

## **The Centre for Spatial Economics**

*Assessing past, present and future economic and demographic change in Canada*

# **Labour Market Information Research Agenda Project— Labour Market Research and Data Development Agenda and Action Plan**

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*Prepared for:*

**Child Care Human Resources Sector  
Council**

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# 1. Introduction

This document sets out a labour market research and data development (LMRDD) agenda and action plan for the Child Care Human Resources Sector Council (CCHRSC). The focus of this agenda and action plan is a set of initiatives and associated activities that can be undertaken by the Sector Council or in partnership with the child care community, its partners in governments, the education community, post secondary institutions, labour, and policy and research organizations. The LMRDD agenda and action plan are based on the recommendations of a panel of experts that the CCHRSC convened to provide advice to the sector council as part of the *Labour Market Information Research Agenda* (LMIRA) project.

The CCHRSC designed the LMIRA project to examine how data on the early childhood education and care (ECEC) workforce is collected, and how the quality and availability of data could be improved. This information is used to create a 3-5 year labour market information research agenda for the ECEC sector. Specifically, the objectives of the project related to the LMRDD agenda are to:

- Identify current data sources across provinces and territories (P/Ts), discuss and select the best approach for more consistent labour market data on the ECEC sector.
- Develop recommendations for:
  - consistent definitions for data collection;
  - consistent approaches for gathering and analyzing information/data including tools and research questions.
- Develop a 3-4 year research and planning agenda for the ECEC sector that recommends ways to improve the availability and quality of labour market information for workforce issues such as recruitment and retention.

This document covers the following areas:

- A framework for the LMRDD agenda and action plan
- A review of the recommendations proposed by the panel of experts
- An outline of the proposed strategic initiatives, purposes/outcomes, activities/outputs, key stakeholders and related resources and partners

## 2. Framework for the LMRDD Agenda and Action Plan – CCHRSC Mandate

### Range of Activities

The 2008 Logic Model indicates five major types of Sector Council activities:

- Labour market and human resources research;
- Sector development;
- Fostering partnerships within and outside the child care sector; and
- Coordination and promotion of human resources and labour market issues in the sector; and
- Performance management.

The first four activities of the CCHRSC are directly related to the LMRDD, while the performance management is related to internal CCHRSC management and is not directly related to the LMRDD.

### Outputs

Outputs related to the activities above and the LMRDD include:

- labour market plans and proposals for funding;
- research reports and plans;
- products and tools for organizations and workforce;
- labour market strategy and action plan;
- data defined, collected and analyzed;
- recruitment and retention tools
- partnerships formed
- collaborative documents, reports and joint initiatives
- HR strategy for the sector

- website and other online resources
- partnership agreements and supporting activities; and
- policy and other documents.

## Ultimate Outcomes

The intended ultimate outcomes of the above activities include:

- Increase the skill development and effectiveness of the child care sector.
- Advance human resource issues and improve conditions in the child care sector and for its workforce
- Improve the balance between the supply and demand for ECEC workers in Canada
- Economies of scale realized in HR development and management for the sector across Canada.
- Enhanced mobility of workers into and within Canada.

## 3. Process for Creating the LMRDD Agenda and Action Plan

An expert panel was convened as part of the LMIRA project. To arrive at the list of priorities, ECEC experts and CCHRSC staff participated in the discussions concerning the topics that need to be addressed by a three to five year research agenda. After lengthy discussions the experts and CCHRSC staff created the list of 22 topics indicated below.

### 1. Snapshot of the workforce: expanded, updated

- a) Assessment of secondary data sets
- b) Prioritize variables for snapshot
- c) Create snapshot

The snapshot updates and builds on the one created as part of the Labour Market Update. The main data source is the census. It is recommended that it is updated every five years following the release of the census data. Additional information from other datasets can be used in the snapshot to supplement the information from the census.

**2. A Literature review**, beginning with synthesizing reviews done for recent projects, would identify gaps data and help to determine what data need to be collected to provide information to the research agenda.

**3. Re-do *You Bet I Care!*** type survey of a sample of centres, family child care providers and agencies, employers and workers (every five years)

- a) Identify purpose of information first
- b) Survey
- c) Research study
- d) Predictors of quality

### 4. Labour Mobility (ECEs & Directors)

- a) Conceptual paper on various types of mobility: eg. across modes (within broader ECEC) and inter-occupational, career ladders, geographic, in and out of the workforce
- b) Define and document labour mobility in the sector
- c) What are the causes and implications of mobility and immobility (such as interprovincial barriers and Agreement on Internal Trade) and turnover
- d) What are the labour mobility opportunities and challenges. Where do we go from here?
- e) Barriers to work (education)
  - i. Physical and other barriers
  - ii. Lack of LMI. Information gap is huge.

### 5. Career choices

- a) Use for recruitment and retention activities
- b) Include those who get ECE training and never go into ECEC, those who use it as a stepping stone to ECE-related work, and those that leave the sector.
- c) Rate of return on formal ECE education
  - i. Under what conditions

- ii. ROR of match box colleges
- iii. Rate of return on professorial development & training to the ECE education
- iv. Days off for training

**6. Program evaluation**

- a) Preliminary list of programs, policies & initiatives
- b) On-going identification, categorization and assessment of programs
- c) Evaluate what works best for labour market related issues eg. recruitment & retention
- d) First step formative evaluation
- e) Match data with programs for preliminary examination
- f) Education of policymakers/HR managers. Include evaluation in program design

**7. LMI:** uses by and impact on stakeholders

- a) How are being used
- b) How you can use these data

**8. Quality begets quality** and affects recruitment and retention (R&R). Understanding the size of the phenomenon and what attributes of quality affect R&R would help to identify virtuous and/or vicious cycles. Need to examine this issue empirically.

**9. Understanding non-profit dynamic** might help to guide policy to improve the mechanism by which non-profit status affects the workplace and therefore ultimately recruitment and retention.

**10. Impact of unionization** on labour market outcomes.

**11. Understanding low wage dynamic & high price elasticity** is important to determine policy prescriptions or other changes that would alter this situation and change recruitment and retention problems

**12. Integrated electronic data system** and software to facilitate Human Resource Management (HRM), data collection and accuracy.

**13. Life Course trajectory**

**14. System comparisons:** Quebec versus other Canadian locations, Canada versus other countries, market vs. non-market comparisons. Compare how different systems operate in order to learn what improves labour market outcomes. Specifically examine:

- a) Human resource management
- b) Labour market issues

**15. Impact of non-wage financial benefits** on recruitment and retention

- a) Pensions
- b) Other benefits
- c) Impact of In-kind transfers (reduced rate for child care)

**16. Learn from other sectors.** ECEC has similarities with other sectors including the not for profit sector. There could be lessons to be learned from examining R&R in the not for profit sector. Similarly, since the ECEC sector is dominated by small organizations, there could be lessons learned from examining the literature on SME/SMO for HRM. The similarities and differences between the practices of the ECEC sector and these other sectors could be identified.

**17. Natural experiments** should be examined to learn valuable lessons on the value of ECEC, impact of policies and developments on the ECEC sector. For example:

- a) Canadian Auto Workers decided to keep child care program over other benefits. This provides information about revealed preferences for ECEC services.

**18. Job satisfaction.** Impact of HRM on job satisfaction & labour market outcomes. Could be linked with HRM toolkit to improve HRM.

**19. Occupational demand/supply model & forecast** at Provincial/Territorial level with a pan-Canadian rollup

**20. System change.** Examine large scale changes to the early learning and care systems to identify implications for the ECEC workforce. For example, the integration of part of the ECEC sector into education system or the introduction of all day kindergarten.

**21. Directors as a specific target group**

- a) Training
- b) Labour market issues and impact on ECEs

**22. Web based clearing house of information on**

- a) HRM practices
- b) Job board links
- c) LMI
- d) Programs/policies information

**Table 1: Identified Research Topics**

	Research Topic	Total Votes	Weighted Votes
<b>1</b>	<b>Expanded, updated snapshot of the workforce</b>	<b>12</b>	<b>7.83</b>
2	Literature review of recent projects to identify data gaps	4	2.50
<b>3</b>	<b>Redo You Bet I Care! type survey</b>	<b>8</b>	<b>5.83</b>
<b>4</b>	<b>Labour Mobility (ECEs and Directors)</b>	<b>9</b>	<b>8.00</b>
<b>5</b>	<b>Career Choices</b>	<b>7</b>	<b>6.58</b>
6	Program evaluation	2	1.83
7	LMI: uses by and impact on stakeholders	3	3.00
8	Quality begets quality	5	2.42
9	Understand the dynamic of non-profit mechanism	3	0.42
10	Impact of unionization on labour market outcomes	4	1.42
11	Understanding low wage dynamic and high price elasticity for ECEC services	4	1.72
<b>12</b>	<b>Integrated electronic data system to improve data collection, quality and HRM</b>	<b>4</b>	<b>4.00</b>
13	Life course trajectory	4	0.97
14	System comparisons	4	0.92
<b>15</b>	<b>Impact of non-wage financial benefits on recruitment and retention</b>	<b>6</b>	<b>3.31</b>
16	Learn from other sectors	0	0.00
17	Natural experiments should be examined	0	0.00
<b>18</b>	<b>Job satisfaction and the Impact of HRM on job satisfaction and LM outcomes</b>	<b>8</b>	<b>3.47</b>
<b>19</b>	<b>Occupational Demand/Supply model</b>	<b>9</b>	<b>8.50</b>
20	System change	3	1.70
21	Directors as a specific target group	2	0.22
22	Web based clearing house of information	3	1.33

All of the identified topics were voted on to determine the top priorities. Each participant had three votes. Participants were encouraged to combined topics where they saw synergies. (See Appendix I for a discussion on commonalities that experts found in the topics). Since many participants combined several topics, there were more votes for these topics. In order to reflect the priorities of the expert panel more accurately two tallies were conducted (see Appendix II for the rankings according to the two methods). First, all full and partial votes were counted once. Second, combined votes were calculated as fractional votes. For example, if three topics were combined each received one third of a vote. These tallies are illustrated in Table 1. The top seven topics for each method of counting are shown in bold in Table 1. Of the seven top topics for each method of counting, six of those topics were in common. There was one topic on each list that did not appear on the other list: the integrated electronic data system and the impact of non-wage financial benefits on recruitment and retention. Therefore, the top seven topics from the two lists provided eight LMRDD priorities.

After averaging two tallies, the ranking of the top eight priorities are:

1. Snapshot of the ECEC workforce,
2. an occupational demand/supply model,
3. labour mobility of ECEs and directors,
4. a YBIC! type survey,
5. career choices,
6. job satisfaction, impact of HRM on job satisfaction and labour market outcomes,
7. impact of non-wage financial benefits on R&R, and
8. an integrated electronic data system to improve data collection and HRM.

The topics with the highest priority include data collection, research on labour market and HRM, and tools to improve data collection, labour market dynamics and potentially HRM. These topics also seem to be directly related to the four relevant CCHRSC's mandated activities and the five ultimate outcomes listed above. Also an examination of the topics suggests that they are of value to various stakeholders including: students, high school councillors, educational institutions, researchers, child care sector organizations, employers, employees and governments. These topics would also be indirectly important to parents and children using ECEC services if they help to lessen R&R challenges faced by the sector.

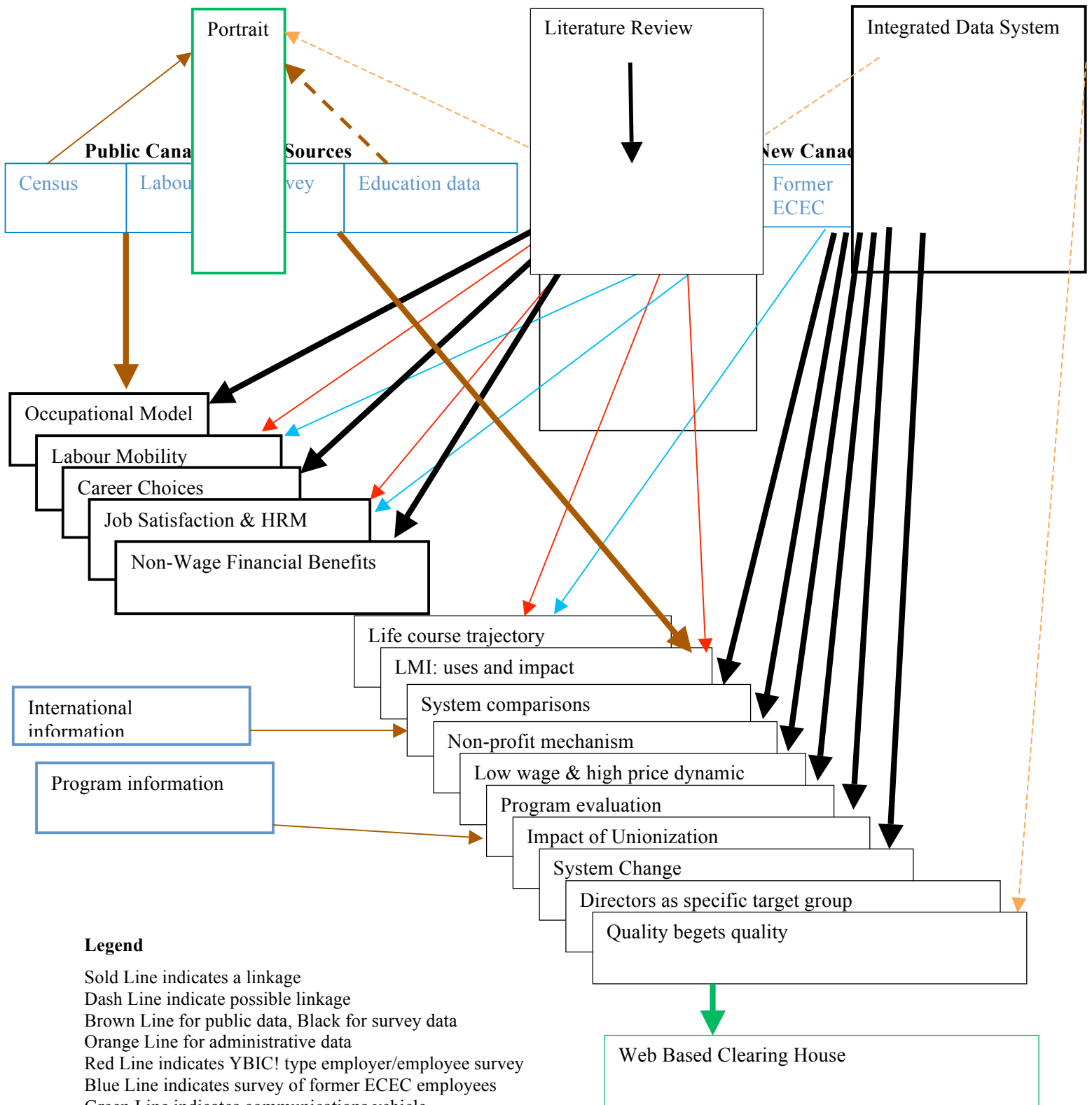
Many of the priority topics are directly or indirectly related to R&R challenges faced by the sector. The focus on R&R problems raises the question of whether these issues will continue to predominate over the coming three to five years. The report "Workforce Shortage Estimates" suggests that the ECEC sector will continue to experience relatively greater and more frequent workforce shortages than other sectors given the existing labour market dynamic evident in the ECEC sector. And the report on "Recruitment and Retention" illustrated that the most pressing challenge facing the sector is retention. Significant systemic change in the broader early learning and care system would likely alter labour market dynamics and have implications for the challenges facing the sector. For example, significant systemic change, such as those envisioned by the Pascal report in Ontario, which is accompanied by much higher financial benefits would likely reduce retention challenges. And a major expansion of the number of spaces in the ECEC sector would have implications for the education system and its ability to train sufficient numbers of students to supply the needed number of ECEs for the new positions.

Many of the topics on the priority list focus on R&R challenges and require similar data, so there will be many instances where the same data can be used for several research areas. Moreover, many of the topics that did not make the priority list also use similar data to those topics that were at the top of the list, so some of the data for the topics not included in the top eight could be obtained from the surveys that are needed to examine the list of top eight priorities. This observation suggests that the data needed to examine the lower ranked topics should be kept in mind when the surveys that will be used for the top priorities are developed. A small extension of questions that are used in the surveys could allow more of the listed topics to be examined. For example, it would be relatively easy to include: directors as a specific target group, unionization, and non-profit status. A question in the surveys could flag these attributes and specific questions to explore these issues could also be included.

### **3. Data Needs for the LMRDD Agenda and Action Plan**

The topics identified by the expert panel did not always explicitly include data. Since these data are not generally available, these topics implicitly included surveys. One of the topics that explicitly included a survey was the redoing of the You Bet I Care! survey. The original YBIC! survey surveyed a sample of centres, family child care providers and agencies, employers and workers. This type of survey is insufficient to provide the data for all of the topics at the top of the priority list. This section focuses on the links between the needed surveys and the topics identified by the group of experts that received votes (see Figure 1 below).

**Figure 1: Flow Chart of LMIRA Topics and Data**



**Legend**

- Solid Line indicates a linkage
- Dash Line indicate possible linkage
- Brown Line for public data, Black for survey data
- Orange Line for administrative data
- Red Line indicates YBIC! type employer/employee survey
- Blue Line indicates survey of former ECEC employees
- Green Line indicates communications vehicle
- Bold Line indicates information to/from more than one dataset would be used
- Separate boxes indicates that they are not directly related to other topics
- Joined boxes indicates a degree of commonality in data or results can be used in other topics



In addition to the publicly available data, there are three surveys that would be needed to be carried out to obtain the information needed to carry out the top priorities of the research agenda. All of the publicly available datasets are represented in Figure 1 as the census, labour force survey, and education data. For a complete list of publicly available datasets that are related to the ECEC sector please see the "Situational Analysis". The three new surveys that would need to be carried out include:

1. A YBIC! type survey of centres, family child care providers and agencies, employers and workers
2. Survey of former ECEC workers
3. Survey of ECE trained people who never worked in the ECEC sector

There is also the possibility that the administrative data collected as part of the integrated electronic data system (Topic 12) might be made available for some of these topics. If these data are available there would be clear advantages to using administrative data compared with surveys in terms of the coverage of the full universe of organizations in the sector. If data are not available then surveys would need to be conducted.

Most of the topics outside the top priorities that received votes in the complete list of topics could use information from the above datasets that would be developed to provide information for the top eight priorities. Some of the topics would require information beyond that which would be collected by the three surveys listed above including: information for ECEC systems outside Canada for the system comparison (topic 14), information about the programs that need to be evaluated for the program evaluation (topic 6), and additional information may be required to analyse system change (topic 20) beyond the information listed above, although what that information would be depends on the type of system change that is being contemplated.

#### **4. An Overview of the LMRDD Agenda and Action Plan**

The LMRDD agenda and action plan is a defined and prioritized set of initiatives and associated activities that flow from the recommendations of the expert panel that was convened by the CCHRSC for the LMIRA project and are consistent with the mandate of the council.

##### **The Nature of the LMRDD Agenda and Action Plan**

The LMRDD agenda and action plan initiatives and activities are organized based on their rankings. Each activity area includes:

- A description of the initiatives
- The purposes and outcomes of the initiatives
- Activities and outputs
- Key stakeholders
- Resources and partner

## 5. Proposed Initiatives

The eight initiatives with the highest priority that were proposed by the expert panel are identified in the following section. A full list of the initiatives that were identified by the expert panel is provided in Table 1. The results for each method of counting the votes are listed in Appendix II. The rankings of these initiatives based on the average of the two methods of tallying the results are:

1. Snapshot of the ECEC workforce,
2. occupational demand/supply model,
3. labour mobility of ECEs and directors,
4. a YBIC! type survey,
5. career choices,
6. job satisfaction, impact of HRM on job satisfaction and labour market outcomes,
7. impact of non-wage financial benefits on R&R, and
8. an integrated electronic data system to improve data collection and HRM.

Initiative	Purpose/Outcomes	Activities/Outputs	Key Stakeholders	Resources/Partners
<b>I. Snapshot of the ECEC workforce</b>	Provide information about the broader ECEC workforce that can be used to educate those outside and inside the sector about the workforce	<ol style="list-style-type: none"> <li>1. Create snapshot to reflect census information on the broader ECEC sector.</li> <li>2. Update snapshot to include information from other research and/or data.</li> <li>3. Could be updated annually to include LFS data, or once every five years to include census &amp; information from a YBIC! type survey.</li> <li>4. Provide the Snapshot on the web and in hard copy format.</li> </ol>	<ul style="list-style-type: none"> <li>- Students and youth</li> <li>- High school and career counsellors</li> <li>- Post-secondary institutions</li> <li>- Governments</li> <li>- Professional organizations</li> </ul>	<ul style="list-style-type: none"> <li>- Sector Council staff</li> <li>- Consulting resources</li> <li>- Statistics Canada</li> <li>- Possible partnership with child care organizations, and governments in the distribution of snapshot</li> <li>- New ECEC sector surveys possible resource</li> </ul>

Initiative	Purpose/Outcomes	Activities/Outputs	Key Stakeholders	Resources/Partners
<p><b>II. Occupational demand/supply models and forecast</b></p>	<p>Develop occupational demand/supply models and forecast that reflects the demand/supply situation in individual provinces and territories that can be roll-up to a pan-Canadian total.</p> <p>The models and forecasts will provide information that will help to lessen demand/supply imbalances in the ECEC labour market.</p> <p>Models can also be used for policy analysis.</p>	<ol style="list-style-type: none"> <li>1. Develop expansion demand forecast                             <ol style="list-style-type: none"> <li>a. Collect data</li> <li>b. Develop model</li> <li>c. Create forecast</li> <li>d. Validate results</li> </ol> </li> <li>2. Develop replacement demand model                             <ol style="list-style-type: none"> <li>a. Collect data</li> <li>b. Develop model</li> <li>c. Create forecast</li> <li>d. Validate results</li> </ol> </li> <li>3. Develop education sub-model                             <ol style="list-style-type: none"> <li>a. Collect data</li> <li>b. Develop model</li> <li>c. Create forecast</li> <li>d. Validate results</li> </ol> </li> <li>4. Develop migrant sub-model                             <ol style="list-style-type: none"> <li>a. Collect data</li> <li>b. Develop model</li> <li>c. Create forecast</li> <li>d. Validate results</li> </ol> </li> <li>5. Develop labour supply model                             <ol style="list-style-type: none"> <li>a. Collect data</li> <li>b. Develop model</li> <li>c. Create forecast</li> <li>d. Validate results</li> </ol> </li> <li>6. Develop labour market indicators                             <ol style="list-style-type: none"> <li>a. Collect data</li> <li>b. Develop model</li> <li>c. Create forecast</li> <li>d. Validate results</li> </ol> </li> </ol>	<ul style="list-style-type: none"> <li>- Students and youth</li> <li>- High school &amp; career counsellors</li> <li>- Post-secondary and training institutions</li> <li>- Employers</li> <li>- Employees</li> <li>- Unions</li> <li>- Governments</li> <li>- Professional organizations</li> </ul>	<ul style="list-style-type: none"> <li>- Consulting resources</li> <li>- Statistics Canada</li> <li>- Federal, provincial and territorial officials</li> <li>- Sector Council staff</li> <li>- Child care researchers and other experts</li> <li>- New ECEC sector surveys possible resource</li> </ul>

