educator, supply chain and transportation.*)

In several of the workshops, participants expressed a great deal of satisfaction in simply being able to meet their peers and to discuss issues together. Some felt that the workshops required follow-up and that additional meetings of the same type should be held: *"[CSCSC needs to] Have more sessions like this LMI workshop."* (*Participant from a manufacturing company.*) and *"[CSCSC needs to make] information available based on changing needs. We need to know where to obtain [LMI] and be able to discuss on a regular basis."* (*Lecturer in supply chain education, post-secondary education program.*)

While the private sector focus of the CSCSC was clear to workshop participants, a number emphasized that the CSCSC should include public and quasi-public sector organizations (e.g. governments, Bell Canada, cable TV networks, hydro) because they also face important supply chain challenges, and are important centres of supply chain expertise.

**Promote the Importance of Supply Chain with CEOs and HR Personnel:** Participants at all of the workshops felt that the supply chain's profile has to be raised -- from a "low-end" part of the business, to be seen as a core part of the success of an enterprise. It was noted that HR personnel are often disconnected from companies' strategic decision-making, and therefore, the hiring process (including hiring supply chain specialists) remains somewhat unrelated to longer-term cost-saving benefits. Participants noted that this objective was related to the development of standardized occupational categories within the supply chain sector and the development of national standards which would be widely accepted.

Many participants were of the opinion that the CSCSC should try to engage company CEOs and presidents more, as well as try to assist middle managers in promoting the supply chain as a core function within companies. Participants argued that this is especially important, given the growing importance of such factors as globalization, outsourcing, just-in-time delivery and inventory management in affecting productivity and competitiveness.

In this vein, participants also noted that CSCSC LMI should provide resources to supply chain professionals to help explain the business case for a supply chain-specific professional focus, and to raise the strategic importance of supply chain in companies' activities. As participants commented: "[We need] connections to existing [supply chain] experts and [we need to do more] promotion of the industry." (*Logistics services & third-party services manager*) and "[We need tools to] communicate the value of integrated supply chain management to organization management – presidents and CEOs." (*President, management consulting services.*) and "[It is important to] communicate [LMI] to impacted agencies/departments within an organization. It does no good to send these trend surveys/benchmarks/statistics, etc. just to HR." (*Director, university procurement services*).

*From a broader supply chain perspective, all of the workshops underlined the need to promote the importance of the supply chain within organizations, including making CEOs more aware of the crucial role played by the supply chain function in the context of globalization. This was seen as a crucial need with which the CSCSC could assist. SPR notes that this could, in itself, comprise a LMI product in the form of a research paper on the economic impacts of good LMI and good use of supply chain skills.*

**Develop LMI Using Regional Networks:** Sector councils which were consulted at the beginning of the research emphasized the importance of regional networking and obtaining local LMI. This factor was also reflected at all of the workshops. Participants noted, for example, that supply chain priorities and labour markets are different in each region of Canada. For example, workers in certain occupational categories or skill-sets, are in high demand in the Alberta economy, which impacts on company recruitment and retention. Certain other regions offer different challenges for a company that is national (e.g. arranging equitable wage scales). Cyclical problems were also noted, including the challenge of finding operational-level personnel in Alberta's current "booming" economy, where "bidding wars" often take place to acquire employees.

However, participants at the Moncton workshop emphasized that it was important to retain a national, comparative perspective, especially regarding other LMI that could assist with company HR policies. This was seen as being desirable in order to identify a wide range of best practices and determine how wages compare in different regions of the country. Participants affirmed that while needs differ from region to region, it is important to establish benchmarking tools to assist in HR planning. External regional factors were also noted as being important, for example, in the Province of Québec, where the mandatory provincial

requirement to allocate 1% of company expenditures to staff professional development or training was seen as strongly impacting HR development. Additionally, the issue of language requirements was noted for Québec in particular, however, language was deemed to be important in all regions.

*From a strategic standpoint, the above findings underline the value of the CSCSC in developing a network of regional LMI committees, to build both local relevance and local buy-in. As one participant noted: "[it is important to have] Regional Committee involvement representing all aspects (or streams) of the supply chain function."*

**Create LMI Products that can be Kept Current and Locally Relevant:** Background research emphasized the importance of keeping LMI up-to-date and locally relevant. "Local" it is understood among participants and key stakeholders, indicates municipal agglomerations and economic regions within the provinces (e.g. Vancouver-Lower Mainland in British Columbia). Other sector councils noted that keeping LMI current also means ensuring that stakeholders are able to use LMI tools and integrate them into their daily business and work practices. Good LMI has to be "usable." As one workshop participant commented regarding the need to be able to find "real career opportunities" on the CSCSC web-site: "LMI needs to be credible, current and provide deliverables." (*Senior manager, third-party provider/consultant of supply chain management solutions.*)

*Given the rapidly changing nature of the supply chain sector, the need for currency and local relevance becomes a top priority for LMI. As one participant noted: "Don't develop the LMI, unless you can keep it up-to-date... if I go look at your LMI and it is not current and available for my location, I won't be able to use it." Participants emphasized that these factors were especially important for LMI which is developed if the CSCSC is to remain credible and relevant to stakeholders. SPR notes that this is probably one of the most difficult tasks for the CSCSC, since much of the data which is used for LMI originates from agencies such as HRSDC and Statistics Canada and is difficult (and sometimes costly) to obtain on a local and regular (up-to-date) basis.*

**Assess the Demand for Specific LMI Products (determine the market):** Extensive commentary during the workshops pointed to the need to assess the demand for specific LMI products. One such LMI product noted was a broad, overarching *benchmarking study* dealing with wages, retention, and other key information by occupation across the sector and in comparison to other industries, in each province. Such information would be a particularly relevant and useful LMI tool for companies to ascertain exactly where they are situated in relation to others within their sector. Participants made the following comments in relation to this topic: "Benchmark all positions by market sectors with no preference to any specific professional association or organization." (*University (public service) procurement director with a key concern to replacing retirees with adequately trained workers*); "[Provide an] industry analysis on talent pool and wages, and how to manage changes." (*Individual involved in supply chain activities with a financial company, who voiced an interest in general LMI, including in-house training programs and fostering improved retention.*)

**Identify and Understand the Overlap With Existing LMI and Organizations:** Taken together, the 33 existing sector councils produce many different LMI tools. Each sector council brings together different stakeholders, but the supply chain's cross-sectoral character requires integration of functions across various industries.

For the supply chain's functions to increase in importance requires that the supply chain make reasonable use of existing LMI, establish mechanisms to monitor the use of LMI, and ensure that LMI is being used and is viewed as being reputable. The CSCSC could help break the "silos" of LMI and work towards expanding access to associations and other organizations that would be valuable resources to the sector as a whole. Key steps could include:

- increasing collaboration with other sector councils, Chambers of Commerce, local Training Boards, the Federal, Provincial and local governments and educational institutions;
- establishing methods to monitor and assess stakeholder use of LMI to ensure its continued relevance and impact (e.g. tracking requests for information); and
- along with web-based approaches, personal contacts continue to be important. Overall continued communication is essential to maintain the momentum from the LMI workshops and other CSCSC projects.

**An initial step, from the perspective of the supply chain sector, would be to ensure that links to existing LMI web-sites from related organizations are made available on the CSCSC web-site. (It should be noted that the CSCSC is already providing links to several associations' web-sites.)**

*In the same vein, while not duplicating existing LMI, participants noted that it is important for the CSCSC to develop new LMI, in collaboration with its partners. [SPR also emphasizes that, in some cases, this may mean developing common information mechanisms (e.g. surveys) with other sector councils (or TASC) and associations.]*

## **2.2 PRIORITY NEEDS FOR OCCUPATION AND LABOUR FORCE-RELATED LMI PRODUCTS**

**HR, Labour Market and Occupation Issues are Major Concerns:** Participants at all of the regional workshops reported that they had encountered difficulties finding and retaining qualified workers within their organizations. Most were aware that this issue would become even more important in the near future given projected continuing labour and skill shortages (especially with the impending retirement of baby boomers). These difficulties included attempting to hire (and retain) workers who would be willing to move (relocate) or be on the road for extended periods of time (e.g. for transportation-related jobs). Participants also noted that offering wage incentives alone was no longer enough in order to fill the gaps in qualified personnel.

**Information on Supply-Demand for Specific Occupations is a Priority:** Participants at every workshop spoke of the difficulty in "finding the right person for the job." When asked "*Which types/kinds of workers and/or qualifications do you seek as an employer?*" employers gave the following samples of occupational categories and qualifications in which they regularly sought to employ personnel:

- Forklift technicians;
- Logistics managers;
- Qualified seafarers;
- Marketing/sales;
- Software implementers;
- [Supply chain management] Consultants;
- International logistics and project logistics;
- Warehouse supervisors; and
- Material handling equipment operators.

*It was noted that, for the above occupations, local supply and demand information was a key LMI need. All of the LMI products of this kind should be regional, at a higher level but also "drill down" to a local level (e.g. York region in Ontario, Calgary in Alberta, etc.). In addition, when local supply was insufficient, the use of foreign workers was as a key issue. Participants in Vancouver and Toronto emphasized the importance of the CSCSC covering immigration matters, to assist in paperwork to hire migrant workers, and international students interested in staying to work in Canada. As one participant noted regarding the issue of supply and demand: "For some positions, e.g. Technical Superintendents, most qualified candidates are not Canadian residents and LMI could aid us by making it easier to obtain work permits for these specialized resources." (Individual in transportation industry and related supply chain activities.)*

**Information on Wages for Specific Occupations by Region/Local Area is a Priority:**

Workshop participants noted that wages are a key issue which affects Canadian business on a daily basis. Participants in Moncton clearly voiced the need to be able to balance wage information (i.e., between a national perspective and regional perspective). They also commented that companies in Atlantic Canada face the added burden of having to compete with companies in other areas of the country (e.g. Alberta) which are able to offer higher wages for the same occupation. They suggested that there should be a regional emphasis as well as a nation-wide or international approach to wage information. While regionally-specific information would allow for some degree of detail, broader changes within the sector (including innovations or trends in other regions of the country) were also viewed as being extremely important.

How access to wages information was provided was also seen as being an important issue. Workshop participants in Toronto noted that it is important to create validated LMI, to survey the sector more widely, in terms of key figures for the supply chain sector (e.g. salaries, compensation). There are surveys conducted by business magazines, but supply chain jobs are completely different -- in different industries. **The cross-sectoral nature of the supply chain makes it difficult to narrow down all of these labour market measures, such as salaries, pointing to a need for unique initiatives (possibly partnering with other SCs).**

Participants in Vancouver noted that easy access to wage information was closely linked to labour supply data. Of note was the emphasis on comparability between different sub-sectors, locations, private-public organizations, size of firms, etc. Illustrative comments included: [We need] "tools to help with assessing wages, compensation and fringe benefits" (*Individual in distribution and procurement, government public service*); "Job/compensation surveys" (*Manager, distribution and transportation industry*); and "LMI on: current pay in private sector versus government/public sector, hours, benefits, production." (*Individual in public sector distribution and procurement.*)

**Job Descriptions/Skills Requirements for Specific Occupations are a Priority:** Workshop participants indicated that the CSCSC should contribute to developing job descriptions and skills requirements that are more reflective of the realities of the supply chain sector. It was noted that, in some companies, HR managers are unaware of how to hire supply chain professionals. They require supply chain-specific knowledge or ways to readily access this knowledge, to be able to hire workers who will have the necessary combination of supply chain skills.

In particular, participants involved in supply chain education linked well-defined and accepted skills requirements to the quality development of appropriate educational materials and training courses. Good job descriptions, they indicated, will ensure that educational institutions and associations are providing candidates and employees in the supply chain sector with the skills that match the appropriate employment opportunities (skills sought after in supply chain functions). Specifically, job descriptions and skills requirements should focus on the need for highly skilled labour in supply chain functions and broad spectrum skills ("whole of the supply chain" perspective), rather than just an occupational category perspective, and also include high-end technology work. Supply chain specialists engaged in consulting and lecturing at colleges or universities all expressed the need for improved information on skills required in supply chain-related occupations.

