



BC Industrial Marine Sector Labour Market Strategy Development



Association of
British Columbia
Marine Industries

Strategy and Evaluation Framework
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This report was prepared by R.A. Malatest & Associates Ltd. for the Association of British Columbia Marine Industries (ABCMI) towards fulfillment of a Phase 3 Labour Market Partnership Project.

Executive Summary

Project Background

In March 2018 the Association of British Columbia Marine Industries (ABCMI), with the support of the Ministry of Advanced Education, Skills and Training, commenced an SLMP Phase 3 Strategy Development project for the Industrial Marine Sector. This follows a Sector Engagement Project carried out in 2016 and a Labour Market Information (LMI) Study completed in 2017. The aim of the current project is to produce an evidence-based workforce development strategy, including an implementation plan, to address the key workforce issues faced by the sector as identified in the prior labour market research phase. Highlighted below are the key findings of the LMI study and Human Resource Strategy and Implementation Plan.

The Context

The BC Industrial Marine sector is projected to experience positive growth over the next 10 years. However, it is clear that the long term viability of the sector will require a more pro-active approach to human resource planning to address the looming shortages that the sector will experience in the coming years. Highlighted in this report are the key human resource challenges facing the sector, as well as a discussion of potential strategies that can be adopted by key stakeholders, including the industry, training providers and the government.

The BC Industrial Marine Sector will require significant numbers of new workers over the next ten years

All BC Industrial Marine sub-sectors are expected to demonstrate positive growth between 2017 and 2027. Marine industrial services and small craft marine sub-sectors are expected to outperform growth in the province across all industries (3.9% and 3.0% annual growth per year). These industry growth projections would equate to an additional 5,456 job vacancies across the sector over the next decade.

In addition to new jobs required as the industry expands, the BC Industrial Marine Sector also must address the considerable demands associated with existing vacancies, loss of workers to other sectors, and significant need to replace workers who will be leaving the sector due to retirement. In 2017, the estimated retirement rate of the marine workforce was 4.8%, more than double that of the BC average of 2.3%. It is estimated that by 2027, almost 40% of the current workforce in the sector will have retired.

Combining job requirements across all sectors, 82.1% of the existing Industrial Marine workforce will need to be replaced over the next 10 years. This equates to an estimated 16,559 job openings; an average of 1,660 positions must be filled each year if the sector is to keep up with projected growth and replace workers who are expected to retire or leave the sector.

The Industry lacks workforce diversity

There is a lack of diversity in the workforce, specifically from women, Indigenous workers and new/or prospective immigrants. 87% of the workforce is male, and where women do hold positions, these tend to be in administrative/support roles. Indigenous workers represent less than 3.3% of the sector workforce, lower than their representative proportion of 5.3% of BC's labour force. Employers within the sector tend to source their labour locally, with national and international labour not generally used to fill job openings.

The sector will need to enhance its image among youth and other potential job seekers

The results of LMI study suggest that the industry has challenges in attracting youth and/or other potential workers to the sector. Youth were generally unaware, or had misperceptions, of the Industrial Marine Sector; describing the sector as dirty, unsafe and rife with antiquated technology. It was noted that the sector is not generally well promoted as a career option in either high schools and/or community colleges. Employers identified the following recruitment barriers: job security; employment conditions; cost of living; and lack of brand recognition.

Throughout the sector, employers emphasized that, in their opinion, current training programs are not adequately preparing new entrants for work in the sector. Given the unique and specialized nature of work in the sector, employers often spend years training new hires. Innovative industry-led training/programs are currently filling some of the training gaps, especially within the small craft marine sub-sector.

The Solution

The Human Resource Strategy and Implementation Plan was developed through comprehensive industry input and provides the sector with an actionable plan and initiatives to address human resource capacity challenges in HR strategy coordination, attraction & recruitment, education & training, and retention.

Five priority recommendations for the sector were identified and key elements of the strategy include activities to be undertaken in three of the four strategy themes.



HR Strategy Coordination:

- Establish a human resources committee and/or organization that acts as a focal point for the implementation and coordination of the labour market strategy.

Attraction & Recruitment:

- Development of a marketing strategy to improve perception of the industry to attract potential employees by re-branding the sector.
- Development of marketing materials to conduct focused promotion and outreach activities to attract and recruit sector employees.
- Establishment of a “Women in Marine” initiative to attract and recruit women into careers in the sector.

Retention:

- Development of an incentive program to retain workers in the sector and/or fostering workplace cultures that are attractive to the workforce and more competitive with those offered by other industry sectors.

It should be noted that the strategy has identified six potential future actions that could be undertaken within the strategy themes. However, these future actions were not presently identified as being in the top 5 high priority items (above). Much of the work around understanding the ways in which the 'culture' of the sector could improve was not deemed to be a high priority. The authors acknowledge that these are systemic issues which will require a large amount of work, time and cultural understanding, and that they are valuable strategies to be implemented once adequate resources have been allocated to these complex issues.

Table of Contents

EXECUTIVE SUMMARY	1
1. INTRODUCTION.....	1
2. BACKGROUND.....	2
3. STRATEGY	4
4. STRATEGY IMPLEMENTATION PLAN.....	7
ACTIVITY 1: COORDINATE.....	7
1.1 ESTABLISH A HUMAN RESOURCES COMMITTEE / ORGANIZING BODY	7
ACTIVITY 2: ATTRACT & RECRUIT	8
2.1 DEVELOP MARKETING STRATEGY TO IMPROVE PERCEPTION OF INDUSTRY	8
2.2 DEVELOP MARKETING MATERIALS AND CONDUCT OUTREACH AND PROMOTION	10
2.3 ESTABLISH A “WOMEN IN MARINE” INITIATIVE.....	11
2.4 DEVELOP AN INTEGRATED ‘CAREER PATH’ STRATEGIES.....	12
2.5 DEVELOP AND DEPLOY AN INDIGENOUS PEOPLES RECRUITMENT PLAN.....	12
2.6 DEVELOP AND DEPLOY A RECRUITMENT PLAN GEARED TO IMMIGRATION.....	13
ACTIVITY 3: RETAIN	13
3.1 DEVELOPMENT OF AN INCENTIVE PROGRAM TO RETAIN WORKERS IN THE SECTOR.....	14
ACTIVITY 4: EDUCATION & TRAINING	15
4.1 DEVELOP A STANDARDