2012 HR Study Update
Canadian Supply Chain Sector Council

Prepared by:
R.A. Malatest & Associates Ltd
Acknowledgements

The researchers would like to thank all of the staff at the Canadian Supply Chain Sector Council for their collaboration and assistance in completing the study. The industry associations, employers, employees and training systems providers all deserve special recognition for their extensive participation in the research process. The success of any labour market study is directly dependent upon the participation of industry stakeholders. The high response rate for the 2012 HR Study Update has meant that the analysis is based upon a reliable foundation of industry input. The researchers are also very appreciative of the funding provided by HRSDC, without whose support, this study would not have been possible.

Terms and Acronyms

3PL Third Party Logistics Provider
CI Confidence Interval
COPS Canadian Occupational Projection System
CPP Canadian Pension Plan
CSCSC Canadian Supply Chain Sector Council
DCC Dedicated Contract Carriage
DTM Domestic Transportation Management
GDP Gross Domestic Product
ITM International Transportation Management
IWES Integrated Work Experience Strategy Program
KII Key Informant Interview
NOC National Occupation Classification (NOC) Code
OECD Organization for Economic Co-operation and Development
PNP Provincial Nominee Program
TDSB Toronto District School Board
USD US Dollar
VAWD Value-added Warehousing and Distribution
SaaS Software and Service
ERP Enterprise Resource Systems
Executive Summary

The 2012 HR Study Update included participation from more than 3,200 sector stakeholders who completed a survey. There was representation from all regions of the country and from a wide range of industries. Both large and small employers participated, as did their employees. Over 80 training systems providers across the country also provided their input. The survey data were supported with a great deal of qualitative research: 11 focus groups and 16 in-depth interviews.

The supply chain sector is growing. Over the next five years, employers are expecting a growth in the number of employees from a low of 8.4% (Tactical: Transportation) to a high of 14.9% (Managerial: Marketing and Sales), with all other occupations and sub-functions falling in between. Based on the current sector total of 767,200 employees, an annual employee demand growth rate of 8.6% will result in approximately 65,979 new and vacant positions to be filled. In addition, respondents to the employer survey indicate current unmet employment demand of 3.5%, resulting in the need to fill approximately 26,852 current vacant positions within the sector. This is an enormous challenge.

Comparisons were made with the 2005 baseline study completed by Deloitte. Many of the same issues remain a challenge, including:

- Low awareness and understanding of the sector (resulting in recruitment issues);
- Lack of the required skills among new recruits (particularly leadership skills);
- Small and diminishing talent pool (due to poaching and retirement); and
- Inadequate attention paid to succession and career planning (impacting employee retention).

Some of these are the same challenges that other sectors of the Canadian economy are facing. The primary challenge is that of a shrinking work force brought about by an aging population. While this was noted in the 2005 baseline study, it was still some distance away in terms of immediate impact. That is no longer the case. To avoid increasing labour shortages and escalating labour costs, the sector must:

- Continue to increase its awareness among key employment markets, most notably high school students, immigrants, women and mature workers who are pursuing second careers; and
- Ensure that it does not lose existing supply chain workers to other sectors.

The CSCSC has provided the cornerstone of awareness by clearly defining the sector through the ongoing development of national occupation classification (NOC) codes and by developing their corresponding job descriptions. In addition, the Council continues to address awareness issues through outreach activities, such as the CSCSC led Toronto District School Board project; career presentations to conferences of professional associations in career and guidance.

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1 Source: http://www.supplychaincanada.org/assets/u/SectorFactsandFiguresEnglish.pdf
positions; national career fairs and support of local career events); Recruitment & Retention Toolkit with speakers notes and collateral including videos for stakeholders to use in presenting to high schools; and the Van Asep, Toronto Housing and MicroSkills’ SCAPE projects for Aboriginal and Newcomers.

Although the CSCSC has been addressing these issues through its ongoing work in the sector, given the sense of urgency, a national strategy is required and additional resources should be sought to continue work with respect to sector promotion and development of additional human resource initiatives.

The researchers recommend the development of a national awareness strategy targeting five distinct sources of employees: high school students, immigrants, women, mature workers who are retraining for second careers, and Aboriginal peoples in Canada. Each would require its own strategy.

The national strategy, as it might apply to high schools for example, could involve the CSCSC consulting with school boards, principals and guidance counsellors to optimize the awareness strategy for high school students and their parents. This initiative would provide a return in the form of a flow of new entrants to the sector within the next five years.

Immigrants are another valuable source of workers who need to be made aware of the career opportunities in the supply chain. Immigrants are a diverse group, culturally, geographically and economically. There are numerous immigrant facing agencies that provide a range of services, including employment placement services, to a network of clients.

The sector continues to be male dominated which leaves a sizeable proportion of the population as a largely untapped resource. A national strategy focused on making the sector more appealing to women should recognize that women’s reasons for entering the sector are as likely to be about their expectations of work-life balance, benefits, and work hours as they are to be rooted in ideas of career advancement.

Canada’s Aboriginal population is thought to be one of the fastest growing populations in Canada, and as such, constitutes an important source of potential recruitment for the supply chain sector. Although the data collected for this research does not include a sufficient number of Aboriginal peoples to support an analysis of their views, it is recommended that companies post diversity policies that would make companies more welcoming to Aboriginal workers. In a similar vein, posting diversity policies that make companies more welcoming to immigrants, visible minorities and workers living with disabilities would widen the pool of available talent while contributing to corporate innovation and resiliency.

Many employers in the supply chain have a connection with post secondary education institutions and private sector trainers. Government funds for the retraining of workers often flow through these organizations. The CSCSC should continue to use its network of training systems providers to encourage mature workers who are applying for these funds to consider retraining for the supply chain.

The numbers suggest that across all sectors of the economy, labour is becoming a seller’s market. It is not sufficient to attract workers; they need to be retained. The sector is fortunate in that those who work in the sector appear to enjoy it and are engaged. While they expect
competitive compensation, they are not primarily motivated by money, but rather by the opportunities the sector provides. Sector employers need to provide their current employees with greater clarity in terms of career paths and need to allow them more flexible working arrangements. These workplace features are also valued by new entrants and if offered should be widely promoted in all job postings and job fairs. It should be noted that when employers provide career pathways they should encourage employees’ participation in their sector. That is achieved in large measure through membership in industry associations. The research found that employees who are members of supply chain associations have better career outcomes. Better career outcomes result in less turnover and less resource loss to other sectors.

Education and training are also an issue. Learning system providers and employees believe the students entering the work force are well trained. However, employers believe that new entrants lack the decision making and leadership skills needed to succeed in the field. This lack of agreement is not unusual in labour market studies, but it does underscore the need to establish regular communication channels between employers and the education and training system. The researchers are recommending that the CSCSC facilitate communications between employers and learning system providers to ensure that learning system providers are aware of employers’ training requirements and employers can easily find where appropriate employee training is available. The CSCSC should also continue to provide information about the training requirements of various occupations within the supply chain so that potential entrants are aware of the skills employers require.

The research shows that succession planning provides tangible benefits to the companies that implement such strategies. It also shows that smaller supply chain companies struggle in developing succession plans. The researchers recognize that the CSCSC and many of the stakeholder associations have made ongoing attempts to convince these companies that it is in their best interest to address this crucial area. The hope is that this current research and the sense of urgency that should accompany it will motivate some of these companies to initiate strategies/initiatives that address succession planning in their respective organizations.

From a technology perspective, the sector appears to be performing well. In this area, the findings of the current research are decidedly different from the 2005 baseline study, which found that employers and employees were struggling with technological change and advancements. While it is still a concern, it now appears to be a relatively lower priority.

There is not a significant difference of opinion with respect to the major issues on the basis of employer size, sub-sector, or geographic location. While this may suggest that the problems facing the sector are wide in scope and therefore more challenging, it actually provides an opportunity for the sector and the many stakeholder associations to act in concert, pool their resources and act decisively and collaboratively. Because the sector, due to its sheer size and scope, lacks a clear identity and continues to suffer from what the baseline study referred to as fragmentation, the researchers believe the sector council has an extremely important role to play in bringing the various stakeholders together in pursuit of a common goal – developing and maintaining a well trained work force that can respond to the sector’s future competitive challenges.
The report that follows details the study’s findings and provides projections on a wide variety of human resource metrics. It showcases a sector that has a very involved employer base, engaged employees who want to succeed and a very functional network of training service providers. That is a very strong base with which to address human resource issues that affect the sector as a whole.
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1 BACKGROUND AND APPROACH

1.1 Background

Since the baseline Strategic Human Resources Study was undertaken by Deloitte in 2005, the Canadian supply chain sector has faced numerous challenges caused by environmental turmoil, globalization, and economic disruptions. The supply chain has adapted, aided in no small part by the Canadian Supply Chain Sector Council (CSCSC).

The CSCSC was established in 2006, based on the recommendations of a study completed by the Canadian Logistics Skills Committee in 2005. Its mandate was to “identify and assess the impact of new and emerging technologies, innovations and conditions that have the greatest impact on the supply chain sector, and to develop an appropriate strategic human resources action plan for Canadian industry and academia.” The Council has undertaken several projects since its inception and continues to work toward meeting the human resource challenges faced by the sector. For example, in 2009, the Council developed the first 15 of its 33 national occupational standards (NOCs) to describe the skills required of those seeking to be considered competent within each of the various occupations within the supply chain. The intention was to increase the quality of the services provided by clarifying “what a person in a particular occupation must know and be able to do to be considered competent at that occupation.”

In December 2010, the CSCSC partnered with R.A. Malatest & Associates and Rogers Publishing to update the findings of the 2005 Strategic Human Resources Study and provide insight into how the sector has responded to the human resource issues it has faced, as these relate to recruitment, training, retention and technology. In addition, objectives included identifying any new challenges facing the sector since the 2005 study.

The study included both qualitative and quantitative research. A total of 16 key informant interviews (KIIs) were conducted, followed by 10 focus groups and 3,244 quantitative surveys among employers, employees and learning system providers.

1.2 Qualitative Research: Key Informant Interviews

A total of 16 key informant interviews (KIIs) were conducted between August and September 2011 with supply chain experts from organizations across the country. Interviews were conducted among employers in supply chain operations and learning system providers that offer supply chain related courses and/or programs.

Topics discussed during the interviews included the main human resource issues identified by the 2005 baseline study as impacting the supply chain:

- Recruitment;
- Training;
- Technology; and
- Employee retention.

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2 http://www.supplychaincanada.org/assets/u/CSCSCArticleNOS2010.pdf
1.3 Qualitative Research: Focus Groups

A total of 11 focus groups were conducted between August 6 and September 7, 2011. Groups were held in: Vancouver, Calgary, Edmonton, Regina, Winnipeg, London, Brampton, Montreal (moderated in French) and Halifax.

Interest in attending the focus groups was very high; so much so that not all interested respondents could be included in the groups. To give those who were not able to attend the focus groups the chance to have their voices heard, an online form was posted to the CSCSC website (and promoted through the CSCSC’s November Newsletter).

Focus groups participants discussed key human resource challenges facing the supply chain sector and offered insight into how the sector and industry leaders can best prepare to meet those challenges.

- **Recruitment:**
  - Awareness /attraction of workers into the supply chain
  - Essential skills needed
  - Challenges-successful strategies with recruitment
  - Role of internships, apprenticeships and co-op positions

- **Training:**
  - Most valuable types of training
  - Preferred format of training and accessibility of training
  - Preferred credentials
  - Unmet educational needs in the industry

- **Retention:**
  - Challenges with retaining employees
  - Employee satisfaction within the organization
  - Employee benefits
  - Best practices for retention

1.4 Quantitative

Data were collected from individuals and businesses on the demand side (employers and employees) of the labour market, and from those on the supply side (educational institutions / learning system providers and / or other labour supply sources) of the labour market.

Three survey instruments were developed: one for employers; one for employees; and one for learning system providers.

The survey was conducted online in English and French. Rogers Publishing programmed and conducted the employer and employee surveys. The list of companies and organizations that were contacted to participate was compiled through multiple sources including member databases of various sector associations, subscribers to Materials, Management & Distribution.
(MM&D) and Purchasing B2B magazines, and the database of the CSCSC. R.A. Malatest & Associates programmed and conducted the learning system provider survey.

The employee and employer surveys were accessible via the same survey link. Responses to screener questions qualified a respondent for either the employer or the employee survey. Respondents to the learning systems provider survey were given the option of completing the survey online or via telephone.

The employers who were invited to participate in this study were screened to ensure that:

- employees reported directly to them; or
- they had responsibilities for hiring; or
- they were involved in human resources support of those who work in Supply Chain Management (including shipping/receiving).

Employees were also screened to ensure that they had knowledge with regards to supply chain professionals within their company and did not qualify as employers.

The learning system providers who were invited to participate in this study were those identified as offering programs or courses relevant to the supply chain sector. Participants represented a variety of types of institutions, including (among others) colleges (40%), universities (23%), private colleges / institutions (10%), CEGEP (9%), and technical institutions (6%).

All three online surveys were conducted between April 28, 2011 and June 24, 2011. A total of 3,244 completed, usable surveys were collected, broken out as follows:

- 1,357 employers
- 1,805 employees
- 82 training systems providers

1.5 Survey Issues

The three surveys addressed a range of issues, as described below:

- Employers
  - Employee description and forecast
  - Human resources challenges and practices
  - Description of employer’s organization

- Employees
  - Education and skills development
  - Perceptions of the industry
  - Employee information

- Learning system providers
  - Description of institution
  - Program alignment with supply chain sector
  - Challenges
2  RESEARCH LIMITATIONS

Readers of this report should be cognizant of several possible limitations of the research. A discussion of the research limitations is provided below.

2.1  Snapshot in Time

Sectoral studies are broad-based in nature and require significant time and resources to complete. The data they produce are used over a prolonged period of time, typically five years. Participants in the study were asked to anticipate their future human resource supply and demand challenges; however, the study as a whole is best viewed as an accurate reflection of the period during which it was completed. The economic and political environments both within Canada and beyond its borders are in a constant state of flux. By way of example, no sooner had the data for the 2005 study been collected than Canada’s primary trading partner was hit by Hurricane Katrina. Since then, the sector has experienced:

- Large scale disasters such as the Japanese tsunami and subsequent partial melt-down of the Fukushima nuclear reactor;
- Sub-prime mortgage crisis and loss of over one trillion dollars from the world economy;
- Prodemocracy protests leading to the overthrow or destabilization of a number of Arab states (Tunisia, Egypt, Libya, Syria); and
- Sovereign debt crises in a number of European Union states.

Each of these had a profound economic impact on regional, national and international supply chains. During the same period, profound changes occurred within Canada. The Canadian dollar fluctuated widely compared with the US dollar, from a high of 1.0607 USD in July 2011 to a low of 0.9480 USD in October 2011. Well established companies such as Nortel have gone bankrupt. Canadians elected their first majority government in over 10 years.

Rapid advances in globalization, connectivity and technological innovation have contributed to a more volatile world economy. In addition, the predictive power of research decreases the further into the future it is applied. The consequences of events just on the horizon are easier to imagine. For example, while this report was being written, the federal Finance Minister announced that the government is considering increasing the retirement age. This could reduce the amount of workers leaving the sector and thereby reduce the projected supply shortage in the short term.

Readers of the 2012 HR Update Study are encouraged to use the results to help inform their planning, but should remember that the study is a snap shot in time, and reflects the economic and labour market conditions as of late 2011 and early 2012.

2.2  Non-scientific Sample

The study did not employ a random sampling methodology, but rather accepted participation from any and all those employers, employees and training systems providers who opted to respond to the invitation. Because random sampling was not employed, margins of sampling error cannot be associated with the data or their findings.
Despite that caution, the study achieved considerable representation from a broad base of employers, employees and learning system providers across the sector from both a regional and industry-specific perspective.

Employers contacted for this study generally occupied senior level positions within their respective organizations. A total of 68% occupied senior level positions (owners, VPs, Senior Managers) and 16% were supervisors/managers.

Employers include in this research represent a range of industries, which reflects the wide scope of the supply chain sector in Canada. The largest proportion (23%) works in manufacturing, followed at a distant second by transportation and warehousing (at 11%).

Figure 1: Representation by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>%</th>
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<tbody>
<tr>
<td>Manufacturing</td>
<td>23</td>
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<tr>
<td>Transportation and warehousing</td>
<td>11</td>
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<tr>
<td>Health care and social assistance</td>
<td>8</td>
</tr>
<tr>
<td>Government and public administration</td>
<td>6</td>
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<tr>
<td>Professional, scientific and technical services</td>
<td>6</td>
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<tr>
<td>Retail trade</td>
<td>6</td>
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<tr>
<td>Wholesale trade</td>
<td>6</td>
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<tr>
<td>Educational services</td>
<td>5</td>
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<tr>
<td>Technology and information</td>
<td>5</td>
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<tr>
<td>Business and support services</td>
<td>4</td>
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<tr>
<td>Utilities</td>
<td>4</td>
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<tr>
<td>Construction</td>
<td>3</td>
</tr>
<tr>
<td>Oil and gas extraction</td>
<td>3</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>2</td>
</tr>
<tr>
<td>Culture and recreation</td>
<td>2</td>
</tr>
<tr>
<td>Finance, insurance, real estate and leasing</td>
<td>2</td>
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<tr>
<td>Not-for-profit</td>
<td>1</td>
</tr>
<tr>
<td>Media/printing &amp; publishing</td>
<td>1</td>
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<tr>
<td>Mining (except oil and gas)</td>
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<td>Forestry &amp; logging</td>
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<td>Agriculture</td>
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<td>Tourism</td>
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<td>Fishing &amp; trapping</td>
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<tr>
<td>Other</td>
<td>**</td>
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<td>** represents industries representing 2 % or less of responses.</td>
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The study achieved a good representation from both large and small companies. A total of 12% of employers worked in companies with annual revenues of $1B or more, 27% worked in companies with annual revenues of $50M to less than $1B and 61% worked in companies with annual revenues of less than $50M.

While we cannot guarantee that the provided sample is representative of the Canadian supply chain as a whole, the findings in this report provide valuable information and insights from large and meaningful sub-segments of the sector.

Prepared by:
R.A. Malatest & Associates Ltd.
2.3 Regional Representation

Employer respondents were asked to identify their regions of operation across Canada and internationally. Regional results are based on responses given by employers who indicated that they operated within that region. However, because a significant proportion of employers operate in multiple regions, most employers’ responses are counted multiple times. Therefore, regional differences are not represented to the extent they would be if employers were asked to discuss operations within a specific region.

2.4 Aboriginal People, Visible Minorities and Those Living with Disabilities

Employees were asked to identify whether they were members of any of the following groups: Aboriginal, visible minority, disabled. A total of 93% of respondents did not provide data for this question (possibly due to its sensitive nature). As a result, it is not possible to analyse results for these key sub-groups.

3 KEY FINDINGS

3.1 Section Overview

Many of the challenges identified as impacting the Canadian supply chain sector in the baseline Strategic Human Resources Study remain challenges today. The main issues facing the supply chain sector continue to be:

- Low awareness and understanding of the sector (resulting in recruitment issues);
- Lack of the required skills among new recruits (particularly leadership skills);
- Small and diminishing talent pool (due to poaching and retirement); and
- Succession and career planning (impacting employee retention).

These represent the top four challenges across all regions and represent major issues regardless of company size.

In this section, the human resources identified above (which have remained constant since 2005) are discussed in more detail. A few key changes since the 2005 baseline study was conducted have also been identified and are discussed below.

Limited awareness and understanding of the sector continue to impede sector growth and progress. These were identified as key human resource issues in the 2005 baseline study and both remain significant issues today. Low awareness starts in high schools (career path not promoted by guidance counsellors or parents), and continues into the post-secondary education system (educators talk about low awareness and interest in supply chain related courses). Employers cite recruitment issues associated with this kind of limited awareness and misconceptions about the type of work and career opportunities available to those working in the supply chain. The few potential recruits who are aware of the supply chain typically think of it as offering only ‘blue collar’ jobs. As a result, employers describe how people don’t choose to work in the supply chain; they simply ‘fall into it’.

The sheer size of the supply chain and the variety of jobs within it likely contribute to the limited awareness of the sector. The sector lacks a clear identity because of the range of
industries and job functions. Consistent with the baseline study, findings of this research suggest that the sector remains fragmented.

Outreach programs, too, are limited in scope. While most employers are engaging in outreach activities in colleges and universities, promotional efforts in high schools are somewhat limited. Yet, it is at the high school level that outreach is most critical. Employers, employees and educators all suggested that one critical avenue for increasing awareness of the sector is by promoting the sector to youth and related influence agents (parents, peers, others), before they have decided upon a career to pursue.

Immigrants, too, need to be made aware of the career opportunities in the supply chain. As noted in the report, there are a number of strategies that can be adopted by the sector to attract workers from other countries to Canada. Such a focus requires that promotional materials be developed, and processes be streamlined such that foreign-trained workers can be easily (and quickly) integrated into the workplace. Notwithstanding that employers in the sector have embraced technology as a key tool to increase productivity employers have yet to fully exploit the opportunities available through electronic mediums to promote the sector to available job applicants. Word of mouth is still the main method used, regardless of company revenues. In this electronic age, employers should be promoting opportunities within the sector via the many electronic devices available – particularly if they want to reach youth and workers from other countries.

The sector continues to be male dominated. Ongoing outreach efforts are required to inform women of the opportunities within the sector and attract women to the sector. Communications should mention work-life balance, benefits, and work hours as these are critical to job satisfaction for women who work in the sector. In addition, outreach efforts might include linking women to female mentors who work in the industry and can inform them of the many different career paths available to them.

A lack of a clear career path is also contributing to the poor image of the sector. Talented potential recruits are interested in understanding the opportunities available to them. Results of this study suggest that a clearly delineated career path will increase interest in the sector, support higher levels of employee satisfaction, and stimulate interest in supply chain courses.

Students enrolled in supply chain training courses are generally high school graduates and those with prior supply chain work experience. Currently, just 10% of students enter these programs from another sector entirely. Efforts should be made to promote the career opportunities available in the supply chain available to mature workers who are consider retraining for a second career.

The low attraction to the field is not reflected in employees’ satisfaction with their jobs. Employees are generally satisfied with their employment in the supply chain sector and see it as attractive relative to other sectors. This is a well educated and engaged workforce, with employees who are attracted by the variety and new opportunities afforded by their jobs as much as by the pay.

Best practices for increasing awareness, understanding and attraction include:
Outreach in high schools (e.g., career day)
- Linking women with female mentors who work in the industry
- Organizing promotional events for underrepresented groups, such as women, immigrants and Aboriginals
- Organizing networking events for mature workers interested in pursuing a second career
- Assisting mature workers who possess transferable skills by providing information about the skill requirements for different positions within the sector
- Encouraging promotion of the sector among high school guidance counsellors and other influence agents such as parents and peers
- Continuing efforts to market the sector and the profession (e.g., online media centre; exhibition at the National Job Fair & Training Expo)
- Articulating the opportunities available and clearly defining the career path
- Recruiting methods with broader reach and increase use of technology/applications to promote the sector to youth

The researchers recommend continuing the development of a national sector strategy to inform high school students, their parents, teachers and guidance counsellors about the career opportunities available within the sector. This could require consultation with school boards and principals across the country to identify how they would like to be engaged and what educational materials need to be developed to support this outreach.

3.2 Lack of Required Skills among New Recruits

In the baseline study, lack of skills was identified as an issue; however, the skills that were identified as lacking are different from the skills that are lacking today. In 2005, technical skills were the major obstacle to employer satisfaction with new hires. Emerging technologies kept employers and employees scrambling to keep up with the skills they needed to compete in a global marketplace. In contrast to the technological skills upgrading that was required in 2005, employers in the 2011 study expressed confidence that new entrants possessed the requisite technical skills to perform their jobs. However, employers were of the opinion that new entrants lacked the soft skills companies require: particularly leadership and communication skills. There was consensus among the employers interviewed for this study that the employees they hired lacked the ability to make critical decisions, manage client expectations, and provide the high level of customer service required. In addition, many said that basic literacy and numeracy skills were in short supply.

The majority of employers are investing in employee training. In fact, based on survey data, it appears that the level of investment in training by employers in the supply sector is markedly higher than that of other sectors. Many provide a range of training options, but the most widely used is on-the-job training. While this option makes considerable sense – it is generally less expensive and provides job specific information that is directly relevant to trainees – it can also be a burden to the employees who are providing the training. Due to the diminishing size of the supply chain sector talent pool, employers are already relying on experienced employees to take on more and more work. This limits their capacity to take on the additional responsibility of training new staff.
Despite employers’ dissatisfaction with the skills of new recruits, both employees and learning system providers are of the opinion that the necessary skills are being taught. Employees report that they have been taught the relevant subject matter, and that they were satisfied with the training provided. Learning system providers, too, indicate that they have been teaching subject matter related to these required skills. The disconnect that exists between employers’ impressions and the experiences of both employees and learning system providers suggests a communication gap between what learning system providers are teaching and how students are applying this knowledge when they enter the supply chain.

Employers are engaging in work-study programs (primarily coop and internship programs) but currently, a relatively large proportion of learning system providers report that work-study programs are not part of their curriculum. The proportion of employers who are engaging in work-study programs seems to warrant investigation into the reasons why more learning system providers are not taking part. This applied learning could help bridge the gap between the theory students learn while in school and the application of the theory in an actual job setting.

Best practices for increasing the skills of new recruits include:

- Increased communications between employers and learning system providers to clarify employees’ skill gaps, including industry participation in College Industry Advisory Councils (IACs);
- Increased level of partnership between employers and learning systems providers, and increased investment in work-study programs to give student practical on-the-job experience prior to entering the supply chain; and
- Facilitate credential recognition for immigrants.

3.3 Technical Skills and the Role of Technology

Results of the HR Update suggest that the challenges facing employers, as these relate to technology, have changed somewhat since the 2005 baseline survey was conducted. The financial barriers associated with new technology (purchasing and then training employees) remain the same – particularly for small companies – but employers’ attitudes toward technology has changed.

Today, employers seem better equipped to handle the demands of implementing new technology. This is not to say that technology no longer poses a challenge for employers. In fact, roughly 1 in 5 see it as a “major” challenge. The key point of difference here is that its place as one of the main challenges facing employers has changed. The integration of new technologies into existing systems, and the training of employees that may be required, is less of a barrier than it was in the past. For the most part, operations continue without a hitch.

In addition, the role of technology has changed. In 2005, technology was seen as leading the way, with employers and employees scrambling to keep up. Findings of the current study suggest that employers are finding it easier to integrate new technologies into existing systems. Technology is no longer perceived as a barrier to efficiency; its place is to improve, not impede, workflow. When asked if it created training challenges for their employees, the response given
by employers was, for the most part, a resounding ‘no’. That being said, there was consensus that adopting new technologies does require a commitment to training.

Another key point of difference between the two studies is employers’ impressions of employees’ ability to adapt to new technologies. Findings from the 2005 baseline study suggested that employers did not think employees possessed the technological skills required to keep pace with changing technological demands. In the current study, employees are, for the most part, seen as possessing the required technical skills and generally do not struggle with the technical aspects of their work.

3.4 Small and Diminishing Talent Pool

When the baseline study was conducted in 2005, retirement of experienced employees was not perceived as having a major impact on the sector. Perceptions have changed. The sector now is seen as facing a critical shortage of skilled employees as experienced employees retire.

One consequence of this is “poaching”. Employers who are losing skilled employees to retirement and who are unable to fill these vacant positions are luring away the talent secured by other companies. Companies are competing for the same resources at all levels (managerial, tactical, or operational). The retirement of experienced employees coupled with the lack of new talent coming into the sector is resulting in a continuously diminishing pool of talented resources. Retirement and poaching are significant issues across all regions, and all companies regardless of size. However, the data suggest that the impact of poaching presents a greater challenge for larger organizations.

One of the causes of the recruitment issues experienced by employers is competition among employers for the same candidates. Competition is increasing as a result of two factors: retirement of experienced employees; and too few skilled candidates entering the supply chain. When employers are unable to find suitable candidates to fill positions, they look to other organizations’ supply chain talent pool. Results suggest that poaching is more common among companies that operate in multiple regions.

Poaching appears to be common across all occupation categories (whether managerial, tactical, or operational), although it is somewhat more common for managerial positions. The demographic profile of managers indicates that these employees tend to be older and have been working in the supply chain for a longer period of time. Retirement is likely hitting this occupation category the hardest.

The practice of poaching is negatively impacting both individual companies and the supply chain sector as a whole. Because the same employees are being, in effect, traded back and forth from company to company, the size of the available employee pool is continuing to diminish. New recruits are not filling the gaps left by retirees; instead employees from other organizations are recruited to fill the gaps. Poaching is also manifesting itself in terms of the relatively high vacancy rate in the sector (3.5% based on employer survey data). The movement of individuals from one organization to the next has impeded the ability to develop an attractive succession/progression path. In contrast to retirements which can actually be anticipated and accommodated through a succession plan, poaching is much more disruptive to the work environment and organizations subject to poaching are typically less included to
invest in training or career path planning as they are unsure as to whether they will fully recover their investment. Compounding the problem, not only is the size of the pool diminishing, but the number of those in knowledge positions is diminishing. This is reducing Canada’s overall competitiveness as a global player. Finally, poaching is also driving up the price of skilled workers. As employees are offered more and more to leave one company for another, employee compensation must necessarily continue to grow to meet ever increasing expectations and demands.

Best practices for increasing the size of the supply chain talent pool include:

- Understanding that the supply chain as a whole is diminished when employers compete for the same employees. Cooperative effort is required to curb this behaviour;
- Communicating skill gaps to learning system providers to ensure that the critical soft skills are being effectively taught;
- Ensuring that employees are provided training that will help close existing gaps. Computer courses may not always be the best choice.

3.5 Retention Strategies

Echoing the results of the baseline study, the most common reason for turnover is competitors poaching employees from other supply chain organizations. Larger companies as well as those with HR strategies are generally losing more employees to other supply chain companies.

While employers have noted that they do not see major turnover in their organizations, from an employee perspective, there is limited loyalty to establishments in the sector. For example, a full one-third (33%) of employees surveyed as part of this study indicated that they did not see themselves working for the same employer in 3 to 5 years time. This reinforces the current practice of inter-firm competition for labour, but presents challenges for employers in terms of organizational workforce planning.

To avoid losing their best assets, companies must understand what retention strategies will be most effective. It appears that, while financial compensation is important, it is not the most important component of a retention strategy. Results of this research suggest that what employees consider most attractive about a career in the supply chain is the range of positions and potential for progression. The pay/benefits offered are secondary to this.

That being said, financial compensation is more important for some occupation categories than others. Relative to managerial and tactical positions, salary is much more important to those working in operational positions.

Other factors that are important to employees, in terms of job satisfaction, relate to:

- Flexible work arrangements;
- Support for further education; and
- A family-friendly work environment

Factors most likely to have a large negative impact on employees’ job satisfaction are frequency of on-call work, frequency of shift work and remote work location.
Employers appear to be on the right track when it comes to the retention strategies they currently employ. Most common strategies include providing a career path, offering a flexible work schedule, and investing in professional development. However, employers need to identify how best to communicate career paths to their employees; employees still feel that clarification is required.

Adopting a cookie-cutter approach to retention will not necessarily be the most effective strategy for every company. Employers should make it a priority to understand what drives employee satisfaction within their company.

Best practices for employers to retain skilled employees could include:

- Making it a priority to develop retention strategies that include flexibility and support for employees;
- Avoiding a cookie cutter approach. The retention strategies that work for most companies will generally require some customization to meet any specific company’s workforce needs;
- Touching base with employees on a regular basis to better understand their key drivers of satisfaction. Conducting an annual employee satisfaction survey would help in this regard;
- Being aware of employees’ expectations upon entering the supply chain and utilize appropriate feedback mechanisms (e.g., employee satisfaction surveys) to assess whether or not these expectations are being met;
- Most importantly, employees are looking for career development opportunities and work-life balance. Flexible work arrangements, support for further education, and a family-friendly work environment are also important factors in maintaining employees’ job satisfaction; and
- To retain women within the supply chain it is important to ensure that expectations related to work-life balance, benefits, and work hours are being met.

### 3.6 HR Strategies and Succession Planning

Results suggest that many employers, particularly small companies, are not making sufficient preparations to meet the human resource challenges they face. Succession planning to replace the employees who are retiring or leaving the company is still quite limited. Only about one-third (35%) of employers have a succession plan in place.

Many do not see developing an HR strategy and succession plan as an immediate concern; however, the results of this research suggest that they should. The companies that do not have an HR strategy are less likely to engage in the activities that will attract and retain skilled workers (e.g., providing career paths, continuing education and professional development). They also have fewer training programs and training supports.

The growth of the supply chain sector, the diminishing talent pool and the retirement of skilled employees all combine to make this a critical time for employers. Employers must focus on building partnerships with learning system providers and working together to develop...
strategies that attract new entrants into the sector rather than competing for the existing talent. It is only through collaborative effort that the supply chain will grow and Canada can increase its ability to compete in the global market.

Best practices for employers to keep in mind when developing succession plans include:

- Understanding that succession planning is critical and should be prioritized. Succession planning not only safeguards against skill gaps when experienced employees retire, it also aids in employee retention. Communicating succession plans to employees underscores for them that the company is investing in their career advancement; and

- Clearly articulating the career paths available. This will assist in both retention (per the above) and recruiting efforts. Opportunities are more attractive to potential candidates when upward mobility is clearly demonstrated.

4  RECOMMENDATIONS

Detailed below are recommendations that can assist the supply chain sector in terms of addressing current and future human resource requirements. Recommendations have been grouped on the basis of those that can/should be implemented by the CSCSC, as well as recommendations that target the employer community.

4.1  Recommendations for the CSCSC

1. Continue existing outreach efforts in high schools and encourage promotion of the sector among high school guidance counsellors and other key influence agents such as parents, peers, and others.

2. Continue efforts to increase the participation of internationally trained workers in the supply chain sector through targeted programs such as the Supply Chain Awareness Program for Employment.

3. Continue to provide information to mature workers who are looking to move into the supply chain by posting career profiles that include job descriptions, pre-employment skills, and essential-skill requirements.

4. Link women with female mentors who work in the industry.

5. Organize promotional events for underrepresented groups, such as women, immigrants and Aboriginals.

6. Organize networking events for mature workers interested in pursuing a second career.

7. Assist mature workers who possess transferable skills by providing information about the skill requirements for different positions.

8. Continue promotional efforts using tools that have broader reach and appeal (e.g., social media such as Facebook, Twitter, etc).

9. Continue to promote the opportunities and career paths available to potential entrants to the sector. This could, for example, include the development of a “Career Tracker” application (online, Smartphone application) that provides a succinct description of the
requirements for selected occupations, and the advancement opportunities available within the sector for such occupations.

10. Begin development of a national awareness strategy to further ongoing efforts to inform high school students, their parents, teachers and guidance counsellors about the career opportunities available in the sector. This would require consultation with school boards and principals across the country to identify how they would like to be engaged and what educational materials would be appropriate.

11. Help employers connect with immigrants by posting jobs and facilitating connections with immigrant facing agencies that offer employment placement services. Consideration should also be given to the development of a website/web portal that explains the sector to potential immigrants, and details the credentials/processes required to gain employment in the sector.

12. Analyze the processes used to recognize foreign credentials, and as appropriate, facilitate or streamline processes used to recognize such credentials. In addition, attention should be placed on the review at Canadian licensing/certification to ensure that requirements are not excessive barriers to recent immigrants (no need to demonstrate excessive Canadian work experience).

13. Many employers in the supply chain have a connection with post secondary education institutions and private sector trainers. Government funds for the retraining of workers often flow through these organizations. The CSCSC should continue to use its network of training systems providers to encourage mature workers who are applying for these funds to consider retraining for the supply chain.

14. The CSCSC should also consider revising the Recruitment & Retention Toolkit to include information/resources as to how employers could better engage the education and training system. It could provide advice as to how to become a member of an Industry Advisory Committee, or insight into the benefits/requirements associated with participation in co-ops, internship and/or apprenticeship programs.

4.2 Recommendations for Employers

15. Increase use of recruiting methods that have a broader reach to target potential workers who live outside of Canada to the opportunities within the Canadian supply chain.

16. Increase use of technology / applications to promote job opportunities to youth.

17. Clearly articulate the opportunities available and clearly define the career path for each. This will assist in both retention and recruiting efforts. Opportunities are more attractive to potential candidates when upward mobility is clearly demonstrated.

18. Adopt retention strategies that are more likely to appeal to women; more specifically, strategies that focus on work-life balance, benefits, and work hours (in addition to career advancement).
19. Post diversity policies that make your company more welcoming to Aboriginal workers, immigrants, visible minorities and workers living with disabilities.

20. Increase communication with learning system providers to clarify employees’ skill gaps (e.g., soft skills). It may be that a formal communication process is required.

21. Increase the level of partnership with learning systems providers, and increase investment in work-study programs to give students practical on-the-job experience prior to entering the supply chain.

22. Ensure that employees are provided training that will help close existing gaps. Computer courses may not always be the best choice.

23. Understand that the supply chain as a whole is diminished when employers compete for the same employees. Cooperative effort is required to curb this behaviour and focus on attracting new entrants.

24. Make it a priority to develop retention strategies that include flexibility and support for employees. Effective retention strategies will also contribute to reduction in cross-firm poaching.

25. Avoid a cookie cutter approach. The retention strategies that work for most companies will generally require some customization to meet any specific company’s employees’ needs.

26. Touch base with employees on a regular basis to better understand the key drivers of their workplace satisfaction. Conducting annual employee satisfaction surveys would help in this regard.

27. Be aware of employees’ expectations upon entering the supply chain; specifically that they are looking for career development opportunities, work-life balance, flexible work arrangements, support for further education, and a family-friendly work environment. Utilize appropriate feedback mechanisms (e.g., employee satisfaction surveys) to assess whether or not these expectations are being met.

28. Understand that succession planning is critical and should be prioritized. Communicate succession plans to employees to underscore that the company is investing in their career advancement.

5 SECTOR PROFILE

5.1 Section Overview

This section examines the historical growth rates of the supply chain sector; the current number of workers in the supply chain sector and their distribution by occupational category and sub-function; and provides forecasts of future demand for workers in the supply chain sector.
5.2 Historical Supply Chain Sector Growth

In estimating the demand for employees in the supply chain sector over the short term, the researchers examined historical sector growth rates for a context on the future employment needs of the supply chain sector. In the Strategic Human Resources Study of the Supply Chain Sector it was indicated that the annual revenue growth rate of the supply chain sector was 5.8% from 1991 to 1997\(^3\). While no recent estimate is available for the growth rate of the supply chain sector exclusively, there are a variety of alternative figures that can provide perspective on the growth rate of the supply chain sector over the past 10 years and the likelihood of future growth in the sector.

The Canadian economy as a whole grew at a compound annualized growth rate of 1.9% from 2001 to 2010: GDP increased from $1.04 trillion to $1.23 trillion over this time period\(^4\). Looking at expected GDP growth rates over the coming years, the Canadian economy is expected to continue in a trend of stable growth. As the economy continues to grow, so will the production and movement of goods and services, necessitating organic growth in the supply chain sector. The IMF\(^5\) has published the following projections for Canada’s real GDP:

![Figure 2: Real GDP Growth](image)

<table>
<thead>
<tr>
<th></th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP Growth (Canada)</td>
<td>2.7%</td>
<td>2.4%</td>
<td>2.4%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

According to Industry Canada\(^6\), the manufacturing sector of the Canadian economy has seen a decline over the last decade, with a compound annualized growth rate of -1.2%. This has resulted in GDP attributable to the manufacturing sector declining from $181.1 billion in 2001 to $159.7 billion in 2010. While the manufacturing industry contains a number of the organizations and employees working in the broader supply chain sector (23% of organizations that responded to the employer survey worked in the manufacturing sector), this decline in output in this sector is offset by considerable growth in a number of other areas of the Canadian economy that are linked to the supply chain, including:

- The transportation and warehousing sector witnessed a compound annualized growth rate of 1.5% from 2001 through to 2010, with GDP for this sector growing from $50.2 billion to $58.4 billion;
- The wholesale trade sector saw a compound annualized growth rate of 2.7% from 2001 through to 2010, with GDP for this sector growing from $53.4 billion to $69.5 billion;

\(^3\) Source: [http://www.supplychaincanada.org/assets/sector_facts_and_figures.pdf](http://www.supplychaincanada.org/assets/sector_facts_and_figures.pdf)

\(^4\) Source: [http://www.ic.gc.ca/eic/site/cis-sic.nsf/eng/h__00013.html#vla2b](http://www.ic.gc.ca/eic/site/cis-sic.nsf/eng/h__00013.html#vla2b)


\(^6\) Source: [http://www.ic.gc.ca/eic/site/cis-sic.nsf/eng/h__00013.html#vla2b](http://www.ic.gc.ca/eic/site/cis-sic.nsf/eng/h__00013.html#vla2b)
The retail trade sector experienced a compound annualized growth rate of 3.3% from 2001 through to 2010, with GDP for this sector increasing from $55.2 billion to $76.3 billion;

The healthcare and social assistance sector also grew at a compound annualized growth rate of 2.1% from 2001 through to 2010, with GDP for this sector growing from $67.2 billion to $83 billion; and

The professional, scientific and technical services sector saw a compound annualized growth rate of 2.5% from 2001 through to 2010, with GDP for this sector increasing from $47.5 billion to $60.8 billion.

Against this backdrop of an expansion in output, a parallel trend of employment growth has also been observed across Canada: Statistics Canada reports employment growth of 1.2% from December 2010 to December 2011, following an increase of 1.8% between December 2009 and December 2010.

As noted in Deloitte’s Strategic Human Resources Study of the Supply Chain Sector, historical employment growth has been considerable for a number of industries that the supply chain sector cuts across. Chief among the industries with robust historical employment growth are the professional, scientific and technical services industry, the health care and social assistance industry and the trade industry (see Figure 3: Changes in Employment, by Industry, 1987 to 2007).

Given the recent expansion of the Canadian economy and a number of sectors relevant to the supply chain, as well as projections for continued growth over the coming years, a review of future employment demand is set against a backdrop of increasing competition for employees across a number of industries and sectors.

“We are in direct competition with the energy sector, where there's very good pay and incentives. Other jurisdictions may not have those pressures”

Focus Group Participant

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5.3 Overview of Employment in the Supply Chain Sector

The supply chain sector has grown considerably since its size was estimated at 701,880 employees, based on Labour Force Survey data from 2001 to 2004. The number of employees currently estimated to be working in the supply chain, as of 2010, is 767,200. The supply chain sector saw a compound annual growth rate of 2.2% across all occupational categories and sub-functions from 2001 through to 2010.

Across the organizations that participated in the 2012 HR Study Update, 31% of their employees, on average, work in the supply chain sector. This number increases to 39% of employees for organizations that are providers of supply chain services and decreases to 16% of employees for organizations that are users of supply chain services.

Results of the 2012 HR Study Update show that the most common occupations in the supply chain sector are managerial, followed by tactical and then operational. This represents a dramatic shift from 2005, when operational positions were most common. This change is not unexpected; Deloitte’s Strategic Human Resources Study of the Supply Chain Sector anticipated the rapid expansion of managerial positions based on the supply chain increasing in importance as a business function and supply chain operations becoming more strategic and complex as...
organizations attempt to manage the entire supply chain, meet increasing customer demands and manage cost pressures.

Within the managerial occupations in the supply chain sector, there has been a considerable increase in the number of both senior managers and marketing & sales managers compared to that observed in the 2005 report. The increase in the senior management positions can be attributed to the above mentioned increase in both the complexity and importance of the supply chain operations. Furthermore, the need to have senior managers who possess a broad understanding of not only the full supply chain, but an understanding of their organization’s business model, was highlighted as a specific skill requirement in the Strategic Human Resources Study of the Supply Chain Sector.

“It’s an employer’s market. Since 2007, there’s been a great shift.”

Focus Group Participant

A considerable decline is evident in managerial positions in the warehousing, transportation and inventory/material control sub-functions, while there has been an increase in the knowledge based and customer centric management positions, the number of operational positions has declined dramatically over recent years, with an associated decline in the number of related managerial oversight positions.

Figure 4: Distribution of Supply Chain Employees by Occupational Category and Sub-function

<table>
<thead>
<tr>
<th>Occupational Category and Sub-Function</th>
<th>Current Employees in 2012 (n=1357)</th>
<th>Employees 2001 Census</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Managerial (% of category total)</td>
<td>49%</td>
<td>20%</td>
</tr>
<tr>
<td>Senior Management</td>
<td>24%</td>
<td>5%</td>
</tr>
<tr>
<td>Logistics Information Systems</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Warehousing</td>
<td>7%</td>
<td>30%</td>
</tr>
<tr>
<td>Transportation</td>
<td>6%</td>
<td>21%</td>
</tr>
<tr>
<td>Inventory/Material Control</td>
<td>6%</td>
<td>27%</td>
</tr>
<tr>
<td>Purchasing</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Marketing &amp; Sales</td>
<td>42%</td>
<td>2%</td>
</tr>
<tr>
<td>Total Managerial Sub-Function</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Tactical (% of category total)</td>
<td>16%</td>
<td>20%</td>
</tr>
<tr>
<td>Logistics Information Systems</td>
<td>22%</td>
<td>20%</td>
</tr>
<tr>
<td>Transportation</td>
<td>22%</td>
<td>9%</td>
</tr>
<tr>
<td>Inventory/Material Control</td>
<td>19%</td>
<td>31%</td>
</tr>
<tr>
<td>Purchasing</td>
<td>37%</td>
<td>40%</td>
</tr>
<tr>
<td>Total Tactical Sub-Function</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Operational (% of category total)</td>
<td>34%</td>
<td>60%</td>
</tr>
<tr>
<td>Warehousing</td>
<td>70%</td>
<td>72%</td>
</tr>
<tr>
<td>Transportation</td>
<td>30%</td>
<td>28%</td>
</tr>
<tr>
<td>Total Operational Sub-Function</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Category Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: 2001 Census Data
The substantial decline in operational supply chain occupations is due in part to the increased use of contractors for this type of work. Currently, contractors represent 21% of supply chain personnel, with the incidence of employing contractors increasing as company revenues increase. For the most part, companies (particularly those with higher revenues) are more likely to contract out services for operational and tactical services rather than managerial work. Companies with revenues of $1B+ are significantly more likely than lower revenue (<$50M) companies to contract out tactical purchasing and operational warehousing positions. By contrast, lower revenue (<$50M) companies are more likely to contract out to fill more strategic positions (i.e., managerial level marketing & sales positions). For example, as highlighted in Figure 5, for tactical positions, a much higher proportion of firms with revenues in excess of $1B reported the use of contract staff for transportation (25% among $1B+, 18% for firms with less than $50M in revenues) and for purchasing (27% versus 11%).

The use of contractors to fill tactical and operational positions is linked to two reasons: temporary or seasonal demand for these positions – 51% of organizations use contractors to fill these temporary roles, and management of employment expenses – 26% of organizations use contractors as a cost control measure. Finally, 39% or organizations use contractors to fill skill gaps – it is likely that these positions are filled with contractors working in managerial positions as opposed to tactical or operational roles.

“It’s difficult to keep people at entry level salary due to competition.”
Focus Group Participant
“O-desk allows us to contract out our work, to source out data analysis and mining to someone in India for 3.50 an hour; that’s what the Cloud is doing. The world is going borderless.”
Focus Group Participant

Third-party logistics providers (3PLs) continue to play a significant role in the functioning of the supply chain. However, the specific type of work outsourced to 3PLs appears to have changed somewhat since 2005. While results of the 2005 showed that customer service was generally completed in-house, the 2012 study suggests that customer service is being outsourced to a greater extent. While transportation was more commonly outsourced than warehousing in 2005, the reverse is true in 2012.

“IT outsourcing is becoming more prevalent as a means of overcoming the competition for talent.”
Focus Group Participant

5.4 Anticipated Employment Demand

Future demand for employees in the supply chain sector is dependent on the following:

- New job creation (resulting from sector growth);
- Turnover; and
- Retirement.

Prior to looking into the above three factors, a review of the employer survey results gives an indication of the demand for employees (i.e. employment growth in the next five years) from the perspective of those organizations that operate in the supply chain sector.

Figure 6: Supply Chain Employees by Occupational Category and Sub-function

<table>
<thead>
<tr>
<th>Occupational Category and Sub-function</th>
<th>2012 Update (n=1357)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current # Employees</td>
</tr>
<tr>
<td>Managerial</td>
<td>#</td>
</tr>
<tr>
<td>Senior Management</td>
<td>10058</td>
</tr>
<tr>
<td>Logistics Information Systems</td>
<td>3527</td>
</tr>
<tr>
<td>Warehousing</td>
<td>3140</td>
</tr>
<tr>
<td>Transportation</td>
<td>2583</td>
</tr>
<tr>
<td>Inventory/Material Control</td>
<td>2325</td>
</tr>
<tr>
<td>Purchasing</td>
<td>2644</td>
</tr>
<tr>
<td>Marketing &amp; Sales</td>
<td>17609</td>
</tr>
<tr>
<td>Tactical</td>
<td></td>
</tr>
<tr>
<td>Logistics Information Systems</td>
<td>3132</td>
</tr>
<tr>
<td>Transportation</td>
<td>3014</td>
</tr>
<tr>
<td>Inventory/Material Control</td>
<td>2662</td>
</tr>
<tr>
<td>Purchasing</td>
<td>5209</td>
</tr>
<tr>
<td>Operational</td>
<td></td>
</tr>
<tr>
<td>Warehousing</td>
<td>20476</td>
</tr>
<tr>
<td>Transportation</td>
<td>8759</td>
</tr>
<tr>
<td>Total: All positions</td>
<td>85138</td>
</tr>
</tbody>
</table>

Source: 2012 Update: Employer Survey: A1. Please fill in your current number of employees and any unfilled positions you have. Then, to the best of your ability, estimate the number of employees you expect to have in five years.
Demand is expected to increase for all categories and sub-functions, but appears to be highest in the managerial category, particularly for managerial marketing and sales positions (with employers noting a projected 14.9% growth in the number of positions). This is true regardless of business size; however, very large businesses are expecting particularly large increases in the need for purchasing positions (both at the managerial and tactical level).

The researchers used the Canadian Occupational Projection System (COPS) data to arrive at an estimate of annual new job creation in the supply chain sector. COPS data provide a reliable estimate of the expansion in demand for each relevant occupational category and sub-function. To produce the estimate of total new job creation across the sector, the growth of employment demand from 2011 to 2012 was used. The following table outlines the estimates in the expansion of employee demand over various timeframes, again using COPS data:

<table>
<thead>
<tr>
<th>Occupational Category and Sub-function</th>
<th>&lt;$50M (n=449)</th>
<th>$50M-$1B (n=196)</th>
<th>$1B+ (n=92*)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current # Employees</td>
<td>Mean % Change 5 Yrs</td>
<td>Current # Employees</td>
</tr>
<tr>
<td><strong>Managerial</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Management</td>
<td>2322</td>
<td>14.4</td>
<td>1573</td>
</tr>
<tr>
<td>Logistics Information Systems</td>
<td>347</td>
<td>14.8</td>
<td>1056</td>
</tr>
<tr>
<td>Warehousing</td>
<td>389</td>
<td>11.8</td>
<td>629</td>
</tr>
<tr>
<td>Transportation</td>
<td>221</td>
<td>9.1</td>
<td>885</td>
</tr>
<tr>
<td>Inventory/Material Control</td>
<td>333</td>
<td>7.3</td>
<td>432</td>
</tr>
<tr>
<td>Purchasing</td>
<td>381</td>
<td>8.7</td>
<td>472</td>
</tr>
<tr>
<td>Marketing &amp; Sales</td>
<td>761</td>
<td>16.2</td>
<td>685</td>
</tr>
<tr>
<td><strong>Tactical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logistics Information Systems</td>
<td>386</td>
<td>12.6</td>
<td>796</td>
</tr>
<tr>
<td>Transportation</td>
<td>289</td>
<td>8.8</td>
<td>688</td>
</tr>
<tr>
<td>Inventory/Material Control</td>
<td>362</td>
<td>9.1</td>
<td>462</td>
</tr>
<tr>
<td>Purchasing</td>
<td>455</td>
<td>7.9</td>
<td>858</td>
</tr>
<tr>
<td><strong>Operational</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warehousing</td>
<td>2782</td>
<td>12.7</td>
<td>3784</td>
</tr>
<tr>
<td>Transportation</td>
<td>698</td>
<td>10.3</td>
<td>5595</td>
</tr>
<tr>
<td><strong>Total: All positions</strong></td>
<td>9726</td>
<td>9.6</td>
<td>17915</td>
</tr>
</tbody>
</table>

Total Base. (among those giving a valid response). Source: Employer Survey: A1. Please fill in your current number of employees and any unfilled positions you have. Then, to the best of your ability, estimate the number of employees you expect to have in five years. Note: Single answer only. *Caution: small base.

5.5 **New Job Creation**

The researchers used the Canadian Occupational Projection System (COPS) data to arrive at an estimate of annual new job creation in the supply chain sector. COPS data provide a reliable estimate of the expansion in demand for each relevant occupational category and sub-function. To produce the estimate of total new job creation across the sector, the growth of employment demand from 2011 to 2012 was used. The following table outlines the estimates in the expansion of employee demand over various timeframes, again using COPS data:

<table>
<thead>
<tr>
<th>Expansion Demand for Supply Chain Sector Employees (Canada)</th>
<th>2012</th>
<th>2013</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Job Creation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It should be noted that the results from the employer survey indicate a 10.6% increase in the number of supply chain related positions over a 5 year period (through to 2016). This estimate of growth is in line with the estimate of expansion demand from the COPS data.
One additional element of assessing the demand for staff that is created through sector growth is a consideration of the unmet demand for employees that organizations currently face. Results from the employer survey indicate that, on average, 3.5% of positions related to the supply chain are currently unfilled. This implies that based on current sector employment, that there are 26,852 unfilled positions in the sector.

### 5.6 Turnover

Results from the 2012 HR Study Update show that, for the most part, employees expect to stay with their current organization for the next five years. More than one-half (57%) indicated that they expected to be working at a higher job or the same job within their organization in five years time. Those in the Prairies have higher expectations than other provinces; a total of 43% expect to work at a higher level job within their organization compared to 33% overall. Those in the Atlantic region are significantly more likely to say they’ll be working in the same job within their organization in 5 years time, likely reflective of the fewer opportunities for moving to another organization given the number of organizations operating in the region.

Of note, 10% of respondents indicated that they would be working outside of their current industry in 5 years time – while they may still work in the supply chain sector it is presumed some of those employees who do leave their industry will also work outside of the supply chain sector. Furthermore, 10% of respondents indicated that they will be retiring within the next 5 years – barring significant changes in technology or operational models, the majority of these positions will need to be replaced.

Figure 9: Employee Career Path in Five Years

<table>
<thead>
<tr>
<th>Total (n=645)</th>
<th>Atlantic (n=32*)</th>
<th>Quebec (n=100)</th>
<th>Ontario (n=279)</th>
<th>Prairies (n=120)</th>
<th>BC (n=77*)</th>
<th>North (n=1**)</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Working at a higher level job within my organization</td>
<td>33</td>
<td>22</td>
<td>27</td>
<td>34</td>
<td>43</td>
<td>29</td>
</tr>
<tr>
<td>Working in the same job within my organization</td>
<td>24</td>
<td>41</td>
<td>27</td>
<td>24</td>
<td>21</td>
<td>19</td>
</tr>
<tr>
<td>Working at a higher level job outside of my organization</td>
<td>16</td>
<td>19</td>
<td>12</td>
<td>19</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>Working outside of the industry that I am currently working</td>
<td>10</td>
<td>13</td>
<td>8</td>
<td>10</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Retired</td>
<td>10</td>
<td>6</td>
<td>15</td>
<td>6</td>
<td>11</td>
<td>14</td>
</tr>
<tr>
<td>Working in the same job outside of my organization</td>
<td>5</td>
<td>0</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Self-Employed</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Source: Employee Survey: Q.B11 Which of the following best describes where you see yourself in five years time? Note: Single answer only. Excludes no answer and N/A responses *Caution: small base. **Base <10, too small to reliably report data.

The average turnover rate experienced by organizations ranges from 6.3% to 11.9%, depending on the position. Turnover rate is highest for Senior Management, Operational Warehousing and Managerial Marketing & Sales positions. As outlined previously, Senior Management and Marketing & Sales Positions have experienced rapid growth in recent years, while Warehousing positions have seen a rapid decline. These dramatic changes in the employee makeup of the
supply chain sector are reflected in the turnover rates below. It should be noted that turnover is typically higher for larger companies, particularly so for managerial roles.

Figure 10: Turnover Rate

<table>
<thead>
<tr>
<th>Mean Turnover Rate by Occupational Category and Sub-function</th>
<th>Total (n=1357)</th>
<th>Operates in One Region (n=447)</th>
<th>Operates in Multiple Regions (n=389)</th>
<th>&lt;$50M (n=449)</th>
<th>$50M-$1B (n=196)</th>
<th>$1B+ (n=92*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Management</td>
<td>10.0</td>
<td>10.3</td>
<td>8.9</td>
<td>9.5</td>
<td>8.2</td>
<td>13.9</td>
</tr>
<tr>
<td>Logistics Information Systems</td>
<td>8.0</td>
<td>8.5</td>
<td>6.8</td>
<td>6.1</td>
<td>8.9</td>
<td>12.3</td>
</tr>
<tr>
<td>Warehousing</td>
<td>8.9</td>
<td>8.0</td>
<td>8.7</td>
<td>7.6</td>
<td>8.7</td>
<td>13.6</td>
</tr>
<tr>
<td>Transportation</td>
<td>6.9</td>
<td>7.3</td>
<td>6.0</td>
<td>5.5</td>
<td>6.8</td>
<td>12.5</td>
</tr>
<tr>
<td>Inventory/Material Control</td>
<td>6.8</td>
<td>7.0</td>
<td>6.3</td>
<td>6.7</td>
<td>6.5</td>
<td>7.8</td>
</tr>
<tr>
<td>Purchasing</td>
<td>8.8</td>
<td>8.5</td>
<td>8.8</td>
<td>6.9</td>
<td>11.0</td>
<td>9.8</td>
</tr>
<tr>
<td>Marketing &amp; Sales</td>
<td>11.8</td>
<td>11.2</td>
<td>12.0</td>
<td>11.6</td>
<td>10.5</td>
<td>16.4</td>
</tr>
<tr>
<td>Tactical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logistics Information Systems</td>
<td>7.7</td>
<td>8.1</td>
<td>6.8</td>
<td>5.8</td>
<td>9.8</td>
<td>10.4</td>
</tr>
<tr>
<td>Transportation</td>
<td>6.3</td>
<td>5.8</td>
<td>6.0</td>
<td>4.3</td>
<td>9.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Inventory/Material Control</td>
<td>8.0</td>
<td>6.7</td>
<td>8.2</td>
<td>5.3</td>
<td>10.8</td>
<td>9.0</td>
</tr>
<tr>
<td>Purchasing</td>
<td>8.7</td>
<td>8.2</td>
<td>8.9</td>
<td>6.6</td>
<td>7.9</td>
<td>15.3</td>
</tr>
<tr>
<td>Operational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Warehousing</td>
<td>11.9</td>
<td>11.9</td>
<td>10.8</td>
<td>11.1</td>
<td>11.8</td>
<td>11.6</td>
</tr>
<tr>
<td>Transportation</td>
<td>8.6</td>
<td>8.7</td>
<td>7.7</td>
<td>7.9</td>
<td>9.9</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Total Base: Employer Survey. B8. In the last 12 months, what has been your turnover rate i.e., the percentage of individuals who have left the organization within each of the following categories? Note: Single answer only. Mean Score shown. *Caution: small base.

Using the average turnover rates reported in the employer survey, an average turnover rate for each occupational category has been calculated. Applying this average turnover rate to each occupational category we can arrive at an estimate for the number of positions that are lost to turnover annually. As expected, a considerable number of operational positions are subject to turnover on an annual basis, while in excess of 10,000 managers across the supply chain sector leave their organization each year.

Respondents to the employer survey indicated that 26% of their turnover is attributable to staff moving to another company within the supply chain sector, 19% of turnover is due to retirements, and 17% of turnover is due to staff finding work outside of the supply chain sector. Of note, larger companies saw a higher proportion of staff leave for a position at another firm operating in the supply chain sector – this may be reflective of the ‘poaching’ that occurs between organizations, particularly larger entities with experienced staff. 24% of turnover is attributable to a reason other than retirement, movement within the sector or movement to another sector. Finally, 15% of turnover occurs for unknown reasons. Overall, the net loss to the supply chain sector across occupational categories is estimated at 74% of gross turnover.
Figure 11: Turnover Rate by Occupational Category

<table>
<thead>
<tr>
<th>Mean Turnover Rate by Occupational Category</th>
<th>Current Employment Level</th>
<th>Average Annual Turnover Rate</th>
<th>Positions Lost to Turnover</th>
<th>Net Loss to Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial</td>
<td>150256</td>
<td>8.7</td>
<td>13072</td>
<td>9673</td>
</tr>
<tr>
<td>Tactical</td>
<td>364920</td>
<td>7.7</td>
<td>28099</td>
<td>20793</td>
</tr>
<tr>
<td>Operational</td>
<td>252049</td>
<td>10.3</td>
<td>25961</td>
<td>19211</td>
</tr>
</tbody>
</table>

“The industry is fast paced, time is of the essence, and managers are pushed to fill spots and often can’t find someone with the skills. They end up with workers who are not trained for job they are doing.”

Focus Group Participant

5.7 Retirement

Deloitte’s Resources Study of the Supply Chain Sector indicates that retirement is not a pressing issue for the supply chain sector. However, the composition of the workforce will become a concern for the industry in the near-term. The age profile of study participants in the supply chain is also reflective of the broader Canadian workforce. The following figure displays the proportion of workers within 10 years of, or older than, the median retirement age.

Figure 12:
Proportion of Workers Within 10 Years of, or Older Than, the Median Retirement Age, 1992 – 2007 (Canada – All Industries)

Source: http://www.statcan.gc.ca/pub/71-222-x/2008001/c-g/desc/desc-m4-eng.htm
The above graph shows that the proportion of workers within 10 years of the median retirement age has been steadily increasing over time. The same census data\(^\text{10}\) show that in 2006, workers aged 55 and older accounted for 15.3% of the total labour force, up from 11.7% five years earlier.

The cause of the aging workforce is the baby boomer generation approaching retirement age and the increased tendency for older workers to participate in the labour force. Based on the census, Statistics Canada found that the median age of the labour force was 41.2 in 2006, which rose from 39.5 years in 2001. Statistics Canada report, *Profile of the Canadian population by age and sex: Canada ages\(^\text{11}\)*, states that the nation’s median age has been rising steadily since the end of the baby boom in 1966, when it was only 25.4 years. As the aging of the Canadian workforce continues to increase over the next five to ten years, the threat of attrition as a result of retirement will become an ever more pressing issue.

Alongside Canada’s aging population and the majority of supply chain employees being between the ages of 40-59, it is likely that retirement will have significant implications on the supply chain sector in the near future. A focus group participant reinforces this finding by suggesting that:

> "Retirement has not been an issue, but will become one soon" and "We will have 80% of our workforce retire within the next 10 years".

Focus Group Participant

Forecasting a specific retirement rate for the supply chain at this point in time may be problematic, particularly with potential changes to old age security qualifications. Instead, the aging Canadian workforce at large and the age composition of the supply chain sector should reinforce that retirement will be emerging as a more pressing issue over time. However, organizations in the supply chain will need to confront the negative impact of accelerating retirement rates and prepare for the changing demographic composition of their workforce. Several supply chain professionals who were interviewed recommend using succession planning as a strategy to prepare for the future labour market change caused by retirement:

> "Retirement is becoming an issue and many companies at the table have or are starting to use succession planning as a strategy to hire".

Focus Group Participant

The issue of an aging workforce can be mitigated somewhat if organizations proactively prepare for the future demographic of the industry. Supply chain employers will need to focus on acquiring skilled talent from readily available labour reserves, such as unemployed and underemployed job seekers and students.

It will take time and considerable resources to transform the potentially employable to the actually employed. An article on Finland’s labour market, *Preparing for the labour market*

\(^{10}\) Source: http://www12.statcan.ca/census-recensement/2006/as-sa/97-559/p24-eng.cfm

change caused by the baby boom generation\textsuperscript{12}, suggests that employers should be acting now to increase the supply of labour from available labour reserves. The article offers the following strategies: suppress the numbers of working age people unnecessarily leaving employment; deferring actual retirement to a later date or increasing the work effort of retired people; increase work-based immigration; and improve the unemployed people’s capabilities and readiness for work.

“There aren’t enough people coming out of college to replace the boomers so employers need to learn to manage people in the way they want to be managed.”
Focus Group Participant

5.8 Summary Demand Forecast

In order to predict the annual employment demand for the supply chain sector the average net turnover rate across all occupational categories was calculated (excluding turnover within the supply chain sector). Combining this net turnover rate with the anticipated employment growth rate provides an estimate of the total employment demand for the sector. Note that a retirement rate is excluded from the calculation as retirements are accounted for in the net turnover rate.

<table>
<thead>
<tr>
<th>Figure 13: Sector Employment Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sector Employment Demand</strong></td>
</tr>
<tr>
<td>New Job Creation</td>
</tr>
<tr>
<td>Net Turnover Rate (Inclusive of Retirements)</td>
</tr>
<tr>
<td>Total Employee Demand Growth Rate</td>
</tr>
</tbody>
</table>

Based on the current sector total of 767,200\textsuperscript{13} employees, an annual employee demand growth rate of 8.6 % will result in approximately 65,979 new and vacant positions to be filled on an annual basis to meet requirements associated with demand growth, retirements and workers leaving for positions outside of the supply chain sector.

In addition, respondents to the employer survey indicate current unmet employment demand of 3.5%, resulting in the need to fill approximately 26,852 current vacant positions within the sector.

“HR challenge enormous in Saskatchewan, require 120,000 new workers in next 10 yrs to replace workers & account for the growth in economy.”
Focus Group Participant

\textsuperscript{12} Source: http://www.mol.fi/english/reports/babyboomgeneration.pdf

\textsuperscript{13} Source: http://www.supplychaincanada.org/assets/u/SectorFactsandFiguresEnglish.pdf
“There are also challenges with staffing as it has now become a 24/7 industry.”
Focus Group Participant

“The supply chain has problems recruiting for entry level & top management - not so much for middle management. The entry levels offer very poor compensation so people are not willing to accept these positions, especially those coming out of university. You cannot get the people at the ground level in order to develop them (from the ground up). The very top levels are not well enough compensated and so people look at this and may rethink if this is what they want.”
Focus Group Participant

6 PROFILE OF EMPLOYEES WITHIN THE SECTOR

6.1 Section Overview

The 2012 HR Study Update represents a broad base of companies across the Canadian supply chain sector. The study includes companies operating solely in Canada and companies with international operations; companies operating in one region of Canada and those operating in multiple regions; companies with revenues of more than $1B and companies with revenues of less than $50M; companies that are suppliers of supply chain management services and companies that are users of supply chain management services. In addition, the study includes the views of employers, employees (unionized and non-unionized, male and female, older and younger, higher and lower incomes) and learning system providers. As a result, findings can be reported from a number of different perspectives in order to present a comprehensive overview and of the supply chain sector as a whole.

This section provides a descriptive analysis of the employees working within the supply chain sector and discusses critical changes that have occurred since the baseline study was conducted in 2005. Analysis is based primarily on the information obtained via the employee survey.

6.2 Profile of Supply Chain Sector Employees

Results of the HR Update indicate that almost half (46%) of supply chain employees in Canada are located in Ontario. This result is consistent across all three occupational categories.

Figure 14: Regional Distribution

<table>
<thead>
<tr>
<th>Region</th>
<th>Total (n=627)</th>
<th>Managerial (n=147)</th>
<th>Tactical (n=239)</th>
<th>Operational (n=82*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic Canada (NL, NS, PE, NB)</td>
<td>5%</td>
<td>5%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Quebec</td>
<td>17%</td>
<td>17%</td>
<td>13%</td>
<td>12%</td>
</tr>
<tr>
<td>Ontario</td>
<td>46%</td>
<td>47%</td>
<td>48%</td>
<td>48%</td>
</tr>
<tr>
<td>Prairies (AB, SK, MB)</td>
<td>19%</td>
<td>20%</td>
<td>21%</td>
<td>17%</td>
</tr>
<tr>
<td>BC</td>
<td>12%</td>
<td>12%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>North (NT, YT, NU)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

As observed in 2005, the sector profile is still predominantly male (61% male and 39% female). Men are slightly (but not significantly) more likely to hold managerial positions compared to women (34% versus 28%), but average salaries of men working in the supply chain are significantly higher than women (mean of $67,500 versus $62,500).

The mean age of supply chain employees is 47, with 8% under the age of 30. In 2005, when the baseline study was conducted, only 5% of the supply chain was over the age of 55. In the current study, 27% of employees interviewed are over the age of 55. As these numbers suggest, the supply chain workforce is aging; a much larger proportion than observed in 2005 is nearing retirement.

The proportion of those nearing retirement is also larger among those working in managerial positions. In other words, the supply chain is not only diminishing in numbers, it is also experiencing a loss of knowledge and experience. Employees working in managerial occupations are significantly older (mean age of 50) than those working in tactical and operational positions (mean age of 44 and 46 respectively). Managers also tend to be better educated than those in tactical or operational positions (66% hold an undergraduate degree or higher versus 30% of those in tactical positions and 16% of those in operational positions).

No significant variation in geographical location of employees by occupational category is observed, suggesting that the issue of retirement is of equal significance across all regions. The sector’s loss of employee knowledge and experience as a result of retirement is becoming an increasingly pressing issue.

The sector as a whole is a well-educated group, with roughly half (49%) of all employees interviewed holding a B.A. or higher. Incidence of holding a post-graduate degree is lower in the Prairies and BC (at 7% and 9% respectively versus 14% overall). The most common credential held (or pursued) is the Supply Chain Management Professional SCMP (formerly CPP).

The majority (79%) of employees hold full-time positions within their organization. BC has a higher incidence of part-time employees (14% versus 8% overall). On average, employees have worked in the supply chain sector for over a decade (mean of 13.2 years). A slightly shorter duration is observed for employees working in Quebec (mean of 12.7 years); 19% of Quebec supply chain employees have been working in the sector for less than one year. On average, employees have worked with their current employer for 9.8 years, with a somewhat shorter duration among respondents in the Prairies.

Note that those in managerial positions have worked significantly longer in the supply chain (15.5 years) than those in tactical (12.3 years) or operational (11.5 years) positions. However, the number of years supply chain employees have worked with their current employer does not vary significantly by occupation category. Those working in managerial positions have worked for their current employer for roughly the same number of years (10.9 years) as those holding tactical (9.0 years) and operational (9.9 years) positions.

The job functions of those working within the supply chain vary widely, as shown on Figure 15. The most common job functions are Purchasing (19%), Marketing & Sales (14%), Senior Management (12%), and Inventory Management Control (11%). Few significant differences in job function are observed by region. When examined by occupation category, results show that
those in Managerial positions are most likely to work as Senior Managers (30%), followed by jobs in Marketing &Sales (17%) and Purchasing (12%). The most common job held by those in a Tactical occupation is Purchasing (26%), followed by Inventory Management Control (13%). Within the Operational category, most common jobs are within Marketing & Sales (18%), Warehousing (15%) and Purchasing (14%)\textsuperscript{14}.

In terms of salary, the average annual reported income of employees interviewed was $65,500 with higher salaries in the Prairies (at $75,600) and lower salaries in BC (at $57,300). The average salary for those in a managerial position is $76,400. This compares to $64,500 for those in a tactical position, and $53,000 for those in an operational position. Membership within a supply chain organization appears to pay off; employees who are members of a supply chain association earn significantly higher salaries than those who are not (average of $70,700 versus $63,500 for non-members). However, at this stage, few supply chain employees are members of a supply chain association. Roughly three quarters of employees (74%) report that they are not members of a professional supply chain or association/body.

A total of 20% of employees hold unionized positions. Incidence of holding a unionized position is highest in Quebec (at 31%) and lowest in Ontario (at 13%). Men and women are equally likely to work in unionized positions, 20% and 22% respectively. Working in a unionized position has no significant impact on salary, although those at the highest ($100K+) and lowest (<$30K) ends of the salary spectrum are least likely to be unionized. Tactical and operational positions are

significantly more likely to be unionized than managerial positions (21% and 23% respectively versus 10% of managers).

7 Worldwide Logistics

The 2005 baseline study stated that the demand of worldwide logistics services is driven by globalization. This point is supported by Industry Canada (2011)\(^\text{15}\) which states that logistics services are influenced by six key factors: globalization; increasing logistics complexity; rising risk; increasing labour costs in the developing world; sustainability; and growing volatility. The baseline study indicated that world trade had grown from 1950 through 2001 at an average rate of 6.3% and predicted that for 2004 it was expected to grow by 7.5%, while the global gross domestic product (GDP) was expected to grow 3.5%.

Since the publishing of Deloitte’s report in 2005, the world experienced a severe economic recession in 2008 that had a significant impact on worldwide logistics. The recession contributed to several negative developments in the supply chain sector, such as people being laid off, reduced trade and price pressures. The effect the recession had on the world economy is illustrated by the Organization for Economic Co-operation and Development (OECD) and the World Bank, whose statistics show that the world GDP growth rate fell from 4.0% in 2007, to 1.5% in 2008, and further to -2.3% in the year 2009. These data provide statistical evidence for the severe impact the recession had on the world economy during this time (see the Figure 16 on the next page).

A review of the 21st Annual State of Logistics Report by the Council of Supply Chain Management Professionals (CSCMP)\(^\text{16}\) notes that logistics providers were among the first to feel the effects of this economic downturn. This report, released on June 9, 2010, states that business logistics expenditures\(^\text{17}\) fell to 7.7% of US Gross Domestic Product (GDP) in 2009 compared to 9.5% in 2008, the lowest level measured to date. This can likely be attributed to a lack of economic activity during this time as companies experienced and adjusted to the effects of the recession. Another review of the 21st Annual State of Logistics Report\(^\text{18}\) reveals that total logistics expenditures declined 18.2% in 2009. Transportation expenditures dropped 20.2% lower than 2008 levels, with all modes of transportation being negatively affected, including trucking, rail, the ocean sector, and air cargo. In particular, trucking had a 9% drop in tonnage carried, which is a significant impact as trucking represents one of the largest modes of transportation for business and consumer goods. The decline in transportation also affected warehousing expenditures as this sector witnessed a 2% decline in 2009 relative to 2008 levels.


\(^{17}\) Expenditures represent the costs of logistics operations, and include expenditures in carrying costs, transportation, other utilities, and shipper/logistics expenditures.

Other key findings from the annual report show that inventory carrying costs declined 14.1% and interest rates remained historically low and dropped below the estimates set in 2008. As a result, most industries operating in the supply chain sector experienced significant pressure to reduce their costs.

Although the recession negatively impacted worldwide logistics in 2008 and early 2009, statistics show that significant recovery has been made to the world GDP in the year 2010. Based on data from the OECD and World Bank, world GDP in 2010 grew at a rate of 4.2%, which is back to pre-recession levels (see figure below). The recession appears to have had positive impacts on supply chain organizations that responded to the crisis in a positive and innovative way. These organizations used the situation as an opportunity to reduce inventory and resource requirements and invest in processes which would boost worker productivity, which allowed them to remain progressive and successful during this time.

Figure 16: Gross Domestic Product (GDP), Annual Growth Rates in Percentages

<table>
<thead>
<tr>
<th>Country</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>2.2%</td>
<td>0.7%</td>
<td>-2.8%</td>
<td>3.2%</td>
</tr>
<tr>
<td>United States</td>
<td>1.9%</td>
<td>-0.4%</td>
<td>-3.5%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Euro Area</td>
<td>3.0%</td>
<td>0.4%</td>
<td>-4.2%</td>
<td>1.8%</td>
</tr>
<tr>
<td>World</td>
<td>4.0%</td>
<td>1.5%</td>
<td>-2.3%</td>
<td>4.2%</td>
</tr>
</tbody>
</table>


A review of the 22nd Annual State of Logistics Report outlines several key findings from the annual report. The author of the report describes the 2010 data as “choppy, seesaw, mixed signals, volatile” and suggests that the supply chain is still recovering from the recession.

As detailed in the report, it appears that the logistics sector experienced a modest recovery in 2010 relative to 2009. From the report it appears that total expenditures relative to logistics operations increased by 10.9% in 2010 relative to 2009. In terms of share of the total U.S. GDP, logistics related expenditures increased from 7.7% of GDP in 2009 to 8.3% of GDP in 2010. Increases in logistics related expenditures increased across all sectors, with both inventory and transportation sectors witnessing a 10.3% increase in expenditures in 2010 relative to 2009, and manufacturing was up by 5.3% during the same period.

These data suggest that global trade flows have rebounded strongly in 2010, following a significant collapse in 2009. The World Trade Report 2011 summarizes that the rise of the volume of goods exports in 2010 was the largest on record. The above statistics indicate that in

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2010, world trade had returned to its pre-recession level and that economic conditions were continuing to improve. This report suggests that the factors that contributed to the large drop in world trade in 2009 were the same factors that created the increase in world trade in 2010. These factors were, “the spread of global supply chains and the product composition of trade compared with output”. The report suggests that,

“The goods that were most affected by the downturn (consumer durables, industrial machinery, etc.) have a larger share in world trade than in world GDP, which increased the magnitude of the trade slump relative to GDP in 2009, and which had a similar positive effect during the recovery of 2010.”

Although world trade is beginning to show signs of recovery, its progress was not strong enough to bring about a return to the previous growth path. Thus, if the economic crisis in 2008 did not occur, it is believed that the growth of world trade would have been even larger. The report associates this with the combination of a number of factors: the curtailment of fiscal stimulus measures in many countries dampened economic activity in the second half of the year; high oil prices; and persistent high unemployment, which prevented domestic consumption from rebounding strongly in developed countries and limited income growth and import demand.

It is evident from the Annual State of Logistics reports that the global recession of 2008 continues to affect the supply chain sector. The recession’s impacts continue to be unpredictable and leave the industry in a position of continued flux. However, statistics (such as the 2010 GDP growth rate indicated above and the data provided in the World Trade Report 2011) are showing signs of gradual improvement and recovery for the worldwide economy; however, most economic forecast agencies anticipate that world economic growth will be modest and will be subject to fluctuation given considerable uncertainty in Europe and rising oil prices.

8 NORTH AMERICAN LOGISTICS

The annual percentage change in GDP for North America demonstrates that the Canadian and U.S. economies are emerging from the 2008 recession. North American exports and imports have also recovered and are approaching pre-recession levels (see Figure 17).
This figure shows that in the year 2009, in particular, North America was impacted by the recession in terms of GDP and merchandise trade. However, as we can see in 2010, an improving world economy was supporting a recovery in both GDP and exports in North America. Based on these data, there is cautious optimism for a resumption of economic growth in North America in 2011 and forward.

Emerging from the recession, third party logistics (3PL) are increasing and merger and acquisition activity has picked up in response. An article published in Logistics Quarterly magazine reports that 3PL revenues for 2010 have increased at a much faster rate than the GDP for North America. The article found that 3PL revenues were up 15 to 30 percent for key companies in domestic and international transportation management and dedicated contract carriage. Growth was strongest in International transportation management (ITM); domestic transportation management (DTM); value-added warehousing and distribution (VAWD); and dedicated contract carriage (DCC).

9 TECHNOLOGY

9.1 Section Overview

In the 2005 baseline study, technology was presented as both a solution to the challenges facing the supply chain sector, and a challenge in its own right. It helped employers meet the ever increasing customer expectations of speed and quality but was also a source of stress as employers tried to balance the cost of buying new technology and training employees to use it, against the cost of working with aging, but relatively unsophisticated equipment.

Results from the 2012 HR Update suggest that employers no longer see technology as a barrier to efficiency, but instead as a means to support improved productivity. However, financial limitations still present a burden to employers’ ability to continue to invest in additional new technologies.

9.2 Increased Comfort with Technology

Employers today seem better equipped than in the past to handle the demands of implementing and keeping pace with new technology. Their comments suggest that the integration of new technologies and the required training of employees is relatively seamless. In focus groups when asked what the most pressing issues for supply chain organizations were, technology concerns generally were not raised. This comfort level with technology suggests an important change in attitude from 2005 when the prevailing feeling was that companies were being inundated with new technology and their staff members were overwhelmed. Today the expectation is that employees are comfortable with technology, a sentiment expressed repeatedly in focus groups.

"Technology is not an issue anymore, it's mandatory. If you can't play with technology, you're in trouble"

Focus Group Participant

“The field is getting very technical, employees can't be afraid of technology”

Focus Group Participant

“You can't drive a truck these days without strong skill set in technology and software - you won't survive”

Focus Group Participant

At the same time, employers view attitude and aptitude as key skills in technology integration, adding to the sense of ease with technology prevalent today. Because companies use a variety of software programs and configure them to their individual needs, having the aptitude to learn new skills is key, particularly when coupled with a positive attitude, as one participant noted, "hire for attitude, train for skills". The fact that software is generally more user-friendly today was also mentioned. In addition, focus group participants found that employees were more likely to embrace the changes when they were made aware of the benefits to them, and that it was not “just technology for technology’s sake”.

The current study indicates that, while technology is perceived to be a challenge (20% see it as a “major” challenge), it is less of a human resource challenge, relative to other more pressing concerns such as recruitment (33%), leadership skills (25%) and succession planning (24%).
As detailed in Figure 19, there were not major differences in opinion as to the challenge presented by technology on the basis of firm size. For example, the proportion of employers with less than $50M in revenues who noted that keeping pace with technological change was a major challenge (cited by 18% of such employers), was equivalent to the proportion of large ($1B+) employers who expressed the same concern (19%).

**Figure 19: Major HR Challenges (Employer Survey)**

<table>
<thead>
<tr>
<th>Major Challenges</th>
<th>&lt;$50M Current</th>
<th>3-5 Years Difference</th>
<th>% change</th>
<th>$50M-$1B Current</th>
<th>3-5 Years Difference</th>
<th>% change</th>
<th>$1B+ Current</th>
<th>3-5 Years Difference</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment</td>
<td>24</td>
<td>30</td>
<td>6</td>
<td>35</td>
<td>38</td>
<td>3</td>
<td>34</td>
<td>45</td>
<td>11</td>
</tr>
<tr>
<td>Leadership skills</td>
<td>24</td>
<td>23</td>
<td>-1</td>
<td>29</td>
<td>24</td>
<td>5</td>
<td>25</td>
<td>27</td>
<td>2</td>
</tr>
<tr>
<td>Succession planning</td>
<td>20</td>
<td>25</td>
<td>5</td>
<td>30</td>
<td>30</td>
<td>0</td>
<td>36</td>
<td>41</td>
<td>5</td>
</tr>
<tr>
<td>Retirement of experienced employees</td>
<td>16</td>
<td>29</td>
<td>13</td>
<td>31</td>
<td>42</td>
<td>11</td>
<td>31</td>
<td>42</td>
<td>11</td>
</tr>
<tr>
<td>Keeping pace with technological change</td>
<td>18</td>
<td>23</td>
<td>5</td>
<td>25</td>
<td>26</td>
<td>1</td>
<td>19</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Retention</td>
<td>19</td>
<td>26</td>
<td>7</td>
<td>21</td>
<td>32</td>
<td>11</td>
<td>22</td>
<td>42</td>
<td>20</td>
</tr>
<tr>
<td>Lack of defined career path</td>
<td>17</td>
<td>17</td>
<td>0</td>
<td>22</td>
<td>19</td>
<td>3</td>
<td>23</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Competitive compensation / benefits</td>
<td>18</td>
<td>22</td>
<td>4</td>
<td>21</td>
<td>23</td>
<td>2</td>
<td>20</td>
<td>23</td>
<td>3</td>
</tr>
<tr>
<td>Requirement to provide 24/7 coverage</td>
<td>15</td>
<td>16</td>
<td>1</td>
<td>13</td>
<td>11</td>
<td>2</td>
<td>19</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>Education and training</td>
<td>14</td>
<td>17</td>
<td>3</td>
<td>16</td>
<td>17</td>
<td>1</td>
<td>14</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Labour relations</td>
<td>8</td>
<td>11</td>
<td>3</td>
<td>11</td>
<td>8</td>
<td>3</td>
<td>18</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Creating / maintaining a diverse workforce</td>
<td>9</td>
<td>11</td>
<td>2</td>
<td>9</td>
<td>15</td>
<td>6</td>
<td>10</td>
<td>9</td>
<td>1</td>
</tr>
</tbody>
</table>

n=1,032-1,046

Total Base (among those giving a valid response). Source: Employer Survey: B1a. We are interested in your opinions as to whether the following human resource issues are currently a challenge for your organization, and whether you believe they will be a challenge in the next 3-5 years.
The baseline study described a very different economic environment: that of a booming economy where the financial capacity to adopt new technology was much greater. Employers participating in the 2005 study noted that the ability to keep pace with technology was a challenge, citing increased use of technology as the top human resource challenge. This result reflects the reality at that time of constant and rapid change, where new initiatives soon became core requirements, perhaps even fuelling a reliance by respondents (50%) on 3PL suppliers for IT leadership (Capgemini, 2003) as companies tried to keep pace.

9.3 Improving Workflow

Respondents in the 2012 study no longer see technology as a barrier to efficiency, but instead as a means to support productivity and overall workflow. Participants in the focus groups spoke of enthusiasm for new technology evident in employee evaluations with comments such as, “kind of neat to use”, and related examples of improved workflow in their organizations.

Examples of trucks becoming more reliable and efficient as a result of an increase in technological complexity were highlighted. One participant described time saving technology in their vehicles that reads back anything showing failure or concern to a central location. The driver then receives information about the closest service centre, their parts availability and the expected repair time.

Another employer in a supply chain organization related how having invested wisely in software for his company, where his business once had a number of “fairly unskilled people who at best did their ‘so-so’ paperwork, we now have accurate data managed by one person – we have eliminated a lot!” Other respondents described their drive for further technology investment. One person noted that with procurement, inventory management, disbursement and labour becoming integrated, the expectation is for seamless business interactions. By comparison, in 2005, the race for technology was perceived as impeding workflow, with employers and employees scrambling to keep up. The earlier report describes the introduction of technology as the reason for an increased pace of work with less lead time, and the need to manage an influx of information as a result of real-time requests.

9.4 Training is Required but is Not a Barrier

The most practical concerns with the adoption of new technology arise when the subject of training is raised. As mentioned earlier, training is often viewed as a financial burden. Choosing instead to train on-the-job can be an inefficient use of resources as employees are forced to limit their own work to assist co-workers learn new software.

“Some technology provides no support for training. You end up with a few who know how to use it and then they have to...train the others.”
Focus Group Participant

“Technology can help, but it’s a huge investment, particularly on the training side. Employees want to get back to their work and not go around training everybody.”
Focus Group Participant
Even so, when focus group attendees were asked if they found training to be a serious challenge for their employees, the response given by employers was, for the most part, a resounding ‘no’. There was consensus, however, that adopting new technologies does require a commitment to training.

In focus group discussions respondents suggested their companies still tended to utilize in-house training particularly for technology. This trend is true for all supply chain training (see Figure 20) and likely universally true for all jobs. Online training was also cited as a growing option. One employer noted that with regard to training, because his company had specific needs, “we do it ourselves”. Along the same lines, large enterprises sometimes use different systems with varying amounts of support provided for training, necessitating in-house training and technologically savvy employees training their colleagues.

![Figure 20: How Employees Get Training (Employer Survey)](image)

n=1,255
Total Base (among those giving a valid response). Source: Employer Survey; A6. How do employees within your organization develop the skills and knowledge you require? Note: Totals will add to more than 100% due to multiple responses. Excludes no answer and N/A responses.

Employees surveyed for the current report did largely agree that the skill training they received for technology was sufficient, with 80% indicating that they had received training in computer skills (Figure 21) and 78% indicating that the training was sufficient (Figure 22). This is similar to the 2005 baseline study in which employees indicated that they were provided with adequate training in technology.
Figure 21: Training Received (Employee Survey)

<table>
<thead>
<tr>
<th>Trained On / Off Site</th>
<th>Total (n=955)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Computer skills</td>
<td>80</td>
</tr>
<tr>
<td>Customer relations skills</td>
<td>64</td>
</tr>
<tr>
<td>Knowledge of laws and regulations</td>
<td>60</td>
</tr>
<tr>
<td>Project management skills</td>
<td>59</td>
</tr>
<tr>
<td>Negotiation skills</td>
<td>57</td>
</tr>
<tr>
<td>Analytical skills</td>
<td>57</td>
</tr>
<tr>
<td>Critical thinking skills</td>
<td>56</td>
</tr>
<tr>
<td>Supervisory &amp;/or management skills</td>
<td>55</td>
</tr>
<tr>
<td>Financial planning and forecasting</td>
<td>48</td>
</tr>
<tr>
<td>Optimization of workflow</td>
<td>47</td>
</tr>
<tr>
<td>Operational planning</td>
<td>46</td>
</tr>
<tr>
<td>Integrated supply chain skills</td>
<td>42</td>
</tr>
<tr>
<td>Knowledge of transportation systems</td>
<td>41</td>
</tr>
<tr>
<td>Knowledge of international business practices</td>
<td>38</td>
</tr>
<tr>
<td>Mechanical skills</td>
<td>30</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Responses shown for those indicating ‘trained onsite’ and ‘trained offsite’. Source: Employee Survey: Q.A5 Please indicate which of the following skills you received training for and how the training was provided. Note: Totals will add to more than 100% due to multiple responses. Excludes no answer and N/A responses.

Figure 22: Sufficiency of Training Received (Employee Survey)

<table>
<thead>
<tr>
<th>% Indicating that Training was “Sufficient”</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Customer relations skills</td>
<td>82</td>
</tr>
<tr>
<td>Mechanical skills</td>
<td>80</td>
</tr>
<tr>
<td>Computer skills</td>
<td>78</td>
</tr>
<tr>
<td>Analytical skills</td>
<td>76</td>
</tr>
<tr>
<td>Critical thinking skills</td>
<td>75</td>
</tr>
<tr>
<td>Negotiation skills</td>
<td>69</td>
</tr>
<tr>
<td>Operational planning</td>
<td>69</td>
</tr>
<tr>
<td>Project management skills</td>
<td>68</td>
</tr>
<tr>
<td>Optimization of workflow</td>
<td>67</td>
</tr>
<tr>
<td>Supervisory &amp;/or management skills</td>
<td>66</td>
</tr>
<tr>
<td>Knowledge of transportation systems</td>
<td>65</td>
</tr>
<tr>
<td>Financial planning and forecasting</td>
<td>64</td>
</tr>
<tr>
<td>Knowledge of laws and regulations</td>
<td>64</td>
</tr>
<tr>
<td>Integrated supply chain skills</td>
<td>61</td>
</tr>
<tr>
<td>Knowledge of international business practices</td>
<td>59</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Responses shown for those indicating ‘trained onsite’ and ‘trained offsite’. Source: Employee Survey: Q.A5 Please indicate whether or not the training you received was sufficient. Note: Table shows proportion indicating that training received was “sufficient” (n=275 to 738). Excludes no answer and N/A responses.

Training for technological skills within educational systems is an important component of the overall drive to meet current needs. One focus group participant described his experience watching training “moving away from on-the-job (training), as course structure develops at educational institutions,” and suggested the ideal supply chain employee as someone with specific educational training in technology, “coupled with a business degree”. Educators surveyed indicated that 65% of their institutions taught technology and computer skills as part
of their supply chain curriculum, leaving room for improvement as technology becomes an increasingly necessary part of business.

Employers participating in focus groups noted that young people are more aware of the new technologies and will often introduce them into the company. They also suggested the need to cater to the younger demographic by incorporating up to date technology into organizations as a way to help recruit top students. The Deloitte report also noted a gap in technological knowledge identified between younger and older workers.

### 9.5 Employees No Longer Lack the Technical Skills

In the current study, employees are, for the most part, seen as possessing the required technical skills, and generally do not struggle with the technical aspects of their work. Instead, they are seen to be lacking in soft skills, such as are required to be considered competent at their jobs. The shift in focus, away from concern with employees’ ability to adapt to new technologies toward their weakness in soft skills, represents a key difference between the two studies. Findings of the 2005 baseline study suggested that few organizations had the requisite skill base needed to fully utilize technology.

### 9.6 Financial Burden

The state of the economy and the profitability at each firm affects the ability of organizations to invest and implement new technologies. Focus group participants reflected the current market insecurity in their comments, expressing frustration with the cost of new technology, and in particular with the cost of training involved. One participant lamented that the duty of training fell on the employees themselves, which was perceived to be an inefficient use of company resources, and said that employees would rather “get back to their work and not go around training everybody”.

Focus group respondents also noted that in an era of fiscal restraint, there was less access to government programs that historically had supported training and skills upgrading of

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**Figure 23: Supply Chain Skills and Subject Areas Taught (Educator Survey)**

<table>
<thead>
<tr>
<th>Skill Area</th>
<th>Mentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills (verbal &amp; written)</td>
<td>78</td>
</tr>
<tr>
<td>Analytical and problem solving skills</td>
<td>78</td>
</tr>
<tr>
<td>Decision-making skills</td>
<td>70</td>
</tr>
<tr>
<td>Knowledge of logistics functions &amp; SCM</td>
<td>66</td>
</tr>
<tr>
<td>Technology / Computer skills</td>
<td>65</td>
</tr>
<tr>
<td>Operational planning</td>
<td>62</td>
</tr>
<tr>
<td>Interpersonal skills (e.g., team building)</td>
<td>61</td>
</tr>
<tr>
<td>Knowledge of transportation systems</td>
<td>60</td>
</tr>
</tbody>
</table>

n=77*  
Total Base (among those giving a valid response) Mentions of 60%+ are shown. Source: Educator Survey: B8. Please indicate whether the following skills or subject areas are taught as part of the supply chain programs your institution/learning system provider offers. (check all that apply). Note: Multiple answers accepted. Excludes none and no answer responses. *Caution: small base.
employees. As one focus participant noted, “We used to have partnerships between federal and provincial (government) and employers and we could stand to have some of those partnerships again”. By contrast, the 2005 report reflected a rosier economy, when Canada “rode a wave of prosperity” (Statistics Canada, 2005). Respondents then rated affordability of technology as the least “common aspect of technology impacting employers” and were far more concerned about the increasing use of technology.

As expected larger companies are in a better financial position to implement technology in any economy than small and medium sized companies. This reality was true in the 2005 report and appears to remain the situation in 2011 as indicated in the focus group research:

“A lot of small businesses don’t have the time, resources, or finances to discover what various technologies mean to them in terms of their businesses”.

Focus Group Participant

Another participant pointed out that where large companies may have an enterprise resource planning systems, smaller companies may just use spreadsheet analysis.

Another concern shared by focus group participants and supported in the baseline study was that Canada as a nation lags behind other industrialized nations in investment and implementation of new technologies. The Deloitte report cites budget restrictions, as well as slow adaptation to change within the sector, a sentiment supported by one participant who noted, “you have to make sure that the people using the technology adopt it and understand the benefits of it”.

Ultimately, the goal of technology implementation, particularly in a weak economy is to increase efficiency and thereby lower costs, a result possible with prudent use of technology. Industry Canada lists inventory turnover as the main KPI for supply chain agility and logistics costs as the main KPI for supply chain management efficiency. Technology adoption has been shown to reduce logistics costs and increase a company’s agility (Industry Canada, 2006). One focus group participant, an employer in a large organization, described a user portal designed for his company that gives suppliers access to queues, resulting in a faster loading of trucks and savings in fuel and labour.

### 9.7 New Technologies

Establishments operating in the supply chain sector continue to face the challenge of adopting new technologies. Many informants noted that it was difficult to replace previously purchased (and expensive) technology with newer/better technologies. The conflict between upgrading the “old” and investing in the “new” remains strong for companies, particularly smaller and medium sized ones. In particular, Enterprise Resource Systems (ERP), described in the 2005 report as the only pervasive system used in manufacturing organizations has continued to evolve and is now being promoted as SaaS ERP systems, typically hosted by an internet Cloud.

In terms of where the sector is heading, a 2012 Logistics CIO Industry Report survey of CIOs and IT executives reveals that 50% are planning to invest in transportation management systems (TMS), followed closely by mobile technology at 44% which executives named as a priority. The
report was positive for many CIOs as 70% of transport and logistics companies are intending to increase their IT budget in 2012 (eft.com, 2012).

The focus on adoption of internet-based systems by retailers, wholesalers and manufacturers is being led by supply chain drivers (Industry Canada, 2008). Innovations vary widely within the sector. Pharmaceutical and chemical manufacturers, in response to government requirements are interested in item-level traceability and supply chain visibility. The aerospace industry’s interest is in supply chain quality standards rather than costs. Retailers focus on higher inventory efficiency and increased visibility with suppliers. The transportation industry wants to reduce operational costs and minimize energy consumption (or, maximize fuel efficiency).

As the business environment continues to become increasingly global and demands access to real-time information, supply chains grow increasingly longer and interaction across a large network of businesses becomes a necessity. Where traditional ERP meant limiting a company’s visibility to partners able to invest in grand information technology, Cloud computing, which reached the public consciousness around 2007 (Cloud Computing World, 2012), uses a shared data-centre available across each company’s network and from which customization of ERP software is the norm. Eyefortransport’s *truckIT Breakdown Report* (Sept. 2011) indicates that with 70% of carrier fleet organizations currently using ERP and 30% of respondents seeking to expand their ERP, this area remains one of growth in the industry. The problem as always is the inability to guarantee the integration of older, legacy ERP systems. As well, where the 2005 report saw web-based applications as a means to higher collaboration and visibility between firms as a positive, others have concerns with security and connectivity (Eyefortransport, 2011).

Focus group respondents envision the supply chain moving toward automation and to a knowledge worker economy from a material movement economy. When asked about technology being used and in their future, Cloud computing was the hot topic. Participants spoke excitedly about their experiences, one noting that because Cloud computing is “so live and robust … we are extracting information we’ve never seen before”. A transportation related manufacturer described challenging issues such as billing accuracy, product identification and integration of information into their systems as being greatly assisted by the use Cloud technology. The cost savings aspect arising from the ease of deploying software over a large geographical area was also noted, as well as the increased potential for seamless outsourcing globally.

Among participants the visibility afforded between companies was not always seen as a benefit. One respondent in Vancouver noted the erosion of traditional business relationships as a result of the cloud, relating the personal experiences of having seen a company move on to another provider within six months. Social media, the original Cloud, was suggested particularly for smaller companies and as an area of investigation by a Vancouver focus group respondent from the education sector. As well, respondents mentioned cell phone applications and hand held data collection devices that can transmit Radio Frequency Identifications RFIDs, as leading to more accessibility and efficiency.
9.8 Green Technology

Focus group participants and key informants noted that while the sector generally supported initiatives relating to environmental sustainability, environmental considerations more typically relegated to secondary importance when considering overall impact on operations. Nevertheless, sustainability and green technologies are increasingly being factored into business models. High energy costs are a key driver in the adoption of new technologies utilized in distribution activities, followed by the desire for competitive advantage in the market (Industry Canada, 2009*). Data from the North American Sustainable Supply Chain Report 2010 suggest that despite difficult economic times there has been an increase in awareness and development of green initiatives (eft.com, 2010). This, coupled with the fact that shippers surveyed indicated that financial ROI was the second most important driver for their adoption of sustainable initiatives, the connection between sustainability and good business practices appears solid. The main environmental benefits resulting from green supply chain management (GSCM) practices are reduced energy consumption and lower greenhouse gas emissions (Industry Canada, 2009*).

Canadian logistics and transportation providers reported that the most commonly used GSCM transportation technologies was anti-idling technology (70%22), followed by the use of energy efficient vehicles and auxiliary/external power units (60%23). Green dashboards which monitor greenhouse gas emissions were also frequently used (50%24) (Industry Canada, 2009**).

10 POLICIES AND REGULATIONS

Several unforeseeable events have impacted and created policies and regulations that have an effect on the transportation of goods and services in the supply chain sector. For example, Barchi Peleg-Gillai, Gauri Bhat and Lesley Sept (2006)25 state that among others, recent terrorist attacks, natural disasters such as Hurricane Katrina, as well as product contamination and adulteration, shortages, border closings and strikes by ports, have all “revolutionized” the way trading is done today. In addition, the expansion of global trade has also drawn attention to the transborder movement of goods. These events and other challenges will be discussed later in this section. As a result of the above circumstances, security has become a significant issue for shipping goods, especially the cross-border shipping of goods. Bonner (2005)26 says that because of these changes there are now three elements to trade: it is about moving goods quickly, efficiently and now more so than in the past, it is about moving goods securely.

22 Percentage is approximate
23 Percentage is approximate
24 Percentage is approximate
This section of the report will first provide a description of the various policies and regulations relevant to the supply chain sector by describing those related to cross-border trade. Next, a description of policies and regulations related to transportation followed by a description of programs related to immigration will be addressed. Finally, included in this section will be a review of the impact these policies and regulations have on the supply chain sector by discussing first the benefits and second the barriers and challenges related to policies and regulations.

As indicated in the 2005 baseline report, policies and regulations around the shipment of goods were cited by many employers in the supply chain sector as having an impact on operations. In 2005, the most common regulatory areas that had a significant impact on supply chain operation were:

- International regulations governing border crossing, customs, US Import Security, and International Trade;
- Provincial regulations (e.g., Inter-provincial Trade Barriers, Labour, and Occupational Health and Safety (OH&S));
- Sarbanes-Oxley Act (SOX);
- Environmental regulations (e.g., Kyoto Protocol);
- Food regulations (e.g., US Food and Drug Administration (FDA) and Canadian Food Inspection Agency (CFIA) regulations);
- Municipal regulations; and
- Transportation regulations (e.g., hours of service, weights, material storage and dangerous goods).

With the most common specific regulations cited being:

- Customs-Trade Partnerships Against Terrorism (CTPAT), and

The baseline study provided an outline of specific policies and regulations that had a significant impact on the supply chain sector by describing each under the following three sub-sections:

- Regulations/Programs Driven By Security/Terrorism;
- Regulations Related to Transportation; and
- Product Traceability and Labelling

The following describes various policies and regulations related to cross-border trade that are currently impacting the supply chain sector.

10.1 Description of Policies and Regulations Related to Cross-Border Trade

As a result of 9/11, numerous security initiatives have been implemented that affect the supply chain. As such, a large body of literature exists that details security, customs, brokerage, global supply chain challenges and other regulatory and policy hurdles for the supply chain sector. While the 2005 baseline study describes several policies and regulations that impacted the
supply chain, terrorism and the related policies and regulations previously described in the 2005 report have not changed dramatically and thus are not described in detail within this paper. These initiatives include the following that relate to security and terrorism and continue to impact the supply chain sector (Please refer to Deloitte 2005 for a full description of these initiatives):

- Operation Safe Commerce;
- ISPS Code;
- Container Security Initiative (CSI);
- Advance Electronic Cargo; and
- G7 Import One Step Release on Full Documentation (RFD).

Perhaps more telling is the literature detailing extensive and increasing national and international partnerships developing policies and guidelines for secure supply chain management, specifically initiatives impacting cross-border trade. The following are government and industry security initiatives that are related to cross-border trade:

**The Free and Secure Trade Program (FAST):** FAST is a joint initiative between the Canada Border Services Agency (CBSA) and U.S. Customs and Border Protection that enhances border and trade chain security while making cross-border commercial shipments simpler and subject to fewer delays. The FAST program pre-approves eligible goods to allow for the moving of goods across the border quickly, with a greater degree of certainty and at a reduced cost of compliance.

**Customs-Trade Partnership against Terrorism (C-TPAT):** C-TPAT was developed in direct response to 9/11. The U.S. Customs and Border Protection (CBP) challenged the trade community to partner with CBP to design a new approach to supply chain security focused on protecting the United States against acts of terrorism by improving security while simultaneously speeding the flow of compliant cargo and conveyances. It is a voluntary government/private sector partnership program.

**Canada Partners in Protection (PIP) security initiative:** The PIP program is a voluntary security program that creates partnerships between the Canada Border Services Agency (CBSA) and companies that are directly involved in cross-border trade. As the importance of the program increased in the year 2002, PIP membership became a prerequisite for access to FAST lanes. Since, PIP has been updated to ensure compatibility with C-TPAT. In addition, the program has been aligned with international standards such as those established for Authorized Economic Operators by the World Customs Organization.

**Beyond the Border Action Plan:** This action plan is a security agreement, arrived at in December 2011, between Canada and the US that involves 36 items that the governments plan to pursue together to make trade and travel easier between the Canadian and US borders and to align regulatory approaches between the two countries. An article in the Canadian Press titled
Canada and the US come to an evolutionary security agreement in October 2011\(^{27}\) states that the deal introduces measures that are to “improve communications on customs and security issues and streamline procedures in both countries”. This plan involves two action plans: The Action Plan on Perimeter Security and Economic Competitiveness and The Action Plan on Regulatory Cooperation. The first focuses on four areas, “addressing threats early; facilitating trade, economic growth and jobs; integrating cross-border law enforcement; and improving critical infrastructure and cyber-security”, while the latter “will help reduce barriers to trade, lower costs for consumers and business, and create economic opportunities on both sides of the border”.

10.2 Description of Polices and Regulations Related to Transportation

Cooper et. al. (1997)\(^{28}\) states that the management of the supply chain involves three activities: purchase, manufacture and transport. Transportation plays a connective role in the movement of goods from origin to destination, a crucial role that appears in various sections of the movement processes and can involve trucking, freight rail, air transportation, and water transportation.

An article published by Transport Canada, Global Supply Chains and Transportation: Trends and Issues\(^{29}\), discusses some of the most important trends and issues related to transportation. Most notably is the implementation of time-sensitive practices that utilize new information and communication technologies, such as Collaborative Planning, Forecasting and Replenishment (CPFR) and Radio Frequency Identification Devices (RFID). This article notes that freight carriers will be the most affected from these advancements, as they will be pressured to implement these technologies in order to ensure that the tracing and tracking of shipments worldwide is accurate. It is advanced in the article that freight carriers are one of the only roles left that involves the physical distribution of goods and because of this, carriers who do not invest in these new technologies will likely lose their market share and compromise the competitiveness of their supply chain.

Due to the importance of transportation in supply chain management, this area is in high and constant demand for skilled employees. There are several policies and regulations in place that affect the number of drivers and their ability to transport goods, which in turn affects the overall functionality of the supply chain. For example, employee’s who will be transporting goods are required to pass a medical exam and carriers also have the right to check driving records. Furthermore, employees engaged in cross border transportation are also required to have a Criminal Record Check (CRC) which further impacts the types of employees who are

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eligible for this type of activity. These policies can greatly impact the number of drivers in the supply chain and create supply problems in this area.

10.3 Description of Programs Related to Immigration

Policies and regulations exist in terms of how employers can engage in the recruitment, hiring and training of educated and professional immigrants. These government initiatives work with employers to fulfill provincial objectives and work with immigrants to facilitate their transition into the Canadian workplace. However, immigrants face several barriers that have an impact on their likelihood of obtaining employment. The government, specifically the Ministry of Citizenship and Immigration, and outside organizations offer programs that support the employment of immigrants such as: Foreign credential assessment, skills training and language programs.

For example, the World Education Program (WES) is the leading source of international education intelligence. WES is a long standing trusted program for information and insight on international education and credentials and they provide employers with credible credential evaluation. According to the WES program, “WES reports provide employers with the assurance that their hires have the educational background needed in this era of skills shortages and competitive staffing.” The WES program also helps immigrants to get their credentials recognized.

Conversely, employers may experience a shortage of skilled immigrant workers in their organizations. In response to this, the government fosters partnerships with employers and immigrant agencies to help build and sustain a diverse and inclusive workforce. The Integrated Work Experience Strategy Program (IWES) is an example of this type of bridging program initiative and involves a partnership between the Information and Communications Technology Council (ICTC) and JVS Toronto in Ontario. This program is funded by the Government of Canada’s Foreign Credential Recognition Program. This program is specifically for Information and Communication Technology (ICT) professionals looking for employment in this sector. Thus, the IWES program targets unemployed or underemployed international professionals with a background in ICT.

Another example of this type of program is the Provincial Nominee Program (PNP), which is a Canadian voluntary immigration program that gives participating provinces and territories the ability to match immigrants’ skills to employers’ needs. This program allows provinces/territories to nominate immigrants for permanent resident status and fast track their application through Citizenship and Immigration Canada’s immigration process.

In an article from CBC News on January 26th 201230, Immigration program useful but flawed, Kenney says: Minister tables review of federal-provincial program, the Minister of Citizenship and Immigration expressed that there is an ongoing need for the PNP but the Department

recognizes that several key areas require improvement. According to the article, an evaluation of this program completed by the Department found that the PNP is meeting its objectives of regionalizing immigration by filling skilled labour shortages and contributing to population growth in participating provinces. The Minister describes two current problems with the program: the retention of immigrants in rural areas of the country and flaws in fraud detection.

10.4 Benefits Related to Policies/Regulations; Toward a Collaborative Approach

Papers and studies such as The Manufacturing Institute’s Innovators in Supply Chain Security detail manufacturers’ and logistics suppliers’ investment in, and collateral benefits from, improved security measures. Collateral benefits include:

- higher supply chain visibility;
- improved supply chain efficiency;
- better customer satisfaction;
- improved inventory management;
- reduced cycle and shipping time; and
- cost reduction.

Also examined in the study was an assessment of employer willingness to invest in these new technologies and partnerships and they found a recognition of the need for improved security measures (Barchi Peleg-Gillai, Innovators in Supply Chain Security, 2006). Further proof of the benefits of investing in security can be found in a recent 2010 report on resilience in the North American supply chain. The report notes that security initiatives such as initiatives to: comply with government regulations, to safeguard against terrorist threats and to reduce cargo theft across the supply chain are among the top 10 initiatives that produce the greatest return on investment for both shippers and transportation providers in North America (Eyefortransport, 2010).

In Eyefortransport, the Cargo and Supply Chain Security Trends Report in 2006 notes,

“Cargo and supply chain security is now widely acknowledged as being a matter of collaboration between all players in all sectors of the transportation and logistics industry, from shippers, importers/exporters and technology providers to freight forwarders, carriers, and logistics services providers.”

The report stresses that collaboration is the key to managing global supply chains that move through countries having different standards, customs requirements and regulations that are constantly changing to address issues associated with criminal activity and security demands. Collaboration can occur on many levels:

- Domestically, with shippers and carriers pushing for best practices and supporting industry standards;
- Internationally, with governments co-operating on security directives; and
- Corporately, with multi-national companies setting superior standards for global cargo security.
The results of collaboration provide for safer and more efficient supply chains with fewer disruptions, reduced theft and increased profits.

10.5 Barriers and Challenges Related to Policies/Regulations

It is important to remember that the supply chain operates within a constantly changing environment, and thus changes have occurred since the Deloitte (2005) report and since the current project began.

According to their study, Peleg-Gillai, et.al., (2006) found that companies have been investing more in security in recent years than in the past. They contend that companies are doing so in order to comply with trade initiatives and/or to reduce risk through voluntary initiatives. However, because of the significant level of investment required, many businesses have not been able to justify a successful business case for investing in security. Peleg-Gillai, et.al., (2006) state that one of the main reasons for organizations’ reluctance is that companies are not focused on the collateral benefits of these types of investments, as discussed previously.

Discussions among Canadian Supply Chain Experts (Going Global in 2010: Pros share how to improve international supply chains – Materials Management and Distribution Magazine Jan/Feb 2010) identify border security measures (C-TPAT and PIP) as a barrier or challenge facing Canadian shippers. They identify strict regulations, capacity shortages, rate fluctuations and supplier/customer uncertainty as a set of challenges associated with the stricter border security measures. Canadian shippers must comply with US regulations to maintain their US markets, but insofar as each country has its own border processes, Canadian shippers have the additional challenge of harmonizing the movement of goods globally as well. Shippers must know the rules in all of the countries they do business in and cannot rely on the ability to make quick changes (e.g. from air to ocean) as a response to changing conditions. Additional challenges include the need to exercise due diligence both internally and when working with suppliers in order to stay in compliance with regulations. These experts also suggested that “survival thinking” often supersedes the forward planning required for the investment of new security and building technologies.

As indicated in the sub-section above, collaboration was identified as the key to managing global supply chains. However, in Eyefortransport, the Concerns over information, legalities hinder collaboration in 2011 finds that although collaboration efforts are gaining converts in Europe, North American companies are still hesitant to fully commit to in collaborative initiatives. The report concludes that:

“Fear of information disclosure (40% of respondents) and the absence of a clear legal framework (55% of respondents), are cited as the biggest

http://www.supplychainquarterly.com/articles/20110426forward_concerns_over_business_aspects_of/?utm_medium=email&utm_campaign=Executive+Insight+2011+Apr+28&utm_content=Executive+Insight+2011+Apr+28+CID_d3355e17d4ee7293c1c1b053a3322df0&utm_source=Email+marketing+software&utm_term=Concerns+over+information+legalities+hinder+collaboration
barriers to engaging in such activities as sharing distribution centers, combining loads into truckloads, and joint manufacturing.”

This same report also asked respondents about what would encourage them to invest in supply chain collaboration. Results indicate that carriers most often cited that “the establishment of gain-sharing models” would encourage their participation, while shippers cited a “viable proposal from a noncompeting company to share a supply chain” and 3PLs indicated that “having more shippers open to this type of innovation” as incentives to encourage their investment.

Globally, security and policy issues can have an effect on supply chain investment for emerging markets in developing countries. For example, Egypt was dropped from Agility’s Emerging Markets Logistics Index top ten most attractive markets for logistics companies’ rankings in 2011 due to increases in business costs of crime and violence and terrorism. Kenya on the other hand saw an increase in its ranking due to improvements in the country’s security (Agility, 2011). The Index’s review of Egypt is particularly poignant because it pre-dated the January 2011 civil unrest that destabilized the Egyptian government and led to the overthrow of the government, which according to Vincent Ryan of CFO Magazine should give companies operating in Egypt a reason to review their overseas operations. “Buying a company, expanding a plant, adding new product lines [in emerging markets] – capital expenditures are not like buying stock, where two days later you can flip it if things don’t work” (CFO Magazine, 2011).

Fluctuations in the market, political and economic changes and crises, and the varying global demand of goods can also have an impact on supply chain investment. For example, in Supply Chain Quarterly, Supply chain redesigns: not just about the oil in 2011 suggests that the assumption that the price of oil will fall again is also impacting organizations’ decisions to redesign their supply chains. Additionally, a report by Transport Intelligence (2009) states that:

“India is suffering growing pains as global demand for its agricultural and manufacturing goods is greater than its transportation infrastructure can handle.”

“Not only is capacity an issue but labour strikes and ongoing port construction are resulting in massive delays. Because of these issues, ocean carriers are diverting cargo to private ports.”


33 Source: Robertson, Cathy. (August 2011), India announces plans for new ports as delays and backlogs mount. http://www.transportintelligence.com/content/countries-regions/india/
As a result, India plans to redesign their supply chain, which will involve building seven new ports. In the same way, a report by Transport Intelligence (2011) titled *New report: Three reasons why the pharma logistics sector offers major opportunities for 3PLs*, suggests that important opportunities for logistics service providers will result from demands in the pharmaceutical industry. This report predicts that,

“In a highly competitive market, pharmaceutical drug manufacturers are faced with several industry issues including the expiry of blockbuster drug patents, increasing government legislation and a lack of new drugs in the development pipeline. This has resulted in several mergers/acquisitions in the industry which in turn has meant that supply chains are becoming ever more complex. In addition manufacturing is becoming more globalised, with supply chains extending to remote production locations.”

Natural disasters can also have a detrimental impact on the supply chain function. For example: Hurricane Katrina, the Japanese earthquake and tsunami, and severe flooding in Thailand have all made transportation throughout these countries very difficult. An article in Transport Intelligence, *Just-in-time manufacturing questioned once more as Thailand floods threaten global supply chains* in October 2011, discusses how the flood in Thailand, which began in July of 2011, has affected the automotive and hard disk drive manufacturing industries. This article makes the point that when these sorts of unpredictable events take place that they can affect the supply chain globally. The article states, “When one link is broken, it can disrupt production on a global scale”.

Regulatory changes can affect SCM organizations in ways completely unrelated to security and policies governing the cross-border transport of goods. In February 2011, the Canadian Radio-television and Telecommunications Commission ruled that T1 Internet service providers can charge their clients for the amount of material they download, with no upper limit. Depending on what those costs are and whether the ruling is overturned, this decision may limit the speed and extent to which SCMs commit to Internet-based inventory management systems – a growing trend among global competitors.

Changes in the way Crown Corporations are operated can have impacts on SCMs. For example, Canada Post Corporation, itself a large supply chain management organization, has experienced a significant downturn in its postal revenue as a result of the public’s increased reliance on the Internet for correspondence and bill payments. A change in the way Canada Post Corporation responds to this financial pressure, such as placing an increased emphasis on its parcel delivery service might have a profound and immediate impact on companies that fulfil online product purchases.

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These examples demonstrate that both at home and abroad the business and regulatory environments are in constant flux. That flux translates into unpredictability, which in turn means risk for those who manage supply chains.

11 RECRUITMENT

11.1 Section Overview

As discussed earlier in this report, the demand for skilled employees is high and expected to increase across virtually all sub-functions and industries within the supply chain sector. However, the sector as a whole is facing a critical shortage of qualified candidates to fill these positions. This problem was also identified in the 2005 Deloitte report, which stated, “There is an urgent need to attract new qualified resources, as the current internal growth and development strategy is no longer providing a sufficient pool of qualified resources.” Unless steps are taken to meet the demand for qualified workers, the size of the available talent pool will continue to diminish and Canada’s ability to compete in the global market will be compromised.

The 2012 HR Study Update identifies inadequate recruitment as one of the main human resources issue at the root of this problem. This issue has three basic causes:

- Low awareness and understanding of the opportunities available;
- Limited reach of recruitment methods; and
- Small and diminishing talent pool (due to poaching and retirement).

11.2 Low Awareness and Understanding

Employers interviewed for this study cited low awareness of the supply chain and misconceptions about the types of opportunities available as negatively impacting their ability to attract new recruits. Many suggested that because of the sheer number and variety of jobs available, the sector as a whole lacks a clear identity. This contributes to low awareness. One focus group participant stated, “You have to get into the sector to learn about the sector” (Edmonton). Another said, “People don’t aspire to be in the supply chain, they stumble into it” (Calgary).

Many employers understand the impact low awareness is having on the supply chain as whole. Roughly one quarter (24%) of employers reported that “lack of awareness of the sector and the careers available” represents a “major” recruitment issue. This result is consistent across all regions and impacts large and small companies alike. Low awareness is widespread; not localized to just one or two regions within Canada.

Many employers were of the opinion that low awareness is rooted in a lack of promotion of the sector by high school guidance counsellors. One employer stated that “guidance counsellors don’t make students aware of the opportunities” (Brampton). This sentiment was echoed by educators as well. Educators reported that lack of awareness among guidance counsellors and students is significantly hindering their ability to meet the education and training needs of the supply chain sector (cited as “major” challenges by 62% and 59% respectively). Insufficient
interest in supply chain careers was also cited as a major obstacle (considered a “major” challenge by 43%).

A 2009 time-motion study of Canadian guidance counsellors by Malatest & Associates found that only 23% of counsellors’ time is spent providing individual counselling. Given that the ratio of student to counsellor ranges from 250:1 (small schools) to 666:1 (large schools), the sector may need to find a practical approach that counsellors can work with.

It should be noted that even if every high school student could be convinced to pursue a career in the supply chain, there would not be enough workers recruited to meet the sector’s need for workers within every occupational category. To meet their requirements for skilled workers, it will be necessary for employers to look beyond students to women, immigrants, and Canada’s Aboriginal population.

Misconceptions that the jobs available in the supply chain are predominantly ‘blue collar’ are also hindering recruitment efforts. Employers state that, “there's a perception around transportation that it's blue collar” when in fact it is “more knowledge centric.” As a result it is difficult to attract new talent to the sector compared to other industries (Vancouver).

Employees who participated in this study indicated that, when they first entered the supply chain, they did not know what opportunities were available to them and how their careers would progress; the career path was undefined. Overall, just 31% of employees felt they had adequate information about the career paths available in the supply chain sector to guide them in their decision-making about a career. This was an issue in 2005 as well. Findings from the Deloitte study suggested that many employees knew little about the supply chain when they first entered it. According to the report, many employees reported that they “fell into the area”.

Employers are struggling to attract talent; employees are not aware of the career path available to them; learning system providers are struggling to attract students to supply chain management programs. The result is a critical shortage of skilled workers in the supply chain. The jobs available are not being filled with the right candidates, or not being filled at all, and the supply chain labour pool continues to diminish in size. Since the effectiveness of the supply chain is only as good as the talent within it, the implications of a constantly diminishing pool of talent are significant. The importance of the supply chain to businesses within Canada underscores the need raise the profile and improve the image of the supply chain sector.

Currently, employers’ engagement in career awareness building activities is fairly strong within colleges and universities, but somewhat limited in high schools. This was also the case when the baseline research was undertaken in 2005. As in 2005, a fairly sizeable proportion of those who answered indicate that they are engaging in career awareness activities in conjunction with associations and industry groups. However, it should be noted that less than half of the total number of respondents provided data for this question, and as a result, results should be interpreted with caution.
Figure 24: Career Awareness Activities (Employer Survey)

While larger companies are generally more involved in career awareness activities, smaller companies are more active in high schools. This may be because, for them, this is a feeder market for future employees. It is also interesting to note that firm’s with a HR strategy were much more proactive in career awareness activities than those firms that did not have a HR strategy (see Figure 25). However, since less than half of the total number of respondents provided data for this question, results should be interpreted with caution.

Figure 25: Career Awareness Activities (Employer Survey)

11.3 Limited Reach of Recruitment Methods

Another cause of the recruiting problems facing the sector is the limited reach of the recruiting methods currently being used by employers. Results of this research show that word of mouth
remains the recruitment channel preferred by employers. This result is consistent across all regions and company sizes. Companies with revenues of $1B or more are just as likely to rely on word of mouth as companies with revenues of less than $50M. As Figure 26 shows, other recruiting methods are being used, but to a much less extent.

Employers located in Ontario, the Prairies and BC tend to use more channels than employers located in Quebec. Companies with HR strategies tend to use a much wider range of recruitment channels; however, word of mouth is still the most used channel. The use of electronic channels relative to word of mouth is uniformly low across the sector. It is interesting to note that only 12% of employers cited using social media for their organization.
The rationale for relying on word of mouth is sound. Employers report that this is a method they trust because they are hearing about potential recruits from trusted sources. However, given the rapidly expanding array of electronic communication devices available and Canadians increasing reliance upon them, employers should be encouraged to make better use of these channels as a means of attracting new talent.