Similarly, participants also reported that there is a great deal to be done to enhance the profile of supply chain knowledge and skills. It was especially important, from the perspective of educators, to be able to identify the right match between the education curriculum and the skills sets needed in the industry. For example, as one participant emphasized: "Identification of skill, knowledge sets and qualifications for different level positions in SCM (across functional lines) to support the development of educational programs that better meet industry needs with qualified higher education graduates [is a priority]" (*University professor, supply chain management.*)

In the area of supply chain management (an important concern for many directly involved in managerial functions), participants emphasized that it was important to determine exactly what skills sets were needed in higher level positions, both for new entrants, but also for continuing professional development and for employees looking to "move up" into the supply chain's higher responsibilities. As one participant noted, useful LMI would include: "Leadership expectations of Supply Chain Management professionals – generalizations of typical SCM professionals, i.e., attitudes towards leadership, key gaps in softer skills." (*HR business partner, energy company.*)

Participants also asserted that job descriptions are valuable and provided ideas of how they could best be presented and what they might include. In a database format, they have the added benefit, according to one participant, of allowing companies and prospective employees to "make the connection" using common terms of reference: "At some point, I'd like to see a database made available that will allow companies to utilize when seeking resources, i.e., a resumé database, a job description with salary range database. I believe this will serve as an enabler for the potential new hire and hiring company to discuss the new role with greater ease and confidence." (*VP - Operations, logistics company, noting that dialogue between industry leaders is essential to address sector-wide challenges.*)

Participants also indicated that a priority exists to support educational programs in meeting the needs in the industry, for example, one participant stated that there was a need for: "Qualifications, knowledge and skill set requirements defined for technical and managerial personnel in SCM [Supply Chain Management]." (*Educator in supply chain management.*)

**Participants also emphasized that the current NOCs do not always reflect supply chain reality and that expected skills and career opportunities must be better defined for NOCs.**

**Occupational Standards are a Priority:** As a first step towards driving the agenda on national occupational standards that match the supply chain sector's work descriptions, participants in all workshops (especially in Toronto), indicated that the CSCSC should strive to modify the existing NOCs. Although participants' experiences with NOCs varied, on the whole, they commented that NOCs could be improved to better reflect occupations in the supply chain sector today (including, for example, the new security requirements in cross-border movement). As well, to enhance the relevance of the NOCs, expected skills should be more clearly defined, including *soft skills* and what that particular job can lead to, e.g. in terms of careers further down the line.

*Participants generally agreed that NOCs were seen as "behind the times," compared to the fast-moving new definitions of supply chain work. As a case in point, a recent immigrant who was applying for residency and was hired as a "supply chain analyst" with a company discovered that there was no job category selection in the government immigration forms that matched his position. According to one participant, job descriptions, like NOCs, are considered the appropriate start for building company-specific work descriptions, however, companies have to adapt NOC information to their particular business environment.*

**Certification and Accreditation are Priorities:** Many participants held one or more certifications or were working towards obtaining a designation (e.g. from PMAC, CITT, etc.). It was emphasized that the CSCSC could provide not only a list of accreditation, certification and training, as well as educational programs (as is now underway with the CSCSC's database project), but also a "rating" or "primer" on what these various professional development or educational courses offer in "real terms." For example, to show what an employer can expect when a candidate for a job possesses a particular certificate or diploma (this was noted as a potentially valuable extension to the current CSCSC project on education).

In the same vein, another priority pointed out in Calgary was that the CSCSC should provide a "road map" for companies to better understand professional associations and their accreditation programs. Such a tool would allow companies to more easily navigate and understand these qualifications, the expertise that comes with them and know how these associations and memberships might work together with companies to enhance the sector and better meet their HR needs.

Many participants noted that there is a need for more specificity and level of detail in NOCs. One participant stated that the most important LMI for them would be: "Standard occupational titles with education certification levels/salaries/description of duties." (*Purchasing manager for government public health organization.*)

Several workshop participants thought that standard occupations should not be made more specific and should remain more "generalized", otherwise they would have to be constantly changed/updated, in a fast-paced supply chain sector where qualifications and job tasks are always changing. This was emphasized in Montréal, where the consensus among participants was that the current NOCs were satisfactory and that each company was now able to "take or leave" what fit them best in terms of occupation classification in line with their company's needs.

One workshop participant stressed the importance of creating a system of assessment and recognition of credentials. This would allow employees and employers to seek out and thus avoid confusion regarding the best professional accreditation recognized both within Canada and internationally. This is needed to both affect and reflect the growing importance of supply chain on a strategic level. As this participant emphasized: "A recognized certification for the profession (e.g. CISA for Information Systems Auditors and CA for accountants, the PMI for project managers, etc.) is needed." (*Director in a consultant services supply chain company.*)

Inadequate information received from HRSDC was mentioned by some participants, who noted that more precision as regards supply chain characteristics is necessary:

"[More information in job banks...] when posting on HRDC, many of the applicants have not been qualified. The addition of screening questions may assist in making postings more effective." (*Individual in supply chain activities in transportation industry.*)

"[More specificity, e.g.] subdivide NOC code for forklift technicians to have electric and internal combustion sub-classes." (*Manager, manufacturing and distribution of supply chain tools and equipment – storage, lifting & docking.*)

*From a broader supply chain perspective, participants at all workshops expressed the desire for increased attention to certifications and what they actually mean. Some certifications, it was noted, are well-known across Canada but others are not as well-defined. Many participants indicated that they wished to know how to "read" professional accreditations and know what to expect when a candidate presents certain certification credentials, etc.*

## 2.3 NON-OCCUPATION-RELATED LMI PRIORITIES

### **There is a Need to Compile a List of "Best Practices in HR: Recruitment, Retention, etc.:**

In all of the workshops, participants expressed concerns with company culture and strategies to deal with HR issues. They commented on the changes in hiring practices, including developing contracts that fit the divergent needs of younger and older workers as well as employees with families that are increasingly trying to achieve work-life balance (e.g. flex-time). Participants emphasized that companies have to be more involved in their employees' needs in light of today's more diverse workplace and work-life balance values.

Participants also suggested that the CSCSC could conduct a study of the impact of attrition as a result of downsizing or retirement and the aging workforce. These issues, according to one workshop participant, are not well-understood in the industry. A related result, it was mentioned, is that senior level personnel are simply not available or "short of the time" necessary to mentor the next generation. As well, participants noted that retirements also give rise to a loss of "corporate memory." Creating more opportunities for mentorship was seen as an important practice for organizational structures (creating the next generation of leaders and also addressing the issue of maintaining corporate memory).

Participants commented extensively on HR practices and noted that the sector council should also promote innovative HR solutions, including flexible working hours and present "success stories" of good labour retention practices and company profiles.<sup>11</sup> The sector council should examine issues of succession planning and ways of encouraging the establishment of strategies within the workplace. The CSCSC should also provide information on recruitment costs and identify strategies for balancing these costs with retention spending (in areas such as professional development).