Initiative	Purpose/Outcomes	Activities/Outputs	Key Stakeholders	Resources/Partners
<b>III Research Labour mobility of ECEs and directors</b>	Understanding the magnitude of labour mobility and the factors that influence labour mobility will help to identify those factors that are causing a high turnover rate, and lack of trained workers entering the ECEC sector.	<ol style="list-style-type: none"> <li>1. Create questions for the survey to address labour mobility and underlying factors.</li> <li>2. Conduct survey and collect data on gross in-flows to the ECEC sector and out-flows from the ECEC sector. Collect data on the factors that are known to influence labour mobility.</li> <li>3. Research links between labour mobility and the factors that influence labour mobility.</li> <li>4. Produce research report on the findings and publicize the results.</li> </ol>	<ul style="list-style-type: none"> <li>- Students and youth</li> <li>- High school &amp; career counsellors</li> <li>- Post-secondary and training institutions</li> <li>- Employers</li> <li>- Employees</li> <li>- Unions</li> <li>- Governments</li> <li>- Professional organizations</li> <li>- Researchers</li> </ul>	<ul style="list-style-type: none"> <li>- Statistics Canada</li> <li>- New ECEC sector surveys</li> <li>- Sector Council Staff</li> <li>- Consulting resources</li> <li>- Child care researchers and other experts</li> </ul>
<b>IV YBIC! type survey</b>	To gather information on employer/employees in the ECEC sector from a sample of centres, family child care providers and agencies, employers and workers in order to understand current situation in the sector and to improve situation for parents, employers and employees.	<ol style="list-style-type: none"> <li>1. Create questions for the survey to address identified research topics.</li> <li>2. Conduct survey.</li> <li>3. Tabulate results of survey.</li> <li>4. Create research report that describes the results.</li> <li>5. Publicize research and existence of dataset.</li> <li>6. Make dataset available to other researchers.</li> </ol>	<ul style="list-style-type: none"> <li>- Child care workforce</li> <li>- Child care and labour organizations</li> <li>- Labour market and child care research and policy analysts</li> <li>- Governments</li> </ul>	<ul style="list-style-type: none"> <li>- Sector Council Staff</li> <li>- Child care and labour organizations</li> <li>- Child care researchers and other experts</li> </ul>
<b>V career choices</b>	To examine career choices of ECEC workers and ECE trained people in order to improve recruitment and retention.	<ol style="list-style-type: none"> <li>1. Create questions for a survey to obtain information on career choices and the factors that influence career choices.</li> <li>2. Conduct survey.</li> <li>3. Create research report that examines link between influencing factors and career choices.</li> <li>4. Publicize research.</li> </ol>	<ul style="list-style-type: none"> <li>- Labour market and child care research and policy analysts</li> <li>- Students</li> <li>- High school and career counsellors</li> <li>- Employers</li> <li>- Employees</li> <li>- Unions</li> </ul>	<ul style="list-style-type: none"> <li>- New ECEC sector surveys</li> <li>- Sector Council Staff</li> <li>- Consulting resources</li> <li>- Child care and labour organizations</li> <li>- child care researchers and other experts</li> </ul>

Initiative	Purpose/Outcomes	Activities/Outputs	Audience	Resources
<b>VI job satisfaction, impact of HRM on job satisfaction and labour market outcomes</b>	<p>Job satisfaction influences quit rates, HRM affects job satisfaction. Improvements in HRM practices would improve job satisfaction and reduce quit rates and leading to long tenured employees.</p> <p>The ultimate outcome is to reduce the turnover in the sector. Intermediate outcomes include: database on aspects of HRM practices, job satisfaction and labour market outcomes. Research on these topics, and a toolkit to help individual employers to improve HRM practices.</p>	<ol style="list-style-type: none"> <li>1. Devise survey that asks questions about HRM practices, job satisfaction, turnover and tenure from employers/employees.</li> <li>1. Collect data on HRM practices, job satisfaction, turnover and tenure from employers/employees.</li> <li>2. Research link in the data between HRM practices and job satisfaction.</li> <li>3. Research link in the data between job satisfaction, quit rates and tenure.</li> <li>4. Identify HRM practices that directly or indirectly influence labour market outcomes.</li> <li>5. Provide a toolkit that helps individual employers to improve HRM practices.</li> </ol>	<ul style="list-style-type: none"> <li>- Labour market and child care research and policy analysts</li> <li>- Employers</li> <li>- Employees</li> <li>- Unions</li> <li>- Governments</li> </ul>	<ul style="list-style-type: none"> <li>- Sector Council Staff</li> <li>- HRM experts</li> <li>- Child care researchers and other experts</li> </ul>
<b>VIII Integrated electronic data system to improve data collection and HRM</b>	<p>Improve data collection, processing, and data quality. Reduce paper burden on P/T and employers responding to regulatory and funding information needs. Improve HRM practices of employers.</p> <p>Two way flow of information would enhance the value of the information to employers, improve data quality and compliant for P/T, and improve the functioning of the ECEC sector.</p>	<ol style="list-style-type: none"> <li>1. Requires buy-in of P/T and ECEC organizations.</li> <li>2. Identify data needed for internal HRM and external P/T purposes.</li> <li>3. Develop software to collect and manage data for internal and external needs that links with ministries responsible for ECEC regulation and funding.</li> <li>4. Software to aggregate information and to provide information back to individual organizations concerning the overall situation in the province/region so to place individual organization in context and improve HRM.</li> <li>5. Pilot project to test system.</li> <li>6. Adjust software to reflect findings of pilot project.</li> <li>7. After testing, adjustment, and re-testing, roll out system to broad number of organizations in P/T.</li> </ol>	<ul style="list-style-type: none"> <li>- Employers</li> <li>- P/T governments</li> <li>- Employees</li> </ul>	<ul style="list-style-type: none"> <li>- Sector Council Staff</li> <li>- HRM experts</li> <li>- Software developers</li> <li>- Child care researchers and other experts</li> </ul>