Given the shortage of potential supply chain employees in Canada, it is important for employers to look outside of Canada for potential talent. Employers participating in the focus group sessions reported that this is exactly what they are doing:

“We work with government to help immigrants find work in the supply chain. Bring in more... immigrants to fill the demand.”
Focus Group Participant

“(We are) receptive to immigrants. Stronger in Canada than the U.S.”
Focus Group Participant

“Will need to draw from immigrants, migration from other provinces and youth coming to cities from rural/remote locations.”
Focus Group Participant

However, to reach a wider pool of immigrants and potential candidates who live outside of Canada, it is vital for employers to utilize recruitment methods that have a wider reach. The CSCSC could help address this issue by reaching out on behalf of employers to the immigrant facing agencies that provide employment placement services. These agencies could then channel clients to the appropriate opportunities.
Other possible activities that could be pursued by the Sector Council to promote the sector to potential immigrants include:

- Development of a specific web portal for immigrants considering moving to Canada that would provide information to the process, regulatory requirements, and other issues associated with securing work in the supply chain sector;
- Consider development of relationships with accreditation institutions to expedite a process that could fast track credential recognition for key chain occupations;
- Examine certification/licensing requirements to identify processes/requirements that may make it difficult for foreign trained workers to gain certification (i.e. requirement for “Canadian” work experience).

11.4 Small and Diminishing Talent Pool

Low awareness of and attraction to the sector are resulting in significant recruitment issues for employers. This result is consistent across all regions and is negatively impacting all businesses, regardless of size.

One of the most significant recruitment issues employers experience relates to finding employees with the skills they require. Roughly four employers in ten (38%) identified difficulty finding workers with the correct skills/training as a “major” recruitment issue. As a result, companies are competing for the same resources at all levels (managerial, tactical, and operational).

“Our company looks at the front line staff (mostly young people), how they carry themselves and interact within the company. Look for the potential leaders to groom. It is harder to find ones with technical skills off the street. You end up poaching them from your competitor.”

Focus Group Participant

Figure 28: Major Recruitment Issues (Employer Survey)
When employers are unable to find a suitable candidate to fill a position, they resort to ‘poaching’ from other organizations. Rather than train new talent, they recruit an experienced employee from a competitor. As a result, the compensation for experienced employees increases and new recruits remain outside the sector.

“Employers want the full package but don’t want to spend the time training so they’re stealing from each other, which drives up their salaries.”
Focus Group Participant

Getting workers has become very competitive, hard to hold onto them
Focus Group Participant

We raid other firms for talent
Focus Group Participant

Results suggest that this practice is fairly commonplace for all occupation categories. As shown in Figure 29, when looking to fill a supply chain position, whether managerial, tactical, or operational, employers typically look to other organizations’ supply chain talent pool. As highlighted in Figure 29, it appears that approximately one-third of recruitment comes through recruiting talent from other supply chain establishments.

Figure 29: Recruitment Sources (Employer Survey)

<table>
<thead>
<tr>
<th>Mean</th>
<th>Educational Institutions</th>
<th>From other organizations' supply chain talent pool</th>
<th>Within own organization but outside the supply chain talent pool</th>
<th>Within another organization but outside the supply chain talent pool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managerial (n=764)</td>
<td>16.1</td>
<td>32.1</td>
<td>21.2</td>
<td>18.0</td>
</tr>
<tr>
<td>Tactical (n=742)</td>
<td>23.3</td>
<td>29.9</td>
<td>20.2</td>
<td>16.8</td>
</tr>
<tr>
<td>Operational (n=713)</td>
<td>15.6</td>
<td>29.8</td>
<td>23.5</td>
<td>18.6</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Source: Employer Survey. B2. Please indicate from where you typically recruit the majority of your supply chain employees for each occupation category. (Enter the % of new hires) Note: Multiple Answers Accepted. Excludes no answer and N/A responses. Mean Score shown.

As shown on Figure 30, other organizations’ talent pool represents the main source for recruiting across all regions. For most regions (with the exception of the North), managerial positions are most likely to be filled by poaching.
Table: Recruitment Sources (Employer Survey)

<table>
<thead>
<tr>
<th>Occupation Category</th>
<th>Total</th>
<th>Atlantic</th>
<th>Quebec</th>
<th>Ontario</th>
<th>Prairies</th>
<th>BC</th>
<th>North</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n=764)</td>
<td>(n=235)</td>
<td>(n=323)</td>
<td>(n=429)</td>
<td>(n=301)</td>
<td>(n=298)</td>
<td>(n=127)</td>
</tr>
<tr>
<td>Managerial</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational Institutions</td>
<td>16.1</td>
<td>13.7</td>
<td>14.4</td>
<td>15.0</td>
<td>12.9</td>
<td>11.3</td>
<td>13.3</td>
</tr>
<tr>
<td>From other organizations' supply chain talent pool</td>
<td>32.1</td>
<td>34.3</td>
<td>33.5</td>
<td>33.5</td>
<td>36.2</td>
<td>36.2</td>
<td>35.2</td>
</tr>
<tr>
<td>Within own organization but outside the supply chain talent pool</td>
<td>21.2</td>
<td>23.5</td>
<td>21.0</td>
<td>21.7</td>
<td>23.6</td>
<td>22.9</td>
<td>26.5</td>
</tr>
<tr>
<td>Within another organization but outside the supply chain talent pool</td>
<td>18.0</td>
<td>15.7</td>
<td>17.0</td>
<td>17.7</td>
<td>16.2</td>
<td>16.0</td>
<td>15.0</td>
</tr>
<tr>
<td>Tactical</td>
<td>(n=742)</td>
<td>(n=234)</td>
<td>(n=323)</td>
<td>(n=430)</td>
<td>(n=291)</td>
<td>(n=291)</td>
<td>(n=128)</td>
</tr>
<tr>
<td>Educational Institutions</td>
<td>23.3</td>
<td>22.3</td>
<td>22.6</td>
<td>22.8</td>
<td>19.9</td>
<td>19.2</td>
<td>22.4</td>
</tr>
<tr>
<td>From other organizations' supply chain talent pool</td>
<td>29.9</td>
<td>31.6</td>
<td>30.7</td>
<td>30.9</td>
<td>34.1</td>
<td>34.3</td>
<td>33.6</td>
</tr>
<tr>
<td>Within own organization but outside the supply chain talent pool</td>
<td>20.2</td>
<td>22.0</td>
<td>20.7</td>
<td>21.0</td>
<td>22.7</td>
<td>21.3</td>
<td>23.4</td>
</tr>
<tr>
<td>Within another organization but outside the supply chain talent pool</td>
<td>16.8</td>
<td>16.1</td>
<td>16.5</td>
<td>16.9</td>
<td>15.5</td>
<td>16.2</td>
<td>14.4</td>
</tr>
<tr>
<td>Operational</td>
<td>(n=713)</td>
<td>(n=211)</td>
<td>(n=298)</td>
<td>(n=410)</td>
<td>(n=273)</td>
<td>(n=276)</td>
<td>(n=111)</td>
</tr>
<tr>
<td>Educational Institutions</td>
<td>15.6</td>
<td>13.6</td>
<td>16.6</td>
<td>15.6</td>
<td>12.1</td>
<td>13.4</td>
<td>12.5</td>
</tr>
<tr>
<td>From other organizations' supply chain talent pool</td>
<td>29.8</td>
<td>33.7</td>
<td>30.3</td>
<td>31.2</td>
<td>34.9</td>
<td>33.8</td>
<td>36.5</td>
</tr>
<tr>
<td>Within own organization but outside the supply chain talent pool</td>
<td>23.5</td>
<td>21.6</td>
<td>22.3</td>
<td>22.8</td>
<td>23.3</td>
<td>22.3</td>
<td>25.3</td>
</tr>
<tr>
<td>Within another organization but outside the supply chain talent pool</td>
<td>18.6</td>
<td>17.8</td>
<td>16.7</td>
<td>19.1</td>
<td>17.7</td>
<td>15.5</td>
<td>12.3</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Source: Employer Survey: B2. Please indicate from where you typically recruit the majority of your supply chain employees for each occupation category. Note: Multiple Answers Accepted. Excludes no answer and N/A responses.

With few new recruits entering the sector, and employers competing for the same employees, the size of the talent pool is not growing.

“If you had a critical mass of people involved, you don’t worry about training and exporting to other companies because you would do the same thing. People would leave you and others would come”.

Focus Group Participant

Retirement of experienced employees is compounding the problem. In the 2005 baseline study, retirement was not considered to be a significant issue because at the time the supply chain employee population was predominantly between the ages of 26 and 55. Now, however, retirement is a much more immediate and pressing issue. In the current study, focus group participants talked about retirement as a problem primarily because they were unable to recruit employees with the skills to replace retirees:

“Retirement is becoming an issue and many companies at the table have or are starting to use succession planning as a strategy when the hire.”

Focus Group Participant

In the quantitative component of this study, retirement of experienced employees was identified as a major issue by approximately one-quarter (22%) of employers.
11.5 Recommendations and Best Practices

The following section outlines recommendations for how employer can best deal with the recruitment challenges they face and outlines best practices for addressing recruitment issues based on the findings of this research.

11.5.1 Outreach efforts must begin in high schools

Employers and educators consistently reported that outreach efforts should be targeted at high school students. They suggested that those who are who are best positioned to influence youth, namely parents and high school guidance counsellors, also need to be made aware of the opportunities available in the sector.

“Include supply chain curriculum in high school – make parents aware that there is a career path”
Focus Group Participant

Educators also suggested that the most effective methods for increasing awareness of and enrolment in supply chain programs involve career awareness initiatives in high schools (57% “very effective”) and expanding and promoting co-op programs (57% “very effective”).

In short, companies operating within the supply need to make a concerted effort to make young people aware of the supply chain and the opportunities available to those who choose to work within it.

This message is more targeted to larger companies than smaller companies. While larger companies are generally more involved in career awareness activities, smaller companies are more active in high schools.

Although the CSCSC is already engaged in outreach programs at the high school level, it would benefit the sector as a whole if the CSCSC were to approach a number of school boards and ask permission to solicit from their guidance counsellors ideas in how the sector can best aid them in making students more aware of the career opportunities. It may be that the sector can develop educational material that counsellors could then provide to parents at career education workshops, to help facilitate the parents’ understanding that supply chain careers are acceptable; traditionally, parents want their children to follow an academic stream and guidance counsellors find them reticent to consider other pathways.

The Supply Chain Sector Council could also consider the following strategies/actions to increase awareness of the sector to youth. These include:

- Continued refinement of resources and materials that are part of the Council’s Recruitment & Retention Toolkit which can be distributed to schools/counsellors (DVDs, online resources, other);
- Expansion of the “Careers in the Supply Chain” website to bring focus to the sector and provide clear instruction regarding how youth can enter and progress in the sector;
- Development of applications (apps) that can be accessed through Smartphones/tablets that provide information about the sector;}
• Greater use of social media to profile and promote the sector.

11.5.2 Focus on improving the image of careers in the supply chain

Efforts to increase awareness of the sector should be combined with efforts to improve the image of the sector. The focus should be on promoting the sector as offering a wide range of opportunities. One employer suggested, “When we go to high schools, we tell them it’s a rewarding career”.

To counter misconceptions about the narrow range of job types available in the sector (i.e., predominantly ‘blue collar’), employees suggest that efforts be made to promote the opportunities available and the variety of job functions and skills required (mentioned by 28% of respondents).

Figure 31: Improving Image of Supply Chain (Employee Survey)

<table>
<thead>
<tr>
<th>Total (n=292)</th>
<th>Atlantic (n=20*)</th>
<th>Quebec (n=44*)</th>
<th>Ontario (n=120)</th>
<th>Prairies (n=47*)</th>
<th>BC (n=31*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasize /create more opportunity, job functions and skills</td>
<td>28</td>
<td>10</td>
<td>34</td>
<td>32</td>
<td>23</td>
</tr>
<tr>
<td>Raise/improve profile/awareness</td>
<td>25</td>
<td>20</td>
<td>23</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>Advertise/market the sector</td>
<td>15</td>
<td>15</td>
<td>18</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>Academic recognition/promotion in high-schools</td>
<td>12</td>
<td>5</td>
<td>14</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Improve compensation/job satisfaction/job security</td>
<td>12</td>
<td>20</td>
<td>5</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Mentorship/coaching/focus on business planning</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Emphasize sector impact</td>
<td>5</td>
<td>0</td>
<td>7</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Job fairs/info sessions</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Sector expansion and sophistication/more certified profession</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>20</td>
<td>9</td>
<td>8</td>
<td>13</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Source: Employee Survey: Q.B7 How would you improve the overall image of the supply chain sector to potential new workers? Note: Multiple answers accepted. Excludes no answer and N/A responses.* Caution small base. **Base <10, too small to reliably report data.

11.5.3 Ensure that recruitment methods include mature workers from outside the sector who are looking to start a second career

The impact of retirement on the sector as a whole, coupled with the limited number of new recruits entering the sector, means that employers must expand their search for eligible candidates. Employers should not limit their search to include only those already educated/trained to work within the supply chain; potential candidates should include mature workers who are currently employed in another sector entirely. Many of these individuals have transferable skills and are looking to embark upon a new career.

11.5.4 Expand recruitment methods to reach a broader range of potential employees source internationally

Employers should look for potential candidates abroad as well as within Canada.
To this end, employers should utilize recruitment methods that have a more extensive reach. The sector is generally fairly engaged across a range of awareness activities, but word of mouth is still the preferred method. Employers should use social media to reach youth and the more technologically sophisticated recruits.

In the focus group sessions, many employers reported that they look to immigrants to fill employment gaps. To assist them in finding the appropriate immigrant recruits, employers should utilize the numerous immigrant facing agencies that provide employment placement services.

As noted previously, the CSCSC can also undertake several activities that can enhance/promote the sector to potential international recruits. Among these include building a dedicated web portal or website (similar to going to the Going to Canada site maintained by Citizenship and Immigration Canada), that provides information about the sector, expediting the processes to recognize the education/training of foreign trained candidates, and working with licensing and regulatory authorities in Canada to remove impediments to gaining required certification (i.e. removal of the requirement for Canadian work experience, other).

12 EDUCATION AND TRAINING

12.1 Section Overview

Employers, employees, and learning system providers agree that the most important skills required of those working within the supply chain sector both now and over the next five years are:

- ‘soft skills’/communication skills (e.g., customer relations, negotiation, analytical skills, critical thinking);
- leadership skills (e.g., project management, supervisory/management); and
- computer skills.

Employers report that, by and large, employees’ computer and technical skills are sufficient. This is not to say that computer training is not required; rather, that additional emphasis is generally not required. Where additional emphasis is required is on improving employees’ soft skills.

However, the training employees currently receive does not reflect this. Although communications and analytical skills are key components of training, more emphasis — by a wide margin — is currently placed on developing employees’ computer skills. This finding is consistent across all regions. It may be that computer skills have been made the focus of training to the detriment of communication and leadership skills, and employee training needs to be brought back into alignment with employers’ needs.

This section describes the education and training received by students in supply chain related courses, discusses the types of skills employees require (both now and five years from now), and employers’ impressions of the value of the training currently provided. In addition, this section provides an overview of the various approaches used by employers to address the skill gaps they perceive within the pool of new hires.
12.2 Supply Chain Students

Students enrolled in supply chain programs are generally high school graduates (38%). A total of 35% enter the supply chain with work experience, either in the supply chain (25%) or from another sector entirely (10%).

Based on input from training providers, the focus of training is primarily related to three areas: the soft skills (78% teach communication skills and analytical and problem solving skills) and leadership (70% teach decision making skills), and technology/computers (65% report teaching this).

In terms of specific areas of specialization, most common programs taken are Engineering (11%), Planning, Management, Administration (11%), Finance (8%) and Marketing/Communications (7%).

![Figure 32: Supply Chain Skills and Subject Areas Taught (Educator Survey)](chart)

n=77*  
Total Base (among those giving a valid response). Source: Educator Survey: Q.88 Please indicate whether the following skills or subject areas are taught as part of the supply chain programs your institution/learning system provider offers. (Check all that apply.) Note: Multiple answers accepted. Excludes no answer and N/A responses. *Caution: small base.
Educators report that the majority (72%) of graduates find work in the supply chain upon graduation. The majority find their first position in a tactical (43%) or operational (36%) position. Only 21% enter the supply chain in a managerial position. This echoes findings presented in the previous section that suggest employers are not finding enough new recruits with the appropriate skill sets to fill managerial positions.

In terms of the specific sub-function in which graduates find their first position, the majority find work in Purchasing (59%) or Inventory/Material Control (56%). Transportation and Warehousing are the next most common sub-functions (both at 49%).

Figure 34: Graduate Work Placement by Sub-function (Educator Survey)

<table>
<thead>
<tr>
<th>Sub-function</th>
<th>Total (n=70*)</th>
<th>Atlantic (n=17*)</th>
<th>Quebec (n=61*)</th>
<th>Ontario (n=176)</th>
<th>Prairies (n=58*)</th>
<th>BC (n=53*)</th>
<th>North (n=1*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing</td>
<td>59</td>
<td>54</td>
<td>56</td>
<td>55</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Inventory /Material Control</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
<td>56</td>
</tr>
<tr>
<td>Warehousing</td>
<td>49</td>
<td>47</td>
<td>46</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Transportation</td>
<td>49</td>
<td>47</td>
<td>46</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Marketing and Sales</td>
<td>40</td>
<td>39</td>
<td>40</td>
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</tr>
<tr>
<td>Logistics Information Systems</td>
<td>33</td>
<td>31</td>
<td>33</td>
<td>33</td>
<td>33</td>
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<td>33</td>
</tr>
<tr>
<td>Senior Management</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Source: Educator Survey: D1b. Please indicate the most common sub-functions that your graduates enter into after completing programs at your institution/learning system provider? Note: Multiple answers accepted. Excludes no answer and N/A responses. *Caution: small base.
12.3 Certification, Credentials, Education

Among the employees interviewed for this study, the most common designation completed (or pursued) is the SCMP (formerly CPP).

Figure 35: Designation Completed or Pursuing (Employee Survey)

<table>
<thead>
<tr>
<th></th>
<th>Completed</th>
<th>Pursuing</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCMP (formerly CPP)</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>CITT</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>P.Log</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>CCS</td>
<td>2</td>
<td>2</td>
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<tr>
<td>CPIM</td>
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<td>2</td>
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<tr>
<td>CSCP</td>
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<tr>
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</tr>
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<tr>
<td>FICS</td>
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<td>1</td>
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<tr>
<td>CFIPIM</td>
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<td>1</td>
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<tr>
<td>MICS</td>
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<td>1</td>
</tr>
<tr>
<td>CPPO</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

n=1099

Total Base (among those giving a valid response). Source: Employee Survey: Q.A4a Please indicate any professional designations, licenses or certificates that you have completed or are pursuing that relate to the supply chain sector. Note: Multiple answers accepted. Excludes no answer and N/A responses.

Employers generally see certification as a benefit, particularly at the managerial level:

*Credentia is necessary and important for higher level positions (management)*.

Focus Group Participant

*Having credentials attaches a certain amount of pride and attracts better trained people to company.*

Focus Group Participant

However, there is no clear consensus among employers regarding which particular certification or credential is most important. During the focus group sessions, PMAC and CITT were frequently mentioned by employers, but for the most part the certification considered important depended on the specific area of expertise.

*CITT is one of the few programs that has everything bundled under one package. PMAC is decent also.*

Focus Group Participant

*The particular credential depends on the area of expertise. Health looks for SCMP from PMAC. Another hires CITP's (Certified International Trade Professionals) from FITT.*

Focus Group Participant

Employers expressed some reservations about putting too much stock in credentials, or believing that any one credential will mean an employee is well suited to employment within their company:
“Just because I have a designation, it doesn't mean I'll be a good fit for a company. Can't tie a designation to a skill.”
Focus Group Participant

“There is no one true SC credential that is recognized nationally. There are several different areas that you can become accredited in.”
Focus Group Participant

Attitude and soft skills were seen as more important in a candidate.

“Hire for attitude, train for skills.”
Focus Group Participant

“If you can attract someone with the right attitude then the training of skills is the easy part. If someone has the wrong attitude they'll create all kinds of issues.”
Focus Group Participant

“What skills are essential? Interpersonal skills.”
Focus Group Participant

“Networking skills are crucial to any industry.”
Focus Group Participant

12.4 Training from the Perspective of Employees and Learning System Providers

Objectives of this study included updating the skill requirements of the supply chain sector, both currently and five years from now. Results of the baseline study conducted in 2005 suggested that the most important skills required by employers at that time, across all occupation categories and sub-functions, were communications and analytical skills. The current HR Update also identifies communications and analytical skills as critical.

However, the training employees report receiving is much more focused on computer skills than on communications and analytical skills. A total of 80% of employees reported that they received computer training compared 64% receiving training in customer relations skills, the next most common subject of training. This result is consistent across all regions.

By and large, employees report that they are satisfied with the sufficiency of the computer skills training they have received. The one exception is the Atlantic region where employee satisfaction with the computer training received is much lower relative to the other regions. In fact, Atlantic employees are generally less satisfied than those in other regions with the training they received across all skill and knowledge areas.

In addition to receiving computer skills training, over half of the employees interviewed for this study reported that they received training in the ‘soft skills’ (e.g., customer relations, negotiation, analytical skills, critical thinking) and leadership skills (e.g., project management, supervisory/management). Across all regions, satisfaction with the training received was generally quite high. The one exception was the Atlantic region, particularly with respect to training focused on supervisory/management skills and critical thinking skills.
Employees were also asked what skills they thought would be required of them in their role over the next five years. For the most part, the skills employees expect to require over the next five years are similar to the skills they currently require. In other words, the importance of computer skills, the ‘soft skills’ and leadership skills was expected to increase over the next five years. Employees in Quebec were generally less likely than employees in other regions to think they would require more of any of the skills listed; particularly analytical skills and critical

Prepared by: R.A. Malatest & Associates Ltd.

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thinking skills. Instead, they were more likely than those in other regions to hold the impression that the skill requirements for their role would remain the same five years from now.

Figure 38: Skills Needed in Next Five Years (Employee Survey)

<table>
<thead>
<tr>
<th>Skill Needed “More” in Next 5 Years</th>
<th>Total (n=773-1197)</th>
<th>Atlantic (n=18*-32*)</th>
<th>Quebec (n=52*-98*)</th>
<th>Ontario (n=207-284)</th>
<th>Prairies (n=90*-119)</th>
<th>BC (n=53*-77*)</th>
<th>North (n=1**)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer skills</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Project management skills</td>
<td>69</td>
<td>72</td>
<td>62</td>
<td>74</td>
<td>69</td>
<td>64</td>
<td>**</td>
</tr>
<tr>
<td>Negotiation skills</td>
<td>60</td>
<td>61</td>
<td>55</td>
<td>65</td>
<td>59</td>
<td>60</td>
<td>**</td>
</tr>
<tr>
<td>Customer relations skills</td>
<td>58</td>
<td>66</td>
<td>49</td>
<td>60</td>
<td>70</td>
<td>59</td>
<td>**</td>
</tr>
<tr>
<td>Analytical skills</td>
<td>56</td>
<td>59</td>
<td>51</td>
<td>58</td>
<td>64</td>
<td>55</td>
<td>**</td>
</tr>
<tr>
<td>Critical thinking skills</td>
<td>55</td>
<td>63</td>
<td>37</td>
<td>62</td>
<td>63</td>
<td>61</td>
<td>**</td>
</tr>
<tr>
<td>Optimization of workflow</td>
<td>55</td>
<td>63</td>
<td>37</td>
<td>62</td>
<td>63</td>
<td>61</td>
<td>**</td>
</tr>
<tr>
<td>Knowledge of int'l business practices</td>
<td>48</td>
<td>55</td>
<td>50</td>
<td>57</td>
<td>53</td>
<td>47</td>
<td>**</td>
</tr>
<tr>
<td>Operational planning</td>
<td>48</td>
<td>64</td>
<td>36</td>
<td>54</td>
<td>47</td>
<td>46</td>
<td>**</td>
</tr>
<tr>
<td>Supervisory &amp;/or management skills</td>
<td>48</td>
<td>64</td>
<td>36</td>
<td>51</td>
<td>54</td>
<td>57</td>
<td>**</td>
</tr>
<tr>
<td>Knowledge of laws and regulations</td>
<td>46</td>
<td>48</td>
<td>37</td>
<td>52</td>
<td>58</td>
<td>46</td>
<td>**</td>
</tr>
<tr>
<td>Financial planning and forecasting</td>
<td>45</td>
<td>48</td>
<td>39</td>
<td>51</td>
<td>42</td>
<td>44</td>
<td>**</td>
</tr>
<tr>
<td>Integrated supply chain skills</td>
<td>43</td>
<td>50</td>
<td>46</td>
<td>52</td>
<td>50</td>
<td>45</td>
<td>**</td>
</tr>
<tr>
<td>Knowledge of transportation systems</td>
<td>33</td>
<td>42</td>
<td>30</td>
<td>36</td>
<td>40</td>
<td>32</td>
<td>**</td>
</tr>
<tr>
<td>Mechanical skills</td>
<td>17</td>
<td>17</td>
<td>8</td>
<td>20</td>
<td>11</td>
<td>13</td>
<td>**</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Source: Employee Survey: Q.A2 In your role over the next 5 years, will the following skills be needed more, less or to the same degree? Note: Single answer only. Summary of ‘more’ responses shown. Excludes no answer and N/A responses. *Caution: small base. **Base <10, too small to reliably report data.

