

CONSTRUCTION
SECTOR COUNCIL



CONSEIL SECTORIEL
DE LA CONSTRUCTION



MEETING HUMAN RESOURCE NEEDS

Construction Industry Human Resource Challenges and Responses

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INTRODUCTION

The Construction Sector Council (CSC) was established with a mandate to identify and undertake human resource projects and initiatives geared toward meeting the current and future human resource needs of the industry. Along with the views of labour and business leaders, the CSC turned to existing construction industry labour market studies and reports for guidance in developing its first Business Plan. This report consolidates in one document the key human resource issues and challenges facing the construction industry, along with the work of the CSC. It also illustrates the current and future opportunities for the CSC to make “value-added” contributions to the human resource development issues impacting the construction industry in Canada.

The CSC is one of approximately 30 sector councils that have been established by the federal government, through Human Resources Development Canada. Sector councils are industry-led partnership organizations designed to address the human resource development issues within a particular industry.



HUMAN RESOURCE ISSUES AND CHALLENGES

Issues

While many of the human resource challenges and issues facing the construction industry are the same, the degree of impact varies by sector, trade, and region. Some of the key issues facing the construction industry are the need to:

- Replace the loss of skilled trades people due to an aging workforce.
- Recruit sufficient numbers to meet demands for skilled labour.
- Improve the image of the construction industry as a viable career option.
- Manage the labour supply in a volatile industry.
- Make construction management and supervisor training available.
- Expand the apprenticeship training system.
- Meet the increasing demand for strong basic skills.
- Manage the de-skilling and re-skilling of the labour force due to the introduction of new technology.
- Respond to increasing health and safety requirements.

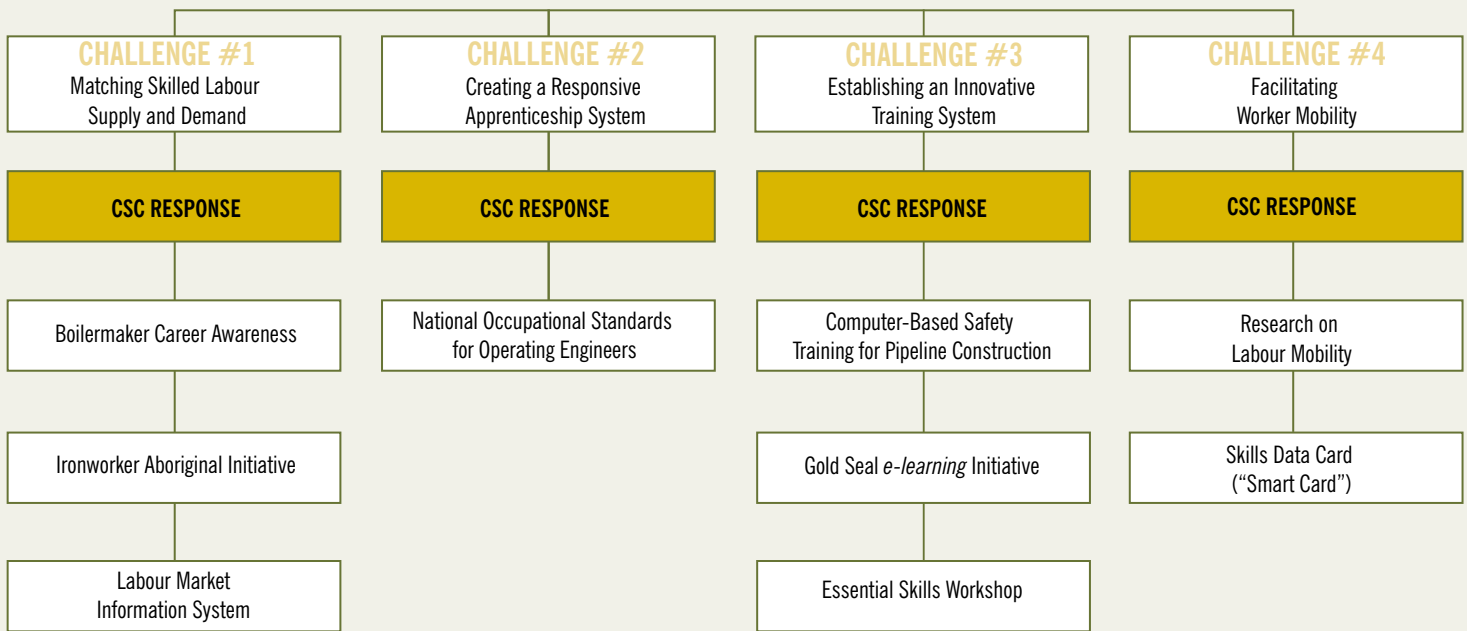
Challenges

These human resource issues can be translated into four challenges facing the construction industry, both now and in the future:

1. Matching the projected demand for qualified tradespeople with the future supply of skilled labour.
2. Creating and supporting a flexible, consistent, responsive apprenticeship system.
3. Creating an innovative, responsive training delivery system to maintain skill currency.
4. Facilitating worker mobility in response to skilled labour demands across the country.

This document outlines the programs, strategies and activities of the CSC which are designed to meet these challenges, as well as the future opportunities for the CSC to contribute a “value-added” response to the human resource needs of the industry.

HUMAN RESOURCE CHALLENGES AND RESPONSES



CHALLENGE 1

Matching the projected demand for qualified tradespeople with the future supply of skilled labour

Aging Workforce

The average age of the workforce is between 40 and 46. A significant proportion of the workforce is over 45 years of age and the industry is projecting significant losses of workers through retirement over the next 10 years.

Labour Shortages

Most describe the shortages as short-term, in specific skill areas, and in select areas across the country. For the most part, the aging workforce, increased skill demands, and insufficient training capacity are identified as causal factors. Some segments of construction are experiencing unemployment and low utilization, and in some instances the under-utilization of workers is attributed to inadequate skill levels.

Attracting Young People

Those segments of construction that are forecasting skill shortages must be able to attract sufficient young people to replace those lost through attrition and to meet the increased demand for skilled labour. What makes this difficult is the fact that the construction industry has traditionally suffered from a poor image as a career option.

CURRENT INITIATIVES: KEY OUTCOMES:

Boilermaker Career Awareness Strategy

- Improve the image of construction occupations.
- Promote Boilermaker career as a viable option for youth.
- Share generic aspects of program with the construction industry.

Ironworker Aboriginal Initiative

- Promote Ironworking as a viable option for Aboriginal youth.
- Expand the number of skilled Aboriginal persons in Ironworker trade to meet market needs.
- Increase the proportion of Aboriginal members in the Ironworker trade.
- Share generic aspects of the campaign with other construction trade groups.

Labour Market Information System

- Design and develop a supply-side labour market information system.
- Develop forecasting capability.
- Monitor labour market issues on an ongoing basis.
- Prepare a current profile of the construction industry's workforce.

Youth

- Improved recruitment and retention of youth in the industry.
- Construction trades seen as a viable career for youth.
- Youth knowledgeable about the importance of the construction industry in today's economy.

Labour Market

- Better determination of future human resource requirements.
- Human resource solutions based on objective data.
- Labour market policy-making that addresses needs of the industry.
- Employers and workers given a competitive edge.

FUTURE "VALUE-ADDED" OPPORTUNITIES:

- Research and analysis of productivity trends.
- Research and analysis of the underground economy and its impact on human resources.
- Research on human resource trends and solutions in other countries.

CHALLENGE 2

Creating and supporting a flexible, consistent, responsive apprenticeship system

Maintaining Currency

The introduction of new technologies, materials, and techniques means that the apprenticeship system must be flexible and responsive to innovation. Many sectors of the construction industry are experiencing ongoing, rapid dissemination of new technology. These changes must be reflected in the curriculum as quickly as possible.

Prior Learning Assessment and Recognition

Prior Learning Assessment and Recognition (PLAR) has emerged as a mechanism for assessing the past training and experience of

APPRENTICESHIP REQUIRES THE SUPPORT OF INDUSTRY TO PROVIDE POSITIONS SO THAT APPRENTICES CAN GAIN THE FULL BREADTH OF EXPERIENCE THEY REQUIRE.

potential new entrants. PLAR would enable the construction industry to draw from a larger pool of candidates. This will also be an important factor in attempting to lower the high drop-out rates experienced in some apprenticeship programs. With looming skill shortages, many are aware of the need to maximize their training capacity by ensuring that only individuals with the greatest possibility of success enter the industry.

Employer Involvement

Another human resource issue is employer involvement in apprenticeship training. Some areas of the industry are challenged to find sufficient employers willing or able to employ apprentices. This situation will negatively impact the industry's ability to meet the future demand for skilled journeypersons. For example, some segments of the industry report that the number of workers participating in apprenticeship training has declined, as employers are not able to support inexperienced workers during periods of weak demand and severe price competition. Apprenticeship requires the support of industry to provide positions so that apprentices can gain the full breadth of experience they require.

Impact of Compulsory vs. Voluntary Certification

Those segments of the industry that do not have compulsory certification identify this as a barrier to providing highly skilled workers. In non-compulsory segments, new entrants do not always see the value in completing an apprenticeship program, and those who begin such a program may be inclined to discontinue during periods of high demand for workers in the industry.

Pan-Canadian Consistency

The lack of national standards in some segments of the construction industry leads to wide variation in the quality of training. National standards are needed to ensure a minimum level of basic and functional skills. In addition to a desire for national training standards, there is also an interest in developing common core curriculum for

apprenticeship programs, which will enable greater mobility for skilled workers. The introduction of new technologies has also raised the issue of the currency of the apprenticeship curriculum.

Flexible Delivery Options

Apprenticeship programs must also look at alternative delivery methods (e.g. computer-based, Internet-based) to meet the training challenges faced by those segments of construction where small numbers of workers are spread across vast geographical areas. Alternatives to taking workers off the job for extended periods of training, or for short periods such as day release, must also be explored to facilitate training and minimize the loss of apprentices' work time.



CURRENT INITIATIVES: KEY OUTCOMES:

National Occupational Standards for Operating Engineers

- Partnership with the Canadian Operating Engineers Joint Advisory Training Committee.
- Develop national standards for selected Operating Engineer occupations.

Apprenticeship

- Expanded apprenticeship training and delivery.
- Portability of training and certification.
- National standards (curriculum and examinations).
- Effective liaison with the apprenticeship community.
- Research and advice available on the financing of apprenticeship.

FUTURE "VALUE-ADDED" OPPORTUNITIES:

- Share best practices in Prior Learning Assessment and Recognition.
- Conduct research on the value of apprenticeship training to the individual, to the employer, and to government.
- Conduct research to assess the cost of apprenticeship training to employers.

CHALLENGE 3

Creating an innovative, responsive training delivery system to maintain skill currency

Technology

There does not appear to be a consensus on the overall impact of new technologies. In some instances, new technologies, in the form of new materials, techniques or equipment have resulted in de-skilling. Improved productivity, which may be a positive impact of the new technologies, can also result in a corresponding reduction in hours of work. For example, in the past, a construction worker may have fabricated a part on-site; now the part is fabricated off-site and simply installed on the job-site. In some areas, new technologies have resulted in a need for increased comprehension abilities, more facility with computer control, a greater need for mathematics and measurement skills, and increased dexterity and better judgement. But the major impact of new technologies in terms of human resource issues is the need to keep skills and knowledge current. This has heightened the need for upgrading, especially in those areas experiencing rapid and constant introduction of new technologies.

AS SKILLS UPGRADING BECOMES INCREASINGLY IMPORTANT, THE NEED FOR MORE CONSISTENT TRAINING ACROSS THE COUNTRY IS VITAL.

The impact is dependent on the pace of introduction of new technologies. The construction industry has traditionally been conservative in adopting new technologies. There are many factors that can impede its introduction, such as weak markets, entrenched resistance, and large up-front costs.

Pan-Canadian Consistency

As skills upgrading becomes increasingly important, the need for more consistent training across the country is vital, both to facilitate worker mobility and to achieve developmental cost savings. Some areas are beginning to look at training registries as a means to begin working towards common training programs. The need for shorter, more flexible training programs is also seen to be important. The use of computer and multi-media based instruction are being considered as effective options to meet the demand for training.

Health and Safety

Health and safety is an important aspect of all construction work. The ability to perform work under increasing safety restrictions in a cost-effective manner, and the need for additional health and safety training are key issues. New regulatory measures are also increasing the demand for health and safety training.

Training and Employability

Some segments of the construction industry workforce are not maintaining the breath of skills required. For example, certain sectors are seeing a move towards specialization, with only a portion of the workforce able to perform the full scope of the trade/occupation. These workers are marginalized and limited in the scope of work they can perform, as compared to the fully-skilled individual who can perform all aspects of the work. In some cases, a clear link has been established between training and employability. As the demand for skilled labour increases, the industry will have to maximize the utilization of the existing workforce to meet the demand. This means increasing the depth and breadth of skills of all workers.



Essential Skills

Today all construction workers must be well educated because of the growing industry need for enhanced essential skill levels. Essential skill in this context refers to literacy, numeracy, communication, team work, and computer skills. In some cases, lower basic skill levels were linked to the older workforce, but the need for increased essential skill levels is also being driven by the introduction of new technologies. The workforce does not always see the importance of these skills in expanding employability and enabling full participation in training and upgrading. Essential skills are the foundation for learning specific technical skills which enable an individual to perform tasks required on the job. Integrating essential skills training into job-specific training programs is seen to be a more effective means of building these skills in the workforce.

Management and Supervisory Skills

Developing the capacity to produce a strong base of management and supervisory skills is an important issue for the construction industry. Strong management skills are necessary to ensure a viable industry and to attract new workers to the industry.

Training Capacity

The introduction of new technologies has brought the need for upgrading training to the forefront, and increased the urgency of expanding the industry's training capacity to ensure that the skills of the construction workforce remain current. Barriers to training include the high cost of equipment required for training in some aspects of construction, such as crane operators, and the small numbers of trainees, as in the case of insulators or millwrights.

CURRENT INITIATIVES: KEY OUTCOMES:

Computer-Based Safety Training for Pipeline Construction

- Develop a computer-based, national pre-employment safety training program for pipeline construction, to take advantage of the technical knowledge and experience available across Canada.
- Share core curriculum among provincial/territorial jurisdictions.
- Pool expertise and share resources.
- Eliminate duplication on the common elements of the program.

Gold Seal e-learning Initiative

- Partnership with the Canadian Construction Association.
- Develop a computer-based capability to deliver and manage Gold Seal courses.

Essential Skills Workshop

- Increase industry awareness of essential skills activity in the construction industry.
- Consult with industry regarding essential skills and possible roles for the CSC.
- Develop an essential skills strategy document to guide future work of the CSC.

Advanced Career and Workforce Training

- Expanded opportunities for workers to upgrade their basic skills.
- Leadership role in promoting the commitment to career development in the construction industry.
- Assistance to the industry in developing the skilled workforce necessary to compete in today's market.

Technology and Research

- Research and advice on the impact of emerging technologies.

FUTURE "VALUE-ADDED" OPPORTUNITIES:

- Development of a training tracking system.
- Research on the link between skill intensity and employment opportunities.

CHALLENGE 4

Facilitating worker mobility in response to skilled labour demands across the country

Red Seal Program

The ease of inter-provincial mobility is particularly important for those segments of construction that are “national,” such as pipeline construction work and for regions and construction sectors that are characterized by higher degrees of volatility. The extent of worker mobility varies across the industry, and in some instances mobility is restricted to bordering provinces.