## **Appendix I: Commonalities in Research Topics**

Commonalities among topics were explicitly recognized by many of the participants in the expert panels. Only two topics that received votes were not combined with other topics, specifically LMI: uses by and impact on stakeholders (topic 7) and the Integrated electronic data system (topic 12). Of the 36 votes cast in the determination of the priority list, 20 were combined votes. These commonalities are worthwhile examining in order to understand the potential synergies that could be harness in the future. Figure A1.1 on the next page graphically illustrates the topic combinations identified by the expert panel.

The common topics can be thought to be two linked clusters of topics. The first cluster is centred around the snapshot (topic 1). The second cluster is centred around a group of nine topics that includes: Quality begets quality (topic 8), Understand the dynamic of non-profit mechanism (topic 9), Impact of unionization on labour market outcomes (topic 10), Understanding low wage dynamic and high price elasticity for ECEC services (topic 11), Life course trajectory (topic 13), System comparisons (topic 14), Impact of non-wage financial benefits on recruitment and retention (topic 15), Job satisfaction and the impact of HRM on job satisfaction and labour market outcomes (topic 18), and Directors as a specific target group (topic 21).

It is clear from an examination of the combined votes that most experts assumed that data collection was part of many of these research topics, since there are no data current available from publicly available data sources for many of these topics such as job satisfaction, quality and systemic change. Data needs for the top eight priority topics was discussed in "Situational Analysis" and in section three of this report data commonalities were discussed.

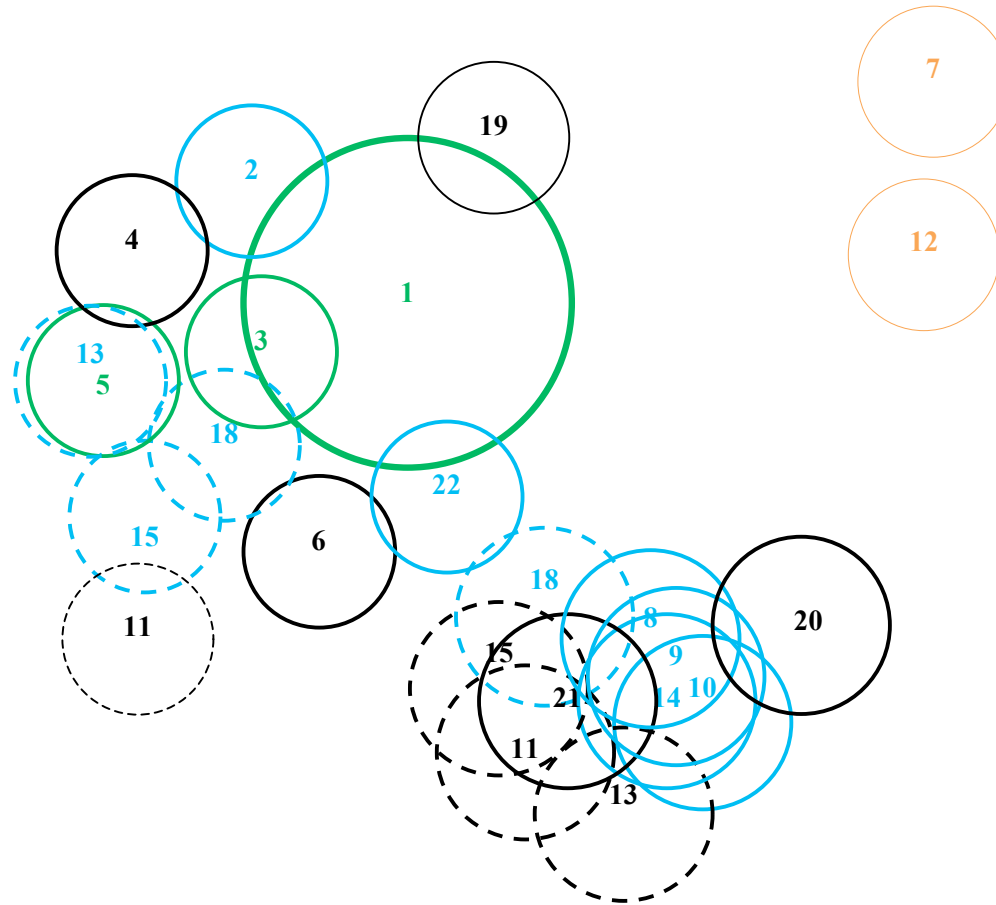
The following focuses on the similarities or commonalities that the expert panel found in the research topics. In some cases the discussion focuses on the similarities in the research areas and in other instances similarities in the data that are needed for the topics is highlighted. The discussion moves down the list of topics that received votes from topic 1 to topic 22. Any particular connection is only examined once.