Another specific suggestion, discussed at length in Vancouver, was for the CSCSC to develop a self-help guide of attraction and retention strategies. In Calgary, participants spent a lot of time discussing these issues and concluded that the CSCSC could develop practical "how-to's" such as employee surveys, that assist in rating performance, based on leadership and the degree of motivation of the employees. Suggested topics included "exit" interviews and concrete measures to foster company loyalty.

To retain employees often means ensuring employees that "fit" are recruited from the start. One participant in Montréal suggested that a company with a culture of entrepreneurship should communicate its company practices and expectations as clearly as possible at the interview stage, to inform potential employees about the requirements of the workplace. Similarly, when outsourcing is a major component of the organization, flexibility which will be required of employees should be clearly communicated as part of agreed-upon expectations for a job. Participants commented in a similar vein, that: "Recruitment is the biggest challenge so products to assist with finding qualified applications are key. Assisting potential employees with communication and soft skills is #2." *(Individual in transportation industry and related supply chain activities, currently using HRSDC LMI mainly to ensure that compensation is within range.)*

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<sup>11</sup> This might also include, from a supply chain perspective, information on failures since there is as much to be learned from failure as from success.

Facing important turnover challenges, some participants felt that sharing best practices in terms of company policies (e.g. in transferring young employees internally to supply chain roles) would be valuable information. As one participant recommended: "Publish "success stories" so that we can find inspiration in the practices of other companies." (*Individual in human resources and operations, pharmaceutical manufacturing company.*)

Another similar comment identified recruitment and retention as key LMI topics to go beyond the current NOC-related information (e.g. number of employees under a particular NOC, salary range). More dynamic LMI is a priority, as one participant emphasized: "Cost of recruitment, best practices for retention strategies." (*Manager, information technology management consulting, involved in supply chain services.*)

*Thus, approaches to aid recruitment and retention were a high priority. From a broader supply chain perspective, recruiting foreign employees (e.g. in Toronto, Vancouver and Montréal) was mentioned several times at the workshops as a means to supplement current HR needs.*

**There is a Need for Initiatives in Career Planning and Awareness:** The "career" focus of several workshops was on school-to-work transition and youth career planning, in particular, disseminating information about the supply chain within schools. However, participants also emphasized identifying potential candidates for positions in the sector by providing existing employees (e.g. operational employees) with a view of supply chain as a "career with many development opportunities" (i.e., using career potential to aid retention).

In Moncton, participants thought that the CSCSC should be at the forefront of promoting the "worth" of the sector and the viability of careers in supply chain positions. More has to be done to increase knowledge regarding the size of this key sector in Canada's economy and the global economy, and also how it can make a company more competitive. For example, participants in several cities, including Vancouver and Toronto, mentioned that the economic success of WalMart, thanks to the efficiency of their supply chain management, has enhanced the profile of the sector. These participants argued that more could be done to make other examples more well-known. In Calgary, participants also emphasized that the CSCSC should play a key role in promoting supply chain work as a career option and contribute to greater awareness of the sector and career paths. There was general agreement among all workshop participants that the CSCSC had a substantial role to play in collaboration with stakeholders, in enhancing supply chain awareness activities, including at high school career fairs, in grade schools as well and in education programs generally.

Some specific tools suggested by participants included a "sales kit" to explain not only what supply chain is, but why prospective workers should choose the sector. It was also noted that a national roster of supply chain companies and managers would be a useful tool for the CSCSC to develop, in order to increase the level of awareness of the scope of the sector and aid networking. Career awareness should also be about managing the expectations of new entrants, including their pay rate on their first job. As one participant commented: "Advise people that they can't start at the *top of the range.*" (*Individual in the distribution and transportation industry, with key LMI needs in fostering employee commitment and in finding the appropriate labour supply.*)

As regards career issues, comments included: "Forget the bureaucracy. Get back to the basics. Teach people that there are many career options in the trades. Make trades education, and apprenticeship programs more available. Instill in young people, the need to find careers they can be passionate about. Co-op programs are wonderful!!" (*Participant involved in supply chain functions in manufacturing - cabinetry, metal fabrication and vehicle electronics.*)

Providing career profiles that are readily accessible (on the Internet) was important to several workshop participants and would allow users to obtain information with a certain degree of independence. Career planning revolves around quality communications tools, and "linkages" between individuals and organizations. Illustrative comments include:

"Develop an employment search website: a "supply chain profession" website that links candidates to companies." (*Individual working as a quality operations assistant in with a manufacturing company.*)

"Career website [related to supply chain jobs]." (*Contributor, manufacturing in supply chain related functions.*)

*From a broader supply chain perspective, some participants noted that working with HR departments within organizations seemed difficult, as HR personnel lacked an understanding of the needs of supply chain departments and an understanding of how career links might be made.*

**There is a Need to Assess Education Training Programs and Services:** For participants at all of the workshops (especially educators), curriculum, awareness of post-secondary programs and training opportunities were extremely important HR-related issues. *This pointed to validity in the CSCSC's first effort in its project to inventory educational programs.* Participants generally agreed that the need for LMI begins with educational institutions and programs that bring awareness of the supply chain to young people. They argued that the vision and expectations of youth and graduates have to be expanded and managed. School guidance counsellors and career information representatives must be informed, perhaps with direct input from the CSCSC, about what youth can expect -- the opportunities available in supply chain. (A promotional video has been produced by HEC, Montréal, and participants noted the successful impact of such videos regarding the supply chain sector, encouraging high school students to pursue studies in supply chain management.)

In Montréal, workshop participants commented that the CSCSC should take the lead in identifying, together with private sector companies, the learning outcomes that they are seeking among graduates or certificate holders, and then to communicate these to, and work together with, institutions that are responsible for these training and education programs. This, it was suggested, will ensure that the CSCSC can support employer-employee matching and obtain the best "fit" for HR needs in the supply chain. In a related vein, Calgary participants suggested that the CSCSC should enable employers, potential employees and new graduates to become aware of one another, including facilitating "real-life" work experience for new entrants. One participant in Vancouver suggested that 4-6 weeks would be sufficient to give youth a taste of the type of work involved. As well, even at younger ages, children would benefit from learning about supply chains (e.g. how running shoes arrive on the store shelf) in fun, educational activities – including a visit from a supply chain professional to talk about their jobs in elementary schools.