The Red Seal exam is seen to be an important tool that facilitates the flow of workers across the country. However, the full potential of the Red Seal Program is not being achieved. Not all segments of the industry throughout the provinces and territories are eligible to acquire Red Seal certification.

In addition to the common training standards that can be achieved through Red Seal, there is also a need to have a more consistent upgrading training curriculum to facilitate a common level of skills and expertise, regardless of the home province or territory of the tradesperson.

Managing Skilled Labour Supply

Discussions of labour supply and demand in the industry inevitably touch on the cyclical nature of construction work. This is seen to be an issue in the context of planning for and managing human resources through the peaks and downturns. The challenge is how to “ratchet up” the supply of skilled labour quickly enough to respond to increasing demand, and not have large numbers of people unemployed during the downturns.

CURRENT INITIATIVES:

Research on Labour Mobility

- Conduct research on the magnitude of worker mobility.
- Analyze issues and challenges surrounding the mobility of workers and the need to meet local labour market efficiencies.

Skills Data Card (“Smart Card”)

- Assess smart card technology as a tool to recognize and document the skills and certification of workers.
- Inform the industry on the potential of smart card technology to enhance worker mobility.
- Develop guidelines for the use and implementation of smart card technology.

KEY OUTCOMES:

Advanced Career and Workforce Training

- Reduce or eliminate the need to carry several documents.
- Workers carry a card which digitally stores all job-related qualifications and certification.
- Hours of processing time saved.
- On-the-spot updating.
- Immediate verification of worker certification.

Technology and Research

- Research available on the impact of emerging labour market trends on the construction industry.
- Better information on supply and demand for skilled labour.

FUTURE “VALUE-ADDED” OPPORTUNITIES:

- Promotion of Red Seal certification as a means of enabling worker mobility.
- Establishment of guidelines to assist in the use and implementation of smart card technology.



CSC OPERATIONAL INFRASTRUCTURE

The CSC has also established key outcomes and activities that relate to the development of the Council, and its ability to serve the needs of the construction industry.

ACTIVITIES:

Clearinghouse Activities

- Co-ordinate and arrange regular meetings with industry to exchange information and identify common priorities and needs.
- Facilitate sharing of existing products and services.
- Monitor labour market and public policy trends and issues relevant to the work of the CSC.
- Provide information on labour market developments to the CSC Board and its constituencies.
- Identify and share best practices.

Communications Plan

- Increase awareness of the mission and vision of the CSC.
- Position the CSC as a national clearinghouse of HR activities in the construction industry.
- Establish the CSC as a key source of labour market information.
- Raise awareness of the vital role construction plays in the economy.
- Improve the image of the construction trades.

KEY OUTCOMES:

Partnerships

- Support the efforts of other organizations committed to skills development.
- Co-ordinate sector-wide human resource issues.
- Forge linkages with related organizations at the national, regional, and local levels.
- Provide clearinghouse and co-ordinating capability for industry initiatives.

Operational Sustainability

- Ensure the future operational sustainability of the CSC by gaining industry support and developing other revenue-generating activities.



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The Construction Sector Council (CSC) is a national partnership organization dedicated to the development of a highly skilled workforce—one that will support the current and future human resource needs of the construction industry in Canada.

Created in April 2001, the CSC is a partnership between labour and business. The founding partners of the CSC are the National Construction Labour Relations Alliance, the Building and Construction Trades Department and its affiliates, and the Canadian Construction Association.

The CSC's mission is the development of a highly skilled workforce and a safe workplace environment that contribute to the organizational productivity and individual prosperity of the members of the construction industry. This will be achieved through the joint efforts of labour and business in promoting the skills development of the workforce.

The CSC is focusing its efforts on five strategic priorities:

1. Promoting apprenticeship training and delivery
2. Advancing career and workforce training
3. Expanding partnerships to support related skills development organizations
4. Improving the recruitment and retention of youth
5. Providing better research and information on the construction workforce

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