The Snapshot (topic 1) has a central position in the first cluster. There are a couple of possible linkages, depending on how experts interpreted these topics. In part, the snapshot appears to be a communications vehicle for the other research topics. The snapshot is linked with the development of a YBIC! type survey. Presumably, the information from the survey will supplement the data that are available from the census and provide a richer understanding of the sector. The snapshot was linked to research on job satisfaction (topic 18), since no current data are available on job satisfaction, the expert presumably assumed that data collection was part of that topic and some of the results of the research would be illustrated in the snapshot. The snapshot was also linked to the occupational demand/supply model (topic 19). Again presumably the information from the model, perhaps the estimate of workforce shortages would be used to provide a deeper understanding of the ECEC sector. The snapshot is also linked to the web based clearing house (topic 22) presumably because that is one means by which the information will be provided to stakeholders.

It is not immediately clear what the direct connection between the review of literature (topic 2) to identify data gaps and the snapshot would be. There could be an indirect link via another topic that collects the missing data. A more obvious linkage would be from the review of literature and the development of a YBIC! type survey (topic 3), but this link was not made. There is a link between the review of literature and labour mobility (topic 4), presumably the literature review would explicitly target labour mobility and provide information about what data need to be collected.

A link between the YBIC! type survey (topic 3) and the job satisfaction research (topic 18) is directly made. This connection presumably means that the expert considers that the YBIC! type survey should collect information on job satisfaction, HRM practices and labour market outcomes. Oddly other research topics were not directly linked to the YBIC! type survey, but which could clearly benefit from the YBIC! type survey if questions on those topics were included.

**Figure A2.1: Topic Combinations Identified by Expert Panel's Voting**



**Legend**

- Thin orange circle: topic not combined with others
- Thin black circle: topic combined with others once
- Thick black circle: topic combined with others twice
- Blue circle: topic combined with others three times
- Green circle: topic combined with others four times
- Thick Green circle: topic combined with others more than four times
- Dotted line: topics identified in both clusters of combined topics
- Number represents the topic number from Table 1

A direct link between labour mobility (topic 4) and career choices research (topic 5) was made by a couple of experts on the panel. Given that there is an overlap between labour mobility and career choice, this is an obvious combination. There is also a clear commonality of data that would be needed to research these topics, but the information on career choices should also include those with ECE training who never entered the ECEC sector.

The career choices research (topic 5) was linked with a number of topics by several experts. There is an obvious link between career choices and life course trajectory, both would use similar data, and address similar issues. The sample needed for the two studies may differ. Life course trajectory would potential require a larger sample of older workers to understand later life transitions, while presumably a focus on career choices would need a larger sample of younger people to understand their initial career choices given that most of the career transitions tend to occur at younger ages. There is also a clear link identified between career choices and the impact of non-wage financial benefits on recruitment and retention (topic 15) and the impact of HRM practices on job satisfaction and labour market outcomes (topic 18). Notably, none of the experts made a link between the topic quality begets quality (topic 8) and career choices whereas this linkage is explicitly identified in the ECEC literature.

Program evaluation (topic 6) was linked with and the impact of HRM practices on job satisfaction and labour market outcomes (topic 18) as well as with the web based clearing house for information (topic 22). Presumably the link between program evaluation and HRM practices is so that the HRM practices can be properly evaluated. The link between the web based clearing house and program evaluation is presumably to publish information on program evaluation. It is not clear if there is another linkage that the expert had in mind.

Quality begets quality and affects R&R (topic 8) was not part of the first cluster of topics, but was one of the core topics in the second cluster that was identified by three experts. This topic was linked with other core topics in the second cluster that include: understand the dynamic of non-profit mechanism (topic 9), impact of unionization on labour market outcomes (topic 10) and system comparisons (topic 14). Presumably the link between quality and the first two of these topics is to reflect the research that suggests that non-profit child care centres and a unionized workforce provide higher quality ECEC services and better labour market outcomes. These topics could use similar sourced data to examine these issues provided that some matched measure of quality is obtain from surveys or from administrative data. Presumably, quality would be one of the attributes of different systems that would be examined in any system comparison. Comparing different ECEC systems in Canada could be done with the same surveys so long as they have a representative sample in the P/T that are being compared. International comparisons would required the same data to be collected for those countries that are to be compared with Canada. In order to compare quality internationally, the same quality measure would need to be recorded and mean the same thing in the different countries under examination.

Quality begets quality was linked less often with several other topics in the second cluster, specifically: low wage dynamic (topic 11), life course trajectory (topic 13), directors as a specific target group (topic 21) and system change (topic 20). There is an obvious link between the low wage and high price elasticity dynamic and quality. To understand the low wage and high price sensitivity dynamic thoroughly it would be necessary to also include quality. This suggests that the surveys that are used to collect information about the ECEC sector should include a measure of quality. Quality could also influence life course trajectory since it may alter the desirability of ECEC employment by older workers, or alter their choice of ECEC related positions. Directors could influence quality in ECEC organizations, which would also impact the other topics in this cluster. Quality begets quality was also linked with system change. A systemic change could have a clear impact on the quality of ECEC services delivered by the sector. Analysing system change could need information that extends beyond current systems in operation in Canada and therefore it would need to be broken down into component parts to understand the implications for the provision of ECEC services and the workforce.