Toronto workshop participants noted that LMI should provide evaluations of the different training and professional development programs -- both for those persons wishing to take courses/obtain diplomas, and for employers as well, to be better informed about what they can expect from someone with a specific diploma, or someone who has taken a course. In some cases, participants noted that the CSCSC could take leadership with key stakeholders in evaluating and establishing connections with educational programs and certificates. For example, one participant emphasized that the CSCSC should:

"Develop a true and accurate licensing and training program for Material Handling Equipment operators, also on more than one piece of equipment." (*Employer, Distribution and transportation industry also concerned with key reliable information on wages, industry standards and recruitment.*)

One participant whose main concern was adapting to technological change by hiring individuals with specific computer skills and seeking better access to on-line computer training for employees, suggested: "[develop a] Computer training package specific to supply chain." (*Individual involved in manufacturing.*)

From an employer's perspective, the need for supporting tools to assess qualified candidates when hiring was noted: "Make it easier to validate candidates' competencies by providing methods or evaluation grids." (*Director, consultant services supply chain company.*)

Soft skills were also noted as a significant component of training needs. Participants felt that leadership qualities were not always as well-defined as the technical qualifications sought after by employers. Managers expressed difficulties developing these skills and finding the appropriate resources to train their employees, as reflected in the following comments:

"[Make] Available workshops, either on-line or within our region. The workshop must be cost effective to support its merit or it will be poorly attended." (*VP-Operations, logistics company.*)

"[Provide]... lists of resources of qualified trainers, seminar people who offer [softer, people/team] skill sets." (*Logistics manager, manufacturing company.*)

*From a broader supply chain perspective, many workshop participants emphasized that education programs need to be evaluated to determine what can be expected from someone who graduates from a specific program.*

**There is a Need for Internships and Co-op Placements:** Internships and co-ops were seen as important, but complex issues. Rather than create "new" internship programs, several participants suggested that the CSCSC could identify 'successful' programs and encourage companies to participate in these internship programs. For apprenticeships and co-ops "on the shop floor" to be successful, they have to be promoted as valid options for high school students and employers. Parents and peers must also be encouraged to view work in the trades as a good profession.

In Moncton and Vancouver, several workshop participants noted that co-ops are sometimes poorly planned and designed. They further commented that companies do not always devote the time and resources required to make co-op experiences worthwhile for the students as well as for the company itself. The CSCSC could assist educational institutions and companies "link-up" more effectively to promote and expand co-op and internship opportunities, and *develop specific criteria and oversight to ensure such opportunities are meaningful and well-supported.*

The CSCSC could also go one step further by promoting and/or spearheading co-op type or internship programs, beginning at the high school level, in order to create better employer-employee matching (throughout the educational process) thus better preparing graduates for jobs. Apprenticeship programs were the subject of little comment in comparison to co-ops. Although apprenticeships are desirable for managers as well as individuals seeking skills training and employment, they are not always highly practical because of regulatory, cost and paperwork issues. For example, one participant in Moncton noted that it is easier and sometimes faster to hire the employee outright and provide them with in-house training rather than follow the steps involved in apprenticeships. Overall, however, workshop participants felt that more could be done to encourage companies to invest in training opportunities for youth, whether co-op or other similar programs.

*From a broader supply chain perspective, the potential role for the CSCSC in support and development of co-op and internships, was seen as being important (for example, this role is prominent with bodies such as the Council of Supply Chain Management Professionals in the United States).*

## 2.4 IMPLEMENTATION AND DISTRIBUTION OF LMI PRODUCTS

**Overview:** Workshop participants expressed a wide range of views on the topic of information dissemination. They emphasized that channels for the distribution of LMI should be wide-ranging, including not only internet (web-sites), but also print and video materials, and that a key element for sharing information could be accomplished through networking (including meetings such as the regional workshops which were held for this project).

Some participants noted that instructional materials (including web-based and video materials which could be used in high schools) should be developed and promoted, so that sector professionals have easy access to tools demonstrating the range and value of supply chain skills. Others emphasized that the CSCSC's information should be included in a wide range of distribution channels, including those that are read by company presidents, and ready by commercial leaders (e.g. at Chamber of Commerce meetings and other regional-local business networks).

It was also suggested that the CSCSC's website could include a page where users could complete a questionnaire that would assist in identifying their company's particular LMI needs, and direct them to the appropriate resources. This, it was suggested, could take the form of "drop-down" menu headings on the CSCSC web-site, to help identify the specific labour market questions users have and, based on their response, show specific LMI tools or resources that would be of assistance.

As well, inventories of information were suggested as a priority. One participant noted that the CSCSC should provide: "An industry-related handbook, tabulating all LMI related to the supply chain/logistics sector." (*Transportation & Logistics Manager, Manufacturing company in transportation and other industry.*)

It was also suggested that the CSCSC could look at other websites and other organizations, including the Western Transportation Advisory Council<sup>12</sup> and the Canadian Materials Handling and Distribution Society -- to identify best practices, communications and potential partners in gathering and distributing LMI that is made relevant and accessible to the sector. Other sources of LMI mentioned included the National Institute of Governmental Purchasing (U.S.-based), and local Chambers of Commerce, governments such as the City of Calgary's *Labour Review*.

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<sup>12</sup> See the council's web-site on careers in transportation, including logistics: [www.transpocity.ca](http://www.transpocity.ca)

Most importantly, workshop participants emphasized that the CSCSC should create more opportunities to allow stakeholders to network and connect among themselves and discuss common issues, as was done at the five regional workshops. This would appear to favour the creation of standing regional or local venues for discussion of supply chain issues, although the CSCSC would have to assess the commitment of stakeholders more closely.

**The Importance of partnerships:** The CSCSC should communicate its future plans and distribute these widely to supply chain sector stakeholders (e.g. the CSCSC should collaborate more with its many partners). This issue extends to HRSDC and Statistics Canada. A key issue in the distribution of LMI is that it be “translated” into a user-friendly fashion, customized to the needs of supply chain organizations.

The development of usable databases or other available sources can be as important as the product itself, for example, information produced by Statistics Canada and HRSDC. Much of this information is of a general nature and information relevant to the supply chain sector can easily be “buried,” thus making it easy to “miss the forest for the trees.” The CSCSC could play a potentially important role in translating such information into a useful format.