12.5 Training from the Perspective of Employers

The skills employers say they require are those that employees and educators claim are being taught; namely, the soft skills and leadership skills. In the qualitative sessions, employers said:

“We need people who can make decisions...on the spot...without having to go to others.”
Focus Group Participant

“You must be a flexible thinker... be able to think for yourself.”
Focus Group Participant

“We're looking for people with business acumen.”
Focus Group Participant

“Must be able to multi-task, do a wide range of things. It's difficult and some people can't do it.”
Focus Group Participant

“You need strong communication skills. Hard to find people with this skill (at every age group) and other soft skills; how to deal with people, conflict management.”
Focus Group Participant

Despite the fact that 78% of educators claim to be teaching these skills, and over half of the employees interviewed report that the training they received was sufficient, employers are still generally not satisfied that new recruits possess these skills.
“Existing external training programs are not put together in the proper package. Most have the technical courses, but not the soft courses. They need to have a better mix.”
Focus Group Participant

As highlighted in Figure 39, a total of 38% of the employers interviewed for this study report that finding workers with the skills they require is a “major” issue for them. Leadership skills were identified as a “major” recruitment issue by 25% of employers. This result was consistent across all regions. In the qualitative sessions as well, employers reported that:

“People are moved up into higher positions. They don’t have the training and get no support and are expected to be managers. Don’t have skills for performance management - coaching/training their team.”
Focus Group Participant

As depicted in Figure 40, while education and training issues were not identified as a major issue (either now or in the future), 15% of employers felt that it would be a major HR challenge in the next 3 to 5 years. Similarly, almost one-quarter (23%) of employers felt that leadership skills would be a major HR challenge for the sector over the next 3 to 5 years.
Employers also complained that new recruits lack basic numeracy and literacy skills. Many suggested this problem was worse among the younger generation.

“There’s a gap in the educational system in basic soft skills: grammar, literacy, numeracy - particularly at entry level jobs (coming from high school and some college).”
Focus Group Participant

“Students coming out are not as detailed oriented as they should be. They are lacking the soft skills as well, like spelling.”
Focus Group Participant

A number of employers suggested that the skills they require are too specialized to be effectively provided via external training programs. This issue was more common for larger companies that had established company specific processes relating to the technologies and software used.

“Most...are capable of learning the new technology. Issue is that sometimes the course material hasn’t been developed and so there’s a gap in transfer of knowledge. Best success with internal training.”
Focus Group Participant
“Training: We do it ourselves, because we’re large and we have specific needs.”
Focus Group Participant

12.6 Solutions to Skills Shortage: How Employers are Responding

Most employers are engaging in some form of employee training. On average, employers spend 7.6% of payroll on training (Figure 41). No significant variation in the amount of payroll spent on training was observed by region. As shown on Figure 42, only 12% of employers indicate that they offer no support to training employees. These are generally small companies (those operating in one region and those with annual revenues of <$50M).

Figure 41: Overall Training as a Percentage of Payroll (Employer Survey)

<table>
<thead>
<tr>
<th>Training and Education Budget as % of Payroll</th>
<th>Operates in One Region (n=446)</th>
<th>Operates in Multiple Regions (n=386)</th>
<th>&lt;$50M (n=448)</th>
<th>$50M-$1B (n=196)</th>
<th>$1B+ (n=91*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Mean</td>
<td>7.6</td>
<td>8.0</td>
<td>7.6</td>
<td>7.1</td>
<td>7.7</td>
</tr>
</tbody>
</table>


It should be noted that expenditures on education and training as a proportion of payroll costs for firms that responded to the survey suggests that employers in this sector do invest in training. For example, in comparison to the 7.6% of payroll spent on training by supply chain employers, US employers spent on average only 2.2% of their total payroll on training (2005 data\(^{35}\)).

The most common type of training offered by employers (by a wide margin) is on-the-job training (88%). Roughly half of the employers interviewed offer external courses and programs (54%) and internal courses and programs (48%). Professional associations (offered by 39%) also provide a significant professional development opportunity for employees. No meaningful differences were observed by region.

Not surprisingly, larger companies (as defined by revenues and multiple regions of operation) are generally more likely to engage in all of the training options available. None-the-less, there is significant investment in training by all sizes of company. Companies that have an HR strategy are also more likely to offer all of the training options available.

\(^{35}\) Source: [http://www.citehr.com/22840-training-hours-expenditure.html](http://www.citehr.com/22840-training-hours-expenditure.html)
On-the-job training has many benefits. Not only is it generally less expensive than sending employees out of the office on training programs, it also allows new recruits to learn from an employee who has hands on experience. However, it is important to be aware of the burden it can place on existing staff members who may be already stretched to deliver beyond their capacity. In the focus group sessions, employers talked about having to ask employees to take on more than they were qualified to handle simply because they could not find another employee to do the work. In some cases, the employee was qualified to do the job but was already stretched beyond capacity due to staff shortages within the company.
“Some technology provides no support for training. You end up with a few who know how to use it and then they have to go around and train the others instead of doing their work.”
Focus Group Participant

“Employees train as they work.”
Focus Group Participant

“When workers are pushed to do more, there is no pride in ownership/doing a good job so they move on to other places.”
Focus Group Participant

The most common types of training offered to employees interested in external training courses are time-off to attend courses (55%), and professional development events (55%) e.g., conferences, one day events. Few differences are observed by region.

Figure 44: Training Supports (Employer Survey)

<table>
<thead>
<tr>
<th></th>
<th>Total (n=1251)</th>
<th>Operates in One Region (n=446)</th>
<th>Operates in Multiple Regions (n=386)</th>
<th>&lt;$50M (n=448)</th>
<th>$50M-$1B (n=196)</th>
<th>$1B+ (n=91*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time-off to attend courses</td>
<td>55%</td>
<td>57%</td>
<td>59%</td>
<td>57%</td>
<td>59%</td>
<td>65%</td>
</tr>
<tr>
<td>Professional development events (e.g. conferences, one day events)</td>
<td>55%</td>
<td>52%</td>
<td>65%</td>
<td>49%</td>
<td>68%</td>
<td>75%</td>
</tr>
<tr>
<td>Support for membership in professional associations / bodies</td>
<td>42%</td>
<td>34%</td>
<td>57%</td>
<td>35%</td>
<td>62%</td>
<td>58%</td>
</tr>
<tr>
<td>Full tuition</td>
<td>36%</td>
<td>32%</td>
<td>41%</td>
<td>32%</td>
<td>44%</td>
<td>44%</td>
</tr>
<tr>
<td>Partial tuition</td>
<td>28%</td>
<td>29%</td>
<td>32%</td>
<td>27%</td>
<td>33%</td>
<td>41%</td>
</tr>
<tr>
<td>Tuition and textbooks</td>
<td>25%</td>
<td>23%</td>
<td>33%</td>
<td>19%</td>
<td>42%</td>
<td>34%</td>
</tr>
<tr>
<td>No support</td>
<td>12%</td>
<td>13%</td>
<td>8%</td>
<td>15%</td>
<td>5%</td>
<td>4%</td>
</tr>
</tbody>
</table>


Results suggest that employer participation in work-study programs is quite strong. The sector as a whole is receptive to work-study programs compared with other sectors of the economy. Roughly half of employers interviewed for this study indicated that they participate in co-op programs (54%) and/or internship programs (53%). Participation in apprenticeships is considerably lower (at 34%). However, it is important to note that since just over one-third of the total number of respondents provided data for this question, results should be interpreted with caution.
12.7 Recommendations and Best Practices

To address the education and training issues facing the sector, the following is recommended:

- Increasing the communication between employers and learning system providers to clarify employees’ skill gaps. It may be that a formal communication process is required.
- In Canada’s college system, it is common for employers to sit on Program Advisory Committees. In order to directly influence program development at the college level, supply chain employers should become active players on such boards/committees.
- Increasing the level of partnership between employers and learning systems providers, and increased investment in work-study programs to give student practical on-the-job experience prior to entering the supply chain; and
- Facilitating the recognition of credentials for immigrants.

13 RETENTION

13.1 Section Overview

Roughly one employer in five (19%) view retention as a “major” human resource issue currently facing the sector, and its importance is expected to increase substantially. Overall, 28% see it as a “major” issue in three to five years (second only to recruitment and retirement). With limited new talent being recruited into the sector, and poaching and retirement continuing to diminish the size of the supply chain talent pool available, finding effective ways to retain existing employees will become increasingly important to employers.
This section focuses on providing a deeper understanding of employee satisfaction and identifying strategies for increasing employee attachment to the supply chain sector.

13.2 Attractiveness of Sector

Employees generally see the sector as attractive. When asked how they would rate the overall attractiveness of the supply chain sector compared to careers in other sectors, over half (55%) of the employees interviewed rated the attractiveness of the supply chain sector “excellent” or “good” compared to other sectors. To determine whether positive impressions of a career in the supply chain relative to other sectors varied by type of employee, results were examined by: region; gender; salary; occupational category (i.e., managerial, tactical or operational); unionized or not; membership in supply chain association. For the most part, differences in perceived attractiveness of a career in the supply chain relative to other sectors were quite minor. Only two sub-groups gave higher ratings to the attractiveness of a career in the supply chain:

- Employees earning salaries of $100K or more (74% rating the attractiveness “excellent” or “good” compared to 54% of those earning less than $100K); and
- Members of a supply chain association (67% rating the attractiveness “excellent” or “good” compared to 51% of non-members).

Respondents were asked to list the aspects of the supply chain sector they saw as attractive. The most common answer was “range of positions/potential for progression” (34%). This was true regardless of region, although, for employees in Quebec and the Prairies, “pay/benefits” were perceived to be almost as attractive as the range of positions.
For employees in managerial positions, the following aspects of the supply chain were most likely to be mentioned as attractive:

**Range of positions/potential for progression (32%);**
- The work itself/variety/diversity (27%);
- The skills/knowledge acquired (22%); and
- Delivering profit, service, decisions/see results (20%).

Among employees holding tactical positions, results were similar, although pay/benefits factored much more prominently:

**Range of positions/potential for progression (35%);**
- Pay/benefits (24% versus 10% of those in managerial positions);
- The work itself/variety/diversity (24%); and
- The skills/knowledge acquired (21%).

**Pay/benefits were still more important to employees holding operational positions:**
- Pay/benefits (37%);
- Range of positions/potential for progression (27%); and
- The work itself/variety/diversity (20%).

In terms of what was most important to employees when they decided to enter the supply chain, the factors cited most frequently as “very important” by employees were “career development/advancement” and “work-life balance” (mentioned as “very” important
influencing factors by 61% and 60% respectively). This result was consistent across virtually all regions.

Figure 48: Attractive Aspects of Employment in Supply Chain by Region (Employee Survey)

<table>
<thead>
<tr>
<th></th>
<th>Total (n=565-670)</th>
<th>Atlantic (n=23*</th>
<th>Quebec (n=73*)</th>
<th>Ontario (n=200-241)</th>
<th>Prairies (n=93*</th>
<th>BC (n=58*)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Career development / advancement</td>
<td>61</td>
<td>71</td>
<td>45</td>
<td>61</td>
<td>68</td>
<td>67</td>
</tr>
<tr>
<td>Work-life balance</td>
<td>60</td>
<td>71</td>
<td>45</td>
<td>59</td>
<td>72</td>
<td>50</td>
</tr>
<tr>
<td>Job security</td>
<td>53</td>
<td>68</td>
<td>41</td>
<td>54</td>
<td>55</td>
<td>56</td>
</tr>
<tr>
<td>Benefits</td>
<td>52</td>
<td>64</td>
<td>41</td>
<td>41</td>
<td>51</td>
<td>62</td>
</tr>
<tr>
<td>Work hours</td>
<td>47</td>
<td>56</td>
<td>34</td>
<td>44</td>
<td>53</td>
<td>46</td>
</tr>
<tr>
<td>Compensation</td>
<td>45</td>
<td>45</td>
<td>41</td>
<td>43</td>
<td>47</td>
<td>48</td>
</tr>
<tr>
<td>Safety on the job</td>
<td>45</td>
<td>61</td>
<td>37</td>
<td>44</td>
<td>44</td>
<td>42</td>
</tr>
<tr>
<td>I knew someone in the industry</td>
<td>20</td>
<td>13</td>
<td>18</td>
<td>21</td>
<td>26</td>
<td>16</td>
</tr>
</tbody>
</table>

*Caution small base. **Base <10, too small to reliably report data.

For employees in managerial and tactical positions, “career development/advancement” was significantly more likely to be cited as a “very important” factor in their decision to enter the supply chain relative to those in operational positions (67% of those in managerial and 67% of those in tactical positions versus 52% of those in operational positions).

When examined by gender, results indicate that men and women have somewhat different motivations for entering the supply chain. For women, the following were significantly more likely to be cited as “very important” factors in their decision to enter the supply chain: “work-life balance” (71% saying “very important” versus 51% of men); “benefits” (59% saying “very important” versus 48% of men); and “work hours” (56% saying “very important” versus 38% of men).

13.3 Employee Satisfaction

Employees were further asked how satisfied they were with a number of different aspects of their employment in the supply chain sector: future career prospects, safe work environment, benefits, co-worker relationship, professional development, and overall working conditions. Levels of satisfaction were highest, by a sizeable margin, for having a safe work environment (49% “very satisfied”). Overall, employees were least satisfied with their future career prospects (25% “very satisfied”). Few meaningful differences were observed by occupational category or region. Employees earning less than $30K a year were generally much less satisfied with every aspect of their employment.
The factors most likely to have a positive impact on job satisfaction relate to flexible work arrangements (51%), support for further education (50%) and a family-friendly work environment (46%). Factors most likely to have a negative impact are frequency of on-call work (32%), frequency of shift work (26%), and remote work location (20%).

Few differences were observed by region, with the exception of employees in Quebec being more likely to state that a remote location and frequency of on-call work would have a large negative impact on their job satisfaction.
Figure 5: Factors Affecting Job Satisfaction by Region (Employee Survey)

<table>
<thead>
<tr>
<th>Total (n=83*-296)</th>
<th>Atlantic (n=19-30*)</th>
<th>Quebec (n=44-71*)</th>
<th>Ontario (n=114-226)</th>
<th>Prairies (n=52*-105)</th>
<th>BC (n=32-60*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE = Negative effect</td>
<td>LPE = Large positive effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Flexible work arrangements</td>
<td>7</td>
<td>51</td>
<td>7</td>
<td>37</td>
<td>11</td>
</tr>
<tr>
<td>Support for further education</td>
<td>8</td>
<td>50</td>
<td>12</td>
<td>52</td>
<td>3</td>
</tr>
<tr>
<td>Family-friendly environment</td>
<td>8</td>
<td>46</td>
<td>4</td>
<td>29</td>
<td>11</td>
</tr>
<tr>
<td>Incentive / rewards programs</td>
<td>10</td>
<td>40</td>
<td>7</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Wellness programs</td>
<td>4</td>
<td>31</td>
<td>4</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>Remote work location</td>
<td>20</td>
<td>23</td>
<td>11</td>
<td>26</td>
<td>49</td>
</tr>
<tr>
<td>Frequency of shift work</td>
<td>26</td>
<td>16</td>
<td>29</td>
<td>5</td>
<td>32</td>
</tr>
<tr>
<td>Frequency of 'on call' work</td>
<td>32</td>
<td>8</td>
<td>35</td>
<td>4</td>
<td>48</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Note that base size fluctuates by category. Responses shown for those indicating 'large positive effect' and combined 'large negative & small negative effect'. Source: Employee Survey: Q.B10 To what extent does each of the following affect your satisfaction with your current job? Note: Single answer only. Excludes no answer and N/A responses. *Caution: small base. **Base <10, too small to reliably report data.

13.4 Turnover Rates and Reasons for Leaving

Results from this study show that, for the most part, employees expect to stay with their current organization for the next five years. Over half (57%) indicated that they expected to be working at a higher job or the same job within their organization in five years time.

Those in the Prairies have higher expectations than other provinces; a total of 43% expect to work at a higher level job within their organization compared to 33% overall. Those in Atlantic significantly more likely to say they’ll be working in the same job within their organization.

Figure 52: Employee Career Path in Five Years (Employee Survey)

<table>
<thead>
<tr>
<th>Total (n=645)</th>
<th>Atlantic (n=32*)</th>
<th>Quebec (n=100)</th>
<th>Ontario (n=279)</th>
<th>Prairies (n=120)</th>
<th>BC (n=77*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working at a higher level job within my organization</td>
<td>33</td>
<td>22</td>
<td>27</td>
<td>34</td>
<td>43</td>
</tr>
<tr>
<td>Working in the same job within my organization</td>
<td>24</td>
<td>41</td>
<td>27</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>Working at a higher level job outside of my organization</td>
<td>16</td>
<td>19</td>
<td>12</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td>Working outside of the industry that I am currently working</td>
<td>10</td>
<td>13</td>
<td>8</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Retired</td>
<td>10</td>
<td>6</td>
<td>15</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Working in the same job outside of my organization</td>
<td>5</td>
<td>0</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Self-Employed</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
It is interesting to note that despite relatively high levels of job satisfaction, there were significant proportions of employees who envisioned that they would not be working for their same employer in five years time. Overall, almost half (43%) of employees felt that they would not be employed by the same employer in five years time. Although a proportion of employees (approximately 10%) expect to retire, a significant proportion of employees across all regions cited intentions to leave their current organization for a number of reasons (see Figure 53).

Employees were also asked to comment on expected turnover rates. It is interesting to note that employer expectation of turnover rates were markedly lower than the turnover rates expressed by staff themselves. This is not uncommon in such sector research, as employers generally have turnover rates or actual experience, whereas employee intentions do not always naturalize due to the inability to find a similar position that provides equivalent or better compensation.
Figure 5: Turnover Rate (Employer Survey)

<table>
<thead>
<tr>
<th>Reason(s) for Leaving</th>
<th>Total (n=894)</th>
<th>Atlantic (n=289)</th>
<th>Quebec (n=398)</th>
<th>Ontario (n=541)</th>
<th>Prairies (n=369)</th>
<th>BC (n=365)</th>
<th>North (n=156)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Found work in another supply chain company in Canada</td>
<td>19.3</td>
<td>22.7</td>
<td>21.6</td>
<td>21.4</td>
<td>22.7</td>
<td>22.4</td>
<td>24.5</td>
</tr>
<tr>
<td>Retirement</td>
<td>13.8</td>
<td>14.0</td>
<td>14.2</td>
<td>13.5</td>
<td>12.1</td>
<td>12.3</td>
<td>13.2</td>
</tr>
<tr>
<td>Found work outside the supply chain sector</td>
<td>12.5</td>
<td>11.7</td>
<td>12.3</td>
<td>13.0</td>
<td>12.1</td>
<td>11.3</td>
<td>13.2</td>
</tr>
<tr>
<td>Reasons other than above</td>
<td>17.6</td>
<td>18.3</td>
<td>19.2</td>
<td>18.6</td>
<td>20.0</td>
<td>20.0</td>
<td>20.4</td>
</tr>
<tr>
<td>Unknown reason</td>
<td>10.5</td>
<td>9.0</td>
<td>10.9</td>
<td>9.6</td>
<td>9.7</td>
<td>10.9</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Base size varies by response category. Source: Employer Survey: B8. In the last 12 months, what has been your turnover rate i.e., the percentage of individuals who have left the organization within each of the following categories? Note: Single answer only.

Echoing the results from the baseline study, the most common reason for turnover is competition among supply chain organizations. Although a variety of reasons for employee exits were identified by employers, the most frequently mentioned reason was “found work in another supply chain company in Canada” (Figure 55). This underscores the impact of poaching on the size of the supply chain as a whole. If new recruits do not move into the sector to replace retirees, then employers will continue to ‘trade’ the same employees, driving up their price. Larger companies (i.e., higher revenues and operating in multiple regions) as well as those with HR strategies are generally losing more employees to other supply chain companies. This may be due to the increased networking opportunities for this group (Figure 56).
### Figure 5: Reason(s) Employees Left (Employer Survey)

<table>
<thead>
<tr>
<th>Reason(s) for Leaving</th>
<th>Total (n=1357)</th>
<th>Operates in One Region (n=447)</th>
<th>Operates in Multiple Regions (n=389)</th>
<th>&lt;$50M (n=449)</th>
<th>$50M-$1B (n=196)</th>
<th>$1B+ (n=92*)</th>
<th>Has HR Strategy (n=348)</th>
<th>No HR Strategy (n=314)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Found work in another supply chain company in Canada</td>
<td>19.3</td>
<td>16.9</td>
<td>23.5</td>
<td>17.1</td>
<td>25.1</td>
<td>28.1</td>
<td>22.8</td>
<td>16.4</td>
</tr>
<tr>
<td>Retirement</td>
<td>13.8</td>
<td>15.5</td>
<td>12.7</td>
<td>11.5</td>
<td>18.0</td>
<td>16.8</td>
<td>17.9</td>
<td>9.5</td>
</tr>
<tr>
<td>Found work outside the supply chain sector</td>
<td>12.5</td>
<td>13.6</td>
<td>11.9</td>
<td>13.7</td>
<td>12.2</td>
<td>11.0</td>
<td>13.4</td>
<td>13.5</td>
</tr>
<tr>
<td>Reasons other than above</td>
<td>17.6</td>
<td>16.6</td>
<td>20.5</td>
<td>19.5</td>
<td>17.1</td>
<td>18.3</td>
<td>17.4</td>
<td>18.1</td>
</tr>
<tr>
<td>Unknown reason</td>
<td>10.5</td>
<td>11.3</td>
<td>10.2</td>
<td>11.6</td>
<td>10.1</td>
<td>9.5</td>
<td>8.0</td>
<td>12.7</td>
</tr>
</tbody>
</table>

Total Base. Source: Employer Survey: B9. Of those who left your organization, could you provide insight as to the proportion that left for the following reasons? Note: Single answer only. Results show mean proportion leaving for each specified reason.

#### 13.5 Retention Strategies

Many employers are utilizing some type of retention strategy in an attempt to minimize employee turnover. The most common strategies included providing a career path (55%) and a flexible work schedule (55%). These were also the most common retention activities engaged in by employers in 2005. Providing employees with professional development opportunities ranked a close third (46%) in the current study. These three retention strategies represent the most common employed across all regions.

### Figure 57: Retention Strategies Employed (Employer Survey)

<table>
<thead>
<tr>
<th>Total (n=753)</th>
<th>Atlantic (n=247)</th>
<th>Quebec (n=342)</th>
<th>Ontario (n=449)</th>
<th>Prairies (n=321)</th>
<th>BC (n=312)</th>
<th>North (n=131)</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Providing a career path</td>
<td>55</td>
<td>57</td>
<td>57</td>
<td>57</td>
<td>60</td>
<td>61</td>
</tr>
<tr>
<td>Flexible work schedule</td>
<td>55</td>
<td>56</td>
<td>56</td>
<td>55</td>
<td>55</td>
<td>58</td>
</tr>
<tr>
<td>Professional development</td>
<td>46</td>
<td>46</td>
<td>47</td>
<td>45</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Paid ongoing / continuing education</td>
<td>43</td>
<td>42</td>
<td>41</td>
<td>43</td>
<td>47</td>
<td>47</td>
</tr>
<tr>
<td>Long-term incentive pay</td>
<td>30</td>
<td>34</td>
<td>34</td>
<td>29</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Job rotation</td>
<td>23</td>
<td>28</td>
<td>27</td>
<td>27</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>Mentorship program</td>
<td>23</td>
<td>24</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>Retention allowance</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>7</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Profit sharing / rewards / bonuses</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Group Insurance / RRSP</td>
<td>**</td>
<td>**</td>
<td>1</td>
<td>**</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1</td>
<td>**</td>
<td>1</td>
<td>**</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Source: Employer Survey: B7b. Please indicate if your organization is engaged in any of the following retention strategies. Note: Multiple answers accepted. Excludes no answer and N/A responses. ** indicates that response category was selected by <1% of those responding to the question.
Smaller companies generally report employing fewer retention strategies than larger companies, and they appear to struggle more with providing a career path, professional development, and paid ongoing/continuing education.