Non-profit status (topic 9) was linked with several other topics in the second cluster including: impact of unionization on labour market outcomes (topic 10) and system comparisons (topic 14). Since non-profit status and unionization are identified as possible factors that affect the delivery of ECEC services and labour market outcomes this is an obvious combination. Non-profit status was also linked, although less often, to low wage dynamic (topic 11), life course trajectory (topic 13), directors as a specific target group (topic 21) and system change (topic 20). Again given the research on the importance of non-profit status there would



seem to be an obvious connection between non-profit status and the first three of these topics in understanding the ECEC workforce. The connection between non-profit status and system change could be because the expert foresees a system of non-profit organizations as the possible model for the ECEC system.

The impact of unionization on labour market outcomes (topic 10) was linked with system comparisons (topic 14) in the second cluster of topics. Presumably unionization is one of the attributes the expert wants to examine in the different systems to understand the impact of unionization on labour market outcomes. Other topics that were connected with unionization, albeit less often, were low wage dynamic (topic 11), life course trajectory (topic 13), directors as a specific target group (topic 21) and system change (topic 20). Similar to the discussion above unionization would be one of the attributes that would need to be studied to understand the sector and labour market outcomes. The connection between unionization and system change could be because the expert foresees a system of high unionization as part of the possible model for the ECEC system.

The low wage and high price sensitivity dynamic (topic 11) was linked to life course trajectory topics (topic 13), system comparisons (topic 14), impact of non-wage financial benefits on recruitment and retention (topic 15) and the impact of HRM practices on job satisfaction and labour market outcomes (topic 18), and directors as a specific target group (topic 21). There are obvious connections between these topics and many would use similar survey data, or data that could be extended to include the relevant information for most of the other topics. System comparisons that extend outside the country would require additional information, however.

The life course trajectory topics (topic 13) was linked to system comparisons (topic 14), impact of non-wage financial benefits on recruitment and retention (topic 15) and the impact of HRM practices on job satisfaction and labour market outcomes (topic 18), and directors as a specific target group (topic 21). There are obvious connections between these topics and many would use similar survey data, or data that could be extended to include the relevant information for most of the other topics. System comparisons that extend outside the country would require additional information.

System comparisons (topic 14) was linked with the impact of non-wage financial benefits on recruitment and retention (topic 15) and the impact of HRM practices on job satisfaction and labour market outcomes (topic 18), and directors as a specific target group (topic 21). Any survey that examines ECEC sector systems in different parts of Canada could be used to compare these systems. System comparisons that extend outside the country would require additional information, however. Naturally system comparisons was also linked with system change (topic 20).

The impact of non-wage financial benefits on recruitment and retention (topic 15) was linked with the impact of HRM practices on job satisfaction and labour market outcomes (topic 18), and directors as a specific target group (topic 21). There are obvious connections between these topics and many would use similar survey data, or data that could be extended to include the relevant information for most of the other topics.

The impact of HRM practices on job satisfaction and labour market outcomes (topic 18) was linked with directors as a specific target group (topic 21). There are obvious connections between these two topics given that directors influence or determine HRM practices and must carry out these practices. Information for these topics could use the same survey information.

## Appendix II: Expert Panel's List of LMIRA Priorities

The topics identified by the expert panel include: literature reviews, potential areas of research, the provision of human resource management tools, methods to deliver research and improvements in data collection and management. In order to create a priority list each member of the expert panel and CCHRSC staff were permitted three votes. Some experts used a single vote on combined topics, so these topics received partial votes. In order to take these partial votes into consideration, these votes were weighted by their fractional amount. For example, if an expert combined three topics then each topic received one third of a vote in the weighted vote tally. Both the total number of votes and the weighted number of votes were calculated.

<b>Table A2.1: Research Topics Ranked by Total Votes</b>	
<b>1</b>	<b>Occupational Demand/Supply model</b>
<b>2</b>	<b>Labour Mobility</b>
<b>3</b>	<b>Snapshot of the workforce</b>
<b>4</b>	<b>Career Choices</b>
<b>5</b>	<b>You Bet I Care! type survey</b>
<b>6</b>	<b>Integrated electronic data system</b>
<b>7</b>	<b>Job satisfaction</b>
8	Impact of non-wage financial benefits
9	LMI: uses by and impact on stakeholders
10	Literature review of recent projects to identify data gaps
11	Quality begets quality
12	Program evaluation
13	Understanding low wage dynamic
14	System change
15	Impact of Unionization
16	Web based clearing house
17	Life Course trajectory
18	System comparisons
19	Understand the dynamic of non-profit mechanism
20	Directors as specific target group
21	Learn from other sectors
22	Natural experiments should be examined

<b>Table A2.2: Research Topics Ranked by Weighted Number of Votes</b>	
<b>1</b>	<b>Snapshot of the workforce</b>
<b>2</b>	<b>Labour Mobility</b>
<b>3</b>	<b>Occupational Demand/Supply model</b>
<b>4</b>	<b>Redo You Bet I Care! type survey</b>
<b>5</b>	<b>Job satisfaction</b>
<b>6</b>	<b>Career Choices</b>
<b>7</b>	<b>Impact of non-wage financial benefits</b>
8	Quality begets quality and affects R&R
9	Literature review
10	Impact of Unionization
11	Understanding low wage dynamic
12	Integrated electronic data system
13	Life course trajectory
14	System comparisons
15	LMI: uses by and impact on stakeholders
16	Understanding low wage dynamic
17	System change
18	Web based clearing house of information
19	Program evaluation
20	Directors as specific target group
21	Learn from other sectors
22	Natural experiments should be examined

The topic that received the most votes is ranked number one and is at the top of the list, while the topics that received the fewest votes are at the bottom of the list. The top seven topics are listed in bold in the tables. These rankings provide similar lists for both methods of counting the votes. Six of the seven highest ranked topics are the same in the two lists. The difference between the two lists is that the ranking of the total votes casted includes the impact of non-wage benefits on recruitment and retention (topic 15), while the electronic data delivery system is included in the weighted vote tally (topic 12).