## **2.5 DISCUSSION: A LABOUR MARKET PERSPECTIVE**

All of the comments by workshop participants relate to a complex economic context. Under global competition where prices of outputs and many inputs are fixed on world markets, the competitive advantage of organizations increasingly lies in the strategic use of their human resources to be productive and competitive. As such, the supply chain function has the opportunity to become a strategic source of comparative advantage and to “have a seat in the board room”.

The timing in 2007 is especially opportune for supply chain management given the importance of factors such as just-in-time delivery, security and inventory management. For the supply chain function to be taken seriously and not marginalized, however, it must be aligned with the goals and business strategies of the organization. This means, for example, that supply chain managers must be able to deliver in a variety of areas: alleviating impending labour and skill shortages so as to prevent production bottlenecks; providing their organization with workers who have the capability of adapting to rapidly changing market needs and who are committed to quality and the goals of the organization; and determining and meeting needs with respect to training, life-long learning, career development and succession planning. This requires close collaboration with the HR function and good LMI.

Having appropriate LMI is crucial in meeting those needs. Information is needed at all phases of the lifecycle of employees: information on facilitating the school-to-work transition on the part of youths; information on transitions in and out of the labour force for middle age workers trying to achieve work-family balance and life-long learning; and information on transitions to retirement, and increasingly back from retirement, on the part of older workers. Furthermore information is needed on a wide range of dimensions as noted in all of the workshops, including: wage and non-wage benefits; training needs and opportunities; recruiting and retention strategies; work time arrangements; internships and co-ops; pension and retirement issues; and non-standard work arrangements (e.g., part-time, part-year, limited term contracts, working out of the home).

Information is also needed on the potential for various sources of labour supply including: students coming out of schools; immigrants; persons who could return from outside of the labour force including from retirement; mobility from other regions; and changes in hours of work and worktime arrangements. For the supply chain sector, CSCSC can be crucial in obtaining such information and “translating” it into usable and “user friendly” forms that is customized to the needs of their sector. Individual organizations have the need for such information, but *individually* they do not have the resources to acquire such information. *Collectively* they can do so, however, through their sector council.

CSCSC can also play an important role in interacting with education institutions, “advertising” the potential for careers in their sector, building on work in education it has done to date. This is especially important in supply chain management where the image is often a limited one associated with “old fashion” functions of warehousing as opposed to the important new functions of logistics frequently associated with just-in-time delivery. CSCSC can also play an important role in feeding information on the sector's needs to the government bodies that provide labour market information.

## 3. Conclusions and Recommendations

### 3.1 CONCLUSIONS

Key conclusions emerging from the research are noted below:

- there is a substantial need for LMI in the supply chain sector; for numerous items, such as information on occupations, wages, awareness and attraction, retention, etc., covering a wide range of industries and occupations;
- there is a need for a regional focus in the development of LMI;
- there is a need to enhance the "business case" of supply chain functions in LMI;
- there is a need for the CSCSC to fully define itself and its plans for LMI to its stakeholders; and
- there is a need to set priorities and strategies, as only a limited number of LMI projects can be undertaken at any given time, and substantial partnering is required for any initiative in the sector.

The overall conclusion drawn from the above is that many additional LMI products might be developed by the CSCSC, subject to its resources and network limitations. These include the wide range of information products mentioned by stakeholders in all regions, including: better job descriptions/skills requirements for specific occupations; sector-wide skills standards; information on certification/accreditation; information on compensation (wages for specific occupations (by regional, local area)); projections on supply and demand for specific occupations -- timely and at the local level; information on educational training programs and services (including colleges, and high schools curriculum) through on-line databases (a topic already addressed in the CSCSC's initial work on education); information on internships and co-op placements for youth; information on best practices in HR (to aid recruitment and retention, dealing with retirement issues, etc.); awareness programs in high schools; information documents for assistance with immigration policy when hiring foreign workers; the development of e-learning tools on the CSCSC web-site or in conjunction with partners, to enable continuing education/professional development, especially in soft skills areas; training to keep up with new/emerging technology; information on sector-relevant legislation and regulations; and (for networking) contacts lists of memberships, associations and affiliations.

## 3.2 RECOMMENDATIONS

**Clearly, setting priorities is a key challenge for the CSCSC since, as noted above, there are many products in demand in a rapidly changing supply chain sector.** However, the recommendations below, while not representative of all of the suggestions at the workshops, represent SPR's informed suggestions of some potential priorities for the CSCSC to consider.

While setting priorities should be a matter for consultation by the CSCSC with its partners, including future regional partners, a number of specific LMI initiatives can be considered and should be placed on the table for upcoming LMI planning discussions. While the CSCSC could undertake some projects independently, each of these could ideally be considered where one or more partners were prepared to collaborate. Some priorities for consideration (not in a definitive order of importance) are listed below:

1. the CSCSC should test stakeholder buy-in to its LMI process by determining if working groups can be developed from the recent workshops, into regional/local LMI working groups -- these might be generic or project-specific;
2. the CSCSC could consider a more formal survey to assess priorities of some of the LMI initiatives emerging from the workshops (e.g. priorities on items such as those listed in the last paragraph of the preceding page); such a survey could also assess specific information needs which stakeholders have regarding educational and other programs; assessments of the usefulness of existing certifications, etc;
3. the CSCSC should undertake a research piece on the economic value of supply chain skills, as a tool for its supply chain stakeholders to use in corporate educational efforts (showing the return-on-investment -- business case -- for adding/improving supply-chain specific skills sets within companies);
4. in order to address the demand for occupation and wage data, the CSCSC should review with HRSDC, the possibility of providing more user-friendly and responsive web-portals with local occupation supply-demand and wage information;
5. the CSCSC should compile from existing sector councils and other research, best practices on recruitment, retention and related issues, for sharing with stakeholders on the CSCSC web-site; and
6. the CSCSC should develop tools to promote careers in the supply chain (for example, adapting HEC, Montreal's and/or the Calgary Board of Education's video (or similar videos) for high schools into a suitable framework for adaptation across Canada).

More broadly, the full range of LMI products discussed (see last paragraph, prior page) could be considered as areas for potential development by the CSCSC.

## **Appendix A: Workshop Materials**

Note: In addition to the materials listed below, *.htm* files from the following websites were also shown as "slides" for the workshop presentations:

Service Canada, Labour Market Information: *Job Descriptions and Wages & Salaries* available at: <http://www.labourmarketinformation.ca/>

Canadian Plastics Sector Council, *Employer centre: Virtual HR Department* available at: <http://www.cpssc-ccsp.ca/index.php?site=www&lang=E&view=a&id=1&aid=123> (password protected)

These web pages have not been reproduced in this appendix.