Figure 58: Retention Strategies Employed (Employer Survey)

<table>
<thead>
<tr>
<th></th>
<th>Total (n=753)</th>
<th>Operates in One Region (n=361)</th>
<th>Operates in Multiple Regions (n=342)</th>
<th>&lt;$50M (n=367)</th>
<th>$50M-$1B (n=175)</th>
<th>$1B+ (n=84*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing a career path</td>
<td>55</td>
<td>49</td>
<td>61</td>
<td>47</td>
<td>65</td>
<td>71</td>
</tr>
<tr>
<td>Flexible work schedule</td>
<td>55</td>
<td>53</td>
<td>56</td>
<td>55</td>
<td>55</td>
<td>52</td>
</tr>
<tr>
<td>Professional development</td>
<td>46</td>
<td>43</td>
<td>48</td>
<td>37</td>
<td>57</td>
<td>60</td>
</tr>
<tr>
<td>Paid ongoing / continuing education</td>
<td>43</td>
<td>39</td>
<td>47</td>
<td>36</td>
<td>51</td>
<td>49</td>
</tr>
<tr>
<td>Long-term incentive pay</td>
<td>30</td>
<td>30</td>
<td>31</td>
<td>31</td>
<td>29</td>
<td>36</td>
</tr>
<tr>
<td>Job rotation</td>
<td>23</td>
<td>19</td>
<td>28</td>
<td>19</td>
<td>23</td>
<td>39</td>
</tr>
<tr>
<td>Mentorship program</td>
<td>23</td>
<td>22</td>
<td>23</td>
<td>18</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td>Retention allowance</td>
<td>8</td>
<td>7</td>
<td>9</td>
<td>8</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Profit sharing / rewards / bonuses</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Group Insurance / RRSP</td>
<td>**</td>
<td>0</td>
<td>**</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1</td>
<td>**</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Source: Employer Survey: B7b. Please indicate if your organization is engaged in any of the following retention strategies. Note: Multiple answers accepted. Excludes no answer and N/A responses. *Caution: small base. ** indicates that response category was selected by <1% of those responding to the question.

Results suggest that opportunity exists for employers to increase employee job satisfaction by increasing and/or improving their communications with employees about the opportunities for advancement. Although employers are of the opinion that they are providing a career path, employees are least likely to be satisfied with their future career prospects (25% “very satisfied”). Employees’ satisfaction with this aspect of their employment ranked among the lowest across all regions.

Figure 59: Employment Satisfaction with Aspects of Employment (Employee Survey)

Total Base (among those giving a valid response). Note that base size fluctuates by category. Responses shown for those indicating ‘Very Satisfied’. Source: Employee Survey: Q.B9 Overall, how satisfied are you with the following aspects of your employment in the supply chain sector? Note: Single answer only. Excludes no answer and N/A responses. **Base <10, too small to reliably report data.
13.6 HR Strategy and Succession Planning

Results suggest that many employers are not making sufficient preparations to meet the human resource challenges they currently face or will face in the future. Succession planning to replace the employees who are retiring or leaving the company is still quite limited. Just 35% of employers have a succession plan in place. Employers themselves realize that this is a problem. Roughly one quarter (24%) identify succession planning as a major human resources challenge they currently face and 28% indicate that it will be a challenge three to five years from now.

Figure 60: Companies with Succession Plans

Employers working in lower revenue (<$50M) companies are significantly less likely to have a succession plan in place (29% versus 46% with revenues of $50M-$1B and 73% with revenues of $1B+), and are also less likely to recognize that this is a problem. Just 20% identify succession planning as a major challenge compared to 30% of companies with revenues of $50M-$1B and 73% with revenues of $1B+. This may be because employers working in smaller companies are too busy trying to deal with the more immediate concerns of running their business and do not have time for succession planning. Qualitative findings support this. In the focus group sessions, employers who worked in smaller companies suggested that their problems with developing an HR strategy and succession planning were caused by the fact that they have limited resources, both in terms of available staff and finances.
Figure 61: Major HR Challenges (Employer Survey)

<table>
<thead>
<tr>
<th>Major Challenges</th>
<th>&lt;$50M</th>
<th></th>
<th>$50M-$1B</th>
<th></th>
<th>$1B+</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current</td>
<td>3-5 Years</td>
<td>Difference</td>
<td>Current</td>
<td>3-5 Years</td>
<td>Difference</td>
</tr>
<tr>
<td>Recruitment</td>
<td>%</td>
<td>%</td>
<td>% change</td>
<td>%</td>
<td>%</td>
<td>% change</td>
</tr>
<tr>
<td>Leadership skills</td>
<td>24</td>
<td>30</td>
<td>+6</td>
<td>35</td>
<td>38</td>
<td>+3</td>
</tr>
<tr>
<td>Succession planning</td>
<td>20</td>
<td>25</td>
<td>+5</td>
<td>30</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Retirement of experienced employees</td>
<td>16</td>
<td>29</td>
<td>+13</td>
<td>31</td>
<td>42</td>
<td>+11</td>
</tr>
<tr>
<td>Keeping pace with technological change</td>
<td>18</td>
<td>23</td>
<td>+5</td>
<td>25</td>
<td>26</td>
<td>+1</td>
</tr>
<tr>
<td>Retention</td>
<td>19</td>
<td>26</td>
<td>+7</td>
<td>21</td>
<td>32</td>
<td>+11</td>
</tr>
<tr>
<td>Lack of defined career path</td>
<td>17</td>
<td>17</td>
<td>0</td>
<td>22</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>Competitive compensation / benefits</td>
<td>18</td>
<td>22</td>
<td>+4</td>
<td>21</td>
<td>23</td>
<td>+2</td>
</tr>
<tr>
<td>Requirement to provide 24/7 coverage</td>
<td>15</td>
<td>16</td>
<td>+1</td>
<td>13</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Education and training</td>
<td>14</td>
<td>17</td>
<td>+3</td>
<td>16</td>
<td>17</td>
<td>+1</td>
</tr>
<tr>
<td>Labour relations</td>
<td>8</td>
<td>11</td>
<td>+3</td>
<td>11</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>Creating / maintaining a diverse workforce</td>
<td>9</td>
<td>11</td>
<td>+2</td>
<td>9</td>
<td>15</td>
<td>+6</td>
</tr>
</tbody>
</table>

n=1032-1046
Total Base (among those giving a valid response). Source: Employer Survey: B1a. We are interested in your opinions as to whether the following human resource issues are currently a challenge for your organization, and whether you believe they will be a challenge in the next 3-5 years.

However, although not all companies identify developing an HR strategy and succession planning as an immediate concern, results of this research suggest that they should. The companies that do not have an HR strategy are less likely to engage in the activities that will address the issues facing the sector. As shown on Figures 61 and 62, they offer fewer training programs and training supports, and they engage in fewer activities aimed at retaining skilled employees (e.g., providing a career path, continuing education, professional development).
### Figure 6: How Employees Get Training (Employer Survey)

<table>
<thead>
<tr>
<th>Sources of Training</th>
<th>Total (n=1255)</th>
<th>Operates in One Region (n=443)</th>
<th>Operates in Multiple Regions (n=387)</th>
<th>&lt;$50M (n=444)</th>
<th>$50M-$1B (n=196)</th>
<th>$1B+ (n=92*)</th>
<th>Has HR Strategy (n=347)</th>
<th>No HR Strategy (n=311)</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-the-job training</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>External programs /courses -offered by outside educational service providers</td>
<td>54</td>
<td>51</td>
<td>62</td>
<td>48</td>
<td>67</td>
<td>73</td>
<td>65</td>
<td>44</td>
</tr>
<tr>
<td>Internal programs /courses -offered by your organization</td>
<td>48</td>
<td>40</td>
<td>56</td>
<td>35</td>
<td>60</td>
<td>73</td>
<td>63</td>
<td>31</td>
</tr>
<tr>
<td>Membership in professional associations</td>
<td>39</td>
<td>38</td>
<td>45</td>
<td>36</td>
<td>52</td>
<td>54</td>
<td>48</td>
<td>34</td>
</tr>
<tr>
<td>Attending events/conferences</td>
<td>**</td>
<td>1</td>
<td>1</td>
<td>**</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Base (among those giving a valid response). Source: Employer Survey: A6. How do employees within your organization develop the skills and knowledge you require? Note: Multiple answers accepted. Excludes no answer and N/A responses. Percentages shown. *Caution: small base. ** indicates response category was selected by <1% of those responding to the question.

### Figure 63: Overall Training as a Percentage of Payroll (Employer Survey)

<table>
<thead>
<tr>
<th>Training and Education Budget as % of Payroll</th>
<th>Total (n=1251)</th>
<th>Operates in One Region (n=446)</th>
<th>Operates in Multiple Regions (n=386)</th>
<th>&lt;$50M (n=448)</th>
<th>$50M-$1B (n=196)</th>
<th>$1B+ (n=91*)</th>
<th>Has HR Strategy (n=347)</th>
<th>No HR Strategy (n=311)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.6</td>
<td>8.0</td>
<td>7.6</td>
<td>7.1</td>
<td>7.7</td>
<td>7.9</td>
<td>9.9</td>
<td>5.8</td>
</tr>
</tbody>
</table>

### 13.7 Recommendations and Best Practices

Employers should be aware of employees’ expectations upon entering the supply chain and utilize appropriate feedback mechanisms (e.g., employee satisfaction surveys) to assess whether or not these expectations are being met.

- Most importantly, employees are looking for career development opportunities and work-life balance. Flexible work arrangements, support for further education, and a family-friendly work environment are also important factors in maintaining employees’ job satisfaction.

- To retain women within the supply chain it is important to ensure that expectations related to work-life balance, benefits, and work hours are being met.

Employers, particularly smaller employers, need to allocate the time and resources to developing succession plans. When developing plans, employers should include:
Understanding that succession planning is critical and should be prioritized. Succession planning not only safeguards against skill gaps when experienced employees retire, it also aids in employee retention. Communicating succession plans to employees indicates to them that the company is investing in their career advancement.

Clearly articulating the career paths available. This will assist in both retention (per the above) and recruiting efforts. Opportunities are more attractive to potential candidates when upward mobility is clearly demonstrated.

14 IN SUMMARY

14.1 Section Overview

The results of the current study confirm that while some progress has been made, the supply chain sector continues to face similar challenges as in 2005. These key challenges include:

- Lack of awareness of the sector, and few programs designed to enhance the attractiveness of the sector to potential new entrants
- Skill gaps among new workers, with employees particularly concerned with the mastery of “soft skills”
- Technology issues
- Internal competition for experienced workers
- Need for proactive retention strategies
- Limited evidence of HR strategies and/or the use of Succession Planning

A summary of these key challenges is provided below. In addition, recommendations for the CSCSC have been included in this section.

14.2 Low Awareness, Understanding and Attraction

Limited awareness and understanding of the sector continue to impede sector growth and progress. These were identified as key human resource issues in the 2005 baseline study and both remain significant issues today. Low awareness starts in high schools (career path not promoted by guidance counsellors or parents), and continues into the post-secondary education system (educators talk about low awareness and interest in supply chain related courses). Employers cite recruitment issues associated with this kind of limited awareness and misconceptions about the type of work and career opportunities available to those working in the supply chain. The few potential recruits who are aware of the supply chain typically think of it as offering only ‘blue collar’ jobs. As a result, employers describe how people don’t choose to work in the supply chain; they simply ‘fall into it’.

The sheer size of the supply chain and the variety of jobs within it likely contribute to the limited awareness of the sector. The sector lacks a clear identity because of the range of industries and job functions. Consistent with the baseline study, findings of this research suggest that the sector remains fragmented.
Notwithstanding that employers in the sector have embraced technology as a key tool to increase productivity, employers have yet to fully exploit the opportunities available through electronic mediums to promote the sector to available job applicants. Word of mouth is still the main method used, regardless of company revenues. In this electronic age, employers should be promoting opportunities within the sector via the many electronic devices available — particularly if they want to reach youth. As noted in the report, there are a number of strategies that can be adopted by the sector to attract workers from other countries to Canada. Such a focus requires that promotional materials be developed, and processes be streamlined such that foreign-trained workers can be easily (and quickly) integrated into the workplace.

Outreach programs, too, are limited in scope. While most employers are engaging in outreach activities in colleges and universities, promotional efforts in high schools are somewhat limited. Yet, it is at the high school level that outreach is most critical. Employers, employees and educators all suggested that the best hope for increasing awareness of the sector is by promoting the sector to youth and are related influence agents (parents, peers, others), before they have decided upon a career to pursue.

A lack of a clear career path is also contributing to the poor image of the sector. Talented potential recruits are interested in understanding the opportunities available to them. Results of this study suggest that a clearly delineated career path will increase interest in the sector, support higher levels of employee satisfaction, and stimulate interest in supply chain courses.

The low attraction to the field is not reflected in employees’ satisfaction with their jobs. Employees are generally satisfied with their employment in the supply chain sector and see it as attractive relative to other sectors. This is a well educated and engaged workforce, with employees who are attracted by the variety and new opportunities afforded by their jobs as much as by the pay.

Best practices for increasing awareness, understanding and attraction include:

- Outreach in high schools (e.g., career day);
- Encourage promotion of the sector among high school guidance counsellors and other influence agents such as parents and peers;
- Continue efforts to market the sector and the profession (e.g., online media centre; exhibition at the National Job Fair & Training Expo);
- Articulate opportunities available and clearly define career path; and
- Recruiting methods with broader reach and increase use of technology/applications to promote the sector to youth.

The researchers recommend continuing efforts to develop a national sector strategy to inform high school students, their parents, teachers and guidance counsellors about the career opportunities available in the sector. This would require consultation with school boards and principals across the country to identify how they would like to be engaged and what educational materials need to be developed to support this outreach.
14.3 Lack of Required Skills among New Recruits

In the baseline study, lack of skills was identified as an issue; however, the skills that were identified as lacking are different from the skills that are lacking today. In 2005, technical skills were the major obstacle to employer satisfaction with new hires. Emerging technologies kept employers and employees scrambling to keep up with the skills they needed to compete in a global marketplace. In contrast to the technological skills upgrading that was required in 2005, employers in the 2011 study expressed confidence that new entrants possessed the requisite technical skills to perform their jobs. However, employers were of the opinion that new entrants lacked the soft skills companies require: particularly leadership and communication skills. There was consensus among the employers interviewed for this study that the employees they hired lacked the ability to make critical decisions, manage client expectations, and provide the high level of customer service required. In addition, many said that basic literacy and numeracy skills were in short supply.

The majority of employers are investing in employee training. In fact, based on survey data, it appears that the level of investment in training by employers in the supply sector is markedly higher than that of other sectors. Many provide a range of training options, but the most widely used is on-the-job training. While this option makes considerable sense – it is generally less expensive and provides job specific information that is directly relevant to trainees – it can also be a burden to the employees who are providing the training. Due to the diminishing size of the supply chain sector talent pool, employers are already relying on experienced employees to take on more and more work. This limits their capacity to take on the additional responsibility of training new staff.

Despite employers’ dissatisfaction with the skills of new recruits, both employees and learning system providers are of the opinion that the necessary skills are being taught. Employees report that they have been taught the relevant subject matter, and that they were satisfied with the training provided. Learning system providers, too, indicate that they have been teaching subject matter related to these required skills. The disconnect that exists between employers’ impressions and the experiences of both employees and learning system providers suggests a communication gap between what learning system providers are teaching and how students are applying this knowledge when they enter the supply chain.

Results suggest that employer participation in work-study programs (primarily co-op and internship programs) is quite strong. Roughly half of employers interviewed for this study indicated that they participate in co-op programs (54%) and/or internship programs (53%). (However, it is important to note that since just over one-third of the total number of respondents provided data for this question, results should be interpreted with caution.) This applied learning should be maintained if not increased to help bridge the gap between the theory students learn while in school and the application of the theory in an actual job setting.

Best practices for increasing the skills of new recruits include:

- Increased communications between employers and learning system providers to clarify employees’ skill gaps, including industry participation in Program Advisory Councils;
Increased level of partnership between employers and learning systems providers, and increased investment in work-study programs to give student practical on-the-job experience prior to entering the supply chain; and

Facilitate credentials recognition for immigrants.

14.4 Technical Skills and the Role of Technology

Results of the HR Update suggest that the challenges facing employers, as these relate to technology, have changed somewhat since the 2005 baseline survey was conducted. The financial barriers associated with new technology (purchasing and then training employees) remain the same – particularly for small companies – but employers’ attitudes toward technology has changed.

Today, employers seem better equipped to handle the demands of implementing new technology. This is not to say that technology no longer poses a challenge for employers. In fact, roughly 1 in 5 see it as a “major” challenge. The key point of difference here is that its place as one of the main challenges facing employers has changed. The integration of new technologies into existing systems, and the training of employees that may be required, is less of a barrier than it was in the past. For the most part, operations continue without a hitch.

In addition, the role of technology has changed. In 2005, technology was seen as leading the way, with employers and employees scrambling to keep up. Findings of the current study suggest that employers are finding it easier to integrate new technologies into existing systems. Technology is no longer perceived as a barrier to efficiency; its place is to improve, not impede, workflow. When asked if it created training challenges for their employees, the response given by employers was, for the most part, a resounding ‘no’. That being said, there was consensus that adopting new technologies does require a commitment to training.

Another key point of difference between the two studies is employers’ impressions of employees’ ability to adapt to new technologies. Findings from the 2005 baseline study suggested that employers did not think employees possessed the technological skills required to keep pace with changing technological demands. In the current study, employees are, for the most part, seen as possessing the required technical skills and generally do not struggle with the technical aspects of their work.

14.5 Small and Diminishing Talent Pool

When the baseline study was conducted in 2005, retirement of experienced employees was not perceived as having a major impact on the sector. Perceptions have changed. The sector now is seen as facing a critical shortage of skilled employees as experienced employees retire.

One consequence of this is “poaching”. Employers who are losing skilled employees to retirement and who are unable to fill these vacant positions are luring away the talent secured by other companies. Companies are competing for the same resources at all levels (managerial, tactical, or operational). The retirement of experienced employees coupled with the lack of new talent coming into the sector is resulting in a continuously diminishing pool of talented resources. Retirement and poaching are significant issues across all regions, and all companies
regardless of size. However, the data suggest that the impact of poaching presents a greater challenge for larger organizations.

One of the causes of the recruitment issues experienced by employers is competition among employers for the same candidates. Competition is increasing as a result of two factors: retirement of experienced employees; and too few skilled candidates entering the supply chain. When employers are unable to find suitable candidates to fill positions, they look to other organizations’ supply chain talent pool. Results suggest that poaching is more common among companies that operate in multiple regions.

Poaching appears to be common across all occupation categories (whether managerial, tactical, or operational), although it is somewhat more common for managerial positions. The demographic profile of managers indicates that these employees tend to be older and have been working in the supply chain for a longer period of time. Retirement is likely hitting this occupation category the hardest.

The practice of poaching is negatively impacting both individual companies and the supply chain sector as a whole. Because the same employees are being, in effect, traded back and forth from company to company, the size of the available employee pool is continuing to diminish. New recruits are not filling the gaps left by retirees; instead employees from other organizations are recruited to fill the gaps. Poaching is also manifesting itself in terms of the relatively high vacancy rate in the sector (3.5% based on employer survey data). The movement of individuals from one organization to the next has impeded the ability to develop an attractive succession/progression path. In contrast to retirements which can actually be anticipated and accommodated through a succession plan, poaching is much more disruptive to the work environment as organizations subject to poaching are typically less inclined to invest in training or career path planning as they are unsure as to whether they will fully recover their investment. Compounding the problem, not only is the size of the pool diminishing, but the number of those in knowledge positions is diminishing. This is reducing Canada’s overall competitiveness as a global player. Finally, poaching is also driving up the price of skilled workers. As employees are offered more and more to leave one company for another, employee compensation must necessarily continue to grow to meet ever increasing expectations and demands.

Best practices for increasing the size of the supply chain talent pool include:

- Understanding that the supply chain as a whole is diminished when employers compete for the same employees. Cooperative effort is required to curb this behaviour;
- Communicating skill gaps to learning system providers to ensure that the critical soft skills are being effectively taught;
- Ensuring that employees are provided training that will help close existing gaps. Computer courses may not always be the best choice.
14.6 Retention Strategies

Echoing the results of the baseline study, the most common reason for turnover is competitors poaching employees from other supply chain organizations. Larger companies as well as those with HR strategies are generally losing more employees to other supply chain companies.

While employers have noted that they do not see major turnover in their organizations, from an employee perspective, there is limited loyalty to establishments in the sector. For example, a full one-third (33%) of employees surveyed as part of this study indicated that they did not see themselves working for the same employer in 3 to 5 years time. This reinforces the current practice of inter-firm competition for labour, but presents challenges for employers in terms of organizational workforce planning.

To avoid losing their best assets, companies must understand what retention strategies will be most effective. It appears that, while financial compensation is important, it is not the most important component of a retention strategy. Results of this research suggest that what employees consider most attractive about a career in the supply chain is the range of positions and potential for progression. The pay/benefits offered are secondary to this.

That being said, financial compensation is more important for some occupation categories than others. Relative to managerial and tactical positions, salary is much more important to those working in operational positions.

Other factors that are important to employees, in terms of job satisfaction, relate to:

- Flexible work arrangements;
- Support for further education; and
- A family-friendly work environment.

Factors most likely to have a large negative impact on employees’ job satisfaction are frequency of on-call work, frequency of shift work and remote work location.

Employers appear to be on the right track when it comes to the retention strategies they currently employ. Most common strategies include providing a career path, offering a flexible work schedule, and investing in professional development. However, employers need to identify how best to communicate career paths to their employees; employees still feel that clarification is required.

Adopting a cookie-cutter approach to retention will not necessarily be the most effective strategy for every company. Employers should make it a priority to understand what drives employee satisfaction within their company.

Best practices for employers to retain skilled employees could include:

- Making it a priority to develop retention strategies that include flexibility and support for employees;
- Avoiding a cookie cutter approach. The retention strategies that work for most companies will generally require some customization to meet any specific company’s workforce needs;
Touching base with employees on a regular basis to better understand their key drivers of satisfaction. Conducting an annual employee satisfaction survey would help in this regard;

Being aware of employees’ expectations upon entering the supply chain and utilize appropriate feedback mechanisms (e.g., employee satisfaction surveys) to assess whether or not these expectations are being met;

Most importantly, employees are looking for career development opportunities and work-life balance. Flexible work arrangements, support for further education, and a family-friendly work environment are also important factors in maintaining employees’ job satisfaction; and

To retain women within the supply chain it is important to ensure that expectations related to work-life balance, benefits, and work hours are being met.

14.7 HR Strategies and Succession Planning

Results suggest that many employers, particularly small companies, are not making sufficient preparations to meet the human resource challenges they face. Succession planning to replace the employees who are retiring or leaving the company is still quite limited. Only about one-third (35%) of employers have a succession plan in place.

Many do not see developing an HR strategy and succession plan as an immediate concern; however, the results of this research suggest that they should. The companies that do not have an HR strategy are less likely to engage in the activities that will attract and retain skilled workers (e.g., providing career paths, continuing education and professional development). They also have fewer training programs and training supports.

The growth of the supply chain sector, the diminishing talent pool and the retirement of skilled employees all combine to make this a critical time for employers. Employers must focus on building partnerships with learning system providers and working together to develop strategies that attract new entrants into the sector rather than competing for the existing talent. It is only through collaborative effort that the supply chain will grow and Canada can increase its ability to compete in the global market.

Best practices for employers to keep in mind when developing succession plans include:

Understanding that succession planning is critical and should be prioritized. Succession planning not only safeguards against skill gaps when experienced employees retire, it also aids in employee retention. Communicating succession plans to employees underscores for them that the company is investing in their career advancement; and

Clearly articulating the career paths available. This will assist in both retention (per the above) and recruiting efforts. Opportunities are more attractive to potential candidates when upward mobility is clearly demonstrated.
15 CONCLUSIONS: KEY POINTS

1. The supply chain is a large sector, employing in excess of 767,200 workers.

2. Due to adverse demographics and competition from other sectors, the sector is experiencing HR pressures. These manifest themselves as:
   - Relatively high vacancy rate (26,852 positions are currently unfilled)
   - High turnover rate, which could be higher if one-third of employees who anticipate leaving their organization actually leave in the next 5 years
   - Increasing proportion of the workforce entering retirement age

3. Due to these trends, it is anticipated that the sector will need to recruit 65,979 individuals on an annual basis to accommodate demand growth and the need to replace individuals who leave the sector.

4. Given the significant number of new workers required, it is critical that the sector examine supply-side strategies, including:
   - Better marketing and promotion to youth
   - Promotions/strategies to enhance the integration of foreign-trained workers into the sector
   - Better training of new workers so that they can more seamlessly integrate into the sector
   - Better strategies to enhance workforce retention (and also contribute to a reduced demand for workers to replace existing workers)

5. An HR strategy cannot be unilaterally implemented only by the CSCSC; it requires a multi-pronged approach, with the participation and inclusion of employers, education and training providers, and, as appropriate, government partners.
16 REFERENCES


KPMG. (2010). Reshaping the Supply Chain: new opportunities for Canadian manufacturers. KPMG.