# **Canadian Supply Chain Sector Council (CSCSC): Labour Market Information Workshops**

Materials prepared by SPR Associates Inc.

## **SPR Workshop Team:\***

Dr. Ted Harvey  
Dr. Morley Gunderson  
Dr. Jacques Roy  
Mr. Maxime Cappeliez

**For more information about the Labour Market Information (LMI) Project or the CSCSC, please contact Dale Ross at: [dross@supplychaincanada.org](mailto:dross@supplychaincanada.org)**

**To provide feedback on today's event, please contact Ted Harvey at: [ted.harvey@spr.ca](mailto:ted.harvey@spr.ca)**

## Materials included:

- Agenda and confidentiality protocol
- What is LMI? How can it work for the supply chain sector?
- Discussion questions for LMI workshops
- **Worksheet** – HR Issues and LMI as Related to your Company
- Annexes 1 and 2: Examples of LMI products:
  - Service Canada
  - Canadian Plastics Sector Council
- Annex 3: Sample List of Occupations from the National Occupational Classification (NOC)
- Annex 4: LMI Priorities List

## Workshop Agenda:

11:30 a.m. – 12:30 p.m.: \*Lunch will be served during this time\*

- Welcome (Dale Ross, CSCSC), networking
- Introductions of moderator and research team, and workshop participants
- Workshop context and objectives (Dr. Ted Harvey, Dr. Morley Gunderson, Dr. Jacques Roy and Mr. Maxime Cappeliez)

12:30 p.m. – 2:30 p.m.:

- Discussion and questions
- Identification of LMI issues, priorities and concrete measures

2:30 p.m. – 3:00 p.m.:

- Final questions and comments on priorities

*Confidentiality and Protocol:*

*Thank you for participating in the CSCSC's LMI workshop.*

*All of your comments and information provided will be kept strictly confidential. No individual comments will be attributed to participants in any study reports. The information obtained from today's workshop will only be used to assist the CSCSC to determine and address stakeholders' LMI questions and needs.*

*SPR Associates Inc. has been contracted to undertake the LMI project on behalf of the CSCSC. A report of the proceedings will be made available to all workshop participants.*

## ***What is LMI? How can it work for the supply chain sector?***

The purpose of the CSCSC as a sector council is to identify current and anticipated human resource (HR) and skills training challenges, and offer medium and long-term strategies to address these sector issues.

**LMI projects are undertaken by all Sector Councils (SCs) to develop strategies that respond to changes in the labour market.**

*LMI has a direct impact on the lives of workers and companies: it helps guide individuals' training and career choices, and allows managers to understand trends in the labour market and make informed company decisions.*

A key definition of LMI is: "Labour Market Information or LMI is the information we need to make better decisions about our jobs and throughout our work or business lives. This information assists career practitioners, employment service providers [employers], job seekers, career decision-makers, and workers by providing (for example) information on job descriptions, employment prospects, wages/salaries, potential employers, industries, economic outlooks, local events and community information." *HRSDC Website ([http://www.hrsdc.gc.ca/en/gateways/nav/top\\_nav/program/lmi.shtml](http://www.hrsdc.gc.ca/en/gateways/nav/top_nav/program/lmi.shtml))*

### **What does LMI generally include? Information regarding:**

- Labour demand: sector growth, regional differences in the industry, projections on skills requirements, job profiles – NOCS.
- Labour supply: demographics, immigration and skills recognition, and training/upgrade needs.
- Changes in the business environment, including information on legislation, education, international economy, etc.
- Tools for training, improving HR, etc.

### **An LMI system is most effective when it combines data with interpretation.**

According to The Canadian Institute of Traffic and Transportation (CITT), an LMI system is effective if it combines data (such as employment projections, salary data and training requirements), with interpretation of this data to make it meaningful to those who seek a job in the sector or who are making career decisions, to organizations that are seeking skilled workers, or to HR managers, career coaches and guidance counsellors who support these people and organizations (from CITT website).

### **Developing LMI faces many challenges:**

- Quality control: Keeping the information up-to-date and accurate, such as occupation definitions.
- Ensuring buy-in: Maintaining and extending contacts within the sector.
- Communication: Sharing information regularly with stakeholders in terms that are clear and relevant.

**LMI makes a difference.** Studies of the impacts of LMI are rare, however, research (such as that conducted by SPR in 2006; and by the Conference Board in 2006) points to many positive impacts for workers and companies.

## **Linking LMI to your Own Company: Discussion should relate to your own specific organizational, HR and LMI needs (see attached worksheet)**

Today's discussion will address the following questions and issues:

- How do specific needs of companies drive the LMI agenda (e.g. specific problems and solutions in your company). What are the problems? What solutions have worked so far?
- Is there support in the industry for CSCSC's facilitating a process to research and assess existing sources of information in firms; specifically, best practices and standards in Canada? How can this best be developed?
- Can a network be developed that would create and use a database containing successful approaches, pools of expertise and development of innovative tools? What would such a network look like?
- How can awareness of supply chain careers be promoted with non-traditional human resources (e.g. women, Aboriginal people, immigrants) and youth, to support the industry's HR needs?
- Does the concept of co-op or apprenticeship experiences assist the industry in recruitment, retention and human resource development, and what mechanisms are needed to make them successful?
- What lessons can or should be drawn internationally?
- How should a national, industry-responsive LMI program be structured?
- What should the highest priorities be as regards types of LMI (wage, employment profiles, certification, employer-employee job matching banks)?
- What should the priorities be as regards LMI delivery (web systems, other)?
- What should the role of the SC be?
- Concluding topics (from the floor)

Concluding Remarks: The moderator will outline next steps (assemble meeting results from working group sessions; how and when the results will be distributed). Concluding questions and discussion.

## Worksheet -- HR Issues and LMI Related to Your Company

***This completed (confidential) worksheet can be submitted to the workshop organizers at the end of the workshop.***

**Your Contact Information (voluntary):** \_\_\_\_\_

1. In which sector does your company operate or work?

- |   |                                     |
|---|-------------------------------------|
| <input type="checkbox"/> Manufacturing          | <input type="checkbox"/> HR         |
| <input type="checkbox"/> Distribution           | <input type="checkbox"/> Education  |
| <input type="checkbox"/> Retail                 | <input type="checkbox"/> Consulting |
| <input type="checkbox"/> Logistics services/3PL | <input type="checkbox"/> Government |
| <input type="checkbox"/> Transportation         |                                     |

The following questions, as they relate to your company, will be discussed at the workshop.

2. What are the major HR challenges which your company faces today in locating, developing or managing supply chain human resources? *(Check all that apply)*

- Ensuring an adequate labour supply - finding suitable personnel generally
- Downsizing and dealing with redundancies
- Finding workers in specific occupational categories (specify which ones): \_\_\_\_\_
- Assessing occupational qualifications of new workers
- Evaluating the credentials of immigrants
- Assessing wages, compensation and fringe benefits
- Dealing with basic skill needs (literacy, numeracy)
- Developing specific technical skills (specific software, computer skills, etc.)
- Developing "softer" skills ("people" skills, team skills)
- Developing suitable in-house training programs
- Finding suitable (format or content) training resources (consultants, colleges)
- Reducing turnover of workers, increasing retention of good workers
- Dealing with technological changes
- Developing effective work organization practices (teams, skill-sharing)
- Developing effective incentive packages (bonus or similar systems)
- Reducing undesirable early retirements (e.g. of productive personnel)
- Finding needed off-shore workers
- Dealing with bureaucratic "red tape" requirements
- Managing diversity in the workforce
- Fostering employee commitment to the organization and its goals
- Reducing adversarialism between employees and management
- Health and safety issues
- Establishing family-friendly work practices
- Employee well-being policies
- Other challenges (please specify): \_\_\_\_\_

- 3.(a) Of the challenges identified in Question 2 above, which is most important to your company?
- 3.(b) What types of LMI or other solutions have you applied to address this challenge (e.g. have you used LMI from HRSDC or other Sector Councils and, if so, what types)?
- 3.(c) What kind of new LMI could CSCSC develop to aid your response to this challenge?
- 4.(a) Of the challenges identified in Question 2 above, which is the second most important to your company?
- 4.(b) What types of LMI or other solutions have you applied to address this challenge (e.g. have you used LMI from HRSDC or other Sector Councils and, if so, what types)?
- 4.(c) What kind of new LMI could CSCSC develop to aid your response to this challenge?
5. How would new LMI need to be tailored or delivered to your company to be effective?
6. What do you feel is the single most important LMI product that the CSCSC should develop over the next 2-3 years in order to meet your company's needs?

## **LMI Priorities List**

You can check off the most important of these and submit to the organizers after the workshop.

### LMI Products and Services

Job descriptions/skills requirements for specific occupations

Sector-wide skills standards

Information on certification/accreditation

Information on compensation (wages for specific occupations (by regional, local area))

Projections on supply and demand for specific occupations, timely and at the local level

Educational training programs and services (including colleges, and high schools curriculum) through on-line data base

Information on apprenticeships

Internships and Co-ops for youth -- Through CSCSC -- Through Colleges, Co-op Programs

Ways to develop in-house or on-the-job training

Possible mentoring programs

Access to on-line training

Best Practices in HR

- Recruitment & retention practices (bonuses, professional development, benefits, incentives, etc.?)

- Retirement, succession planning, ways to retain retirees or have them return to work

Information on technology and impacts on HR practices

Career path planning/awareness programs

Job résumé exchange services

Local/regional information provided in a timely fashion

Tools to evaluate the credentials of immigrants/foreign workers

Sector-relevant legislation and regulations

Contacts lists of memberships, associations and affiliations

Other products

### Distributing LMI -- What Information Channels/Methods are Needed

CSCSC website

Personal contact/word of mouth (telephone call and email)

Monthly CSCSC news bulletins

Regular email updates (group email lists)

Industry publications and magazines

Brochures, hand-outs

Industry conferences, floor shows/booths, job fairs

Press releases (local, national newspapers)

Other Methods/Channels

## Appendix B: National Occupational Classifications (NOCs) for the Supply Chain Sector\*

Sub-function	Occupation Category	NOC Code	Sample Position Titles	Number of Supply Chain Employees
<b>Senior Management</b>	Managerial	0016	Senior managers: goods, production, utilities, transportation and construction	6,620
<b>Logistics Information Systems</b>	Managerial	0213	Computer and information systems managers	9,240
	Tactical	2233	Industrial engineering and manufacturing technologists and technicians	14,635
		2172	Database analysts and data administrators	305
		2171	Computer analysts	9,415
		2175	Web/Internet site developers	665
<b>Warehousing</b>	Managerial	0721	Facility operations and maintenance manager: warehouse manager	24,570
		0132	Postal and courier service manager	4,660
		1214	Supervisors, mail and message distribution occupations	8,305
	Operational	7452	Material handlers	167,355
		9617	Labourers in food, beverage and tobacco processing: material handling, packaging	65,905
		1472	Store keepers and parts clerks: e.g., parts supplier, supply clerk	37,075
		7451	Longshore workers: e.g., dock worker, ship loader operator	6,935
		<b>Transportation</b>	Managerial	0713
Tactical	1236	Customs, ship and other brokers	5,240	
	1476	Transportation route and crew schedulers	3,820	
	1475	Dispatchers and radio operators	2,245	
Operational	1471	Shippers and receivers	106,365	
<b>Inventory/ Material Control</b>	Managerial	0114	Other administrative service managers: e.g., inventory control manager, support services	13,435
		1215	Supervisors, recording, distributing and scheduling occupations	20,725
	Tactical	1474	Purchasing and inventory clerks: e.g., inventory analyst, planner	38,655
		1122	Professional occupations in business services to management: consulting	820
<b>Purchasing</b>	Managerial	0113	Purchasing managers	9,055
	Tactical	1225	Purchasing agents and officers	28,025
		6233	Retail and wholesale buyers	22,190
<b>Marketing and Sales</b>	Managerial	0611	Sales, account and marketing managers	3,135
<b>TOTAL</b>				<b>635,530</b>

From [http://www.supplychaincanada.org/assets/sector\\_facts\\_and\\_figures.pdf](http://www.supplychaincanada.org/assets/sector_facts_and_figures.pdf)

Source: 2001 Census (NAICS: 11, 21, 22, 31-33, 41, 44, 45, 48, 49, 51-56, 61, 62, 71, 72, 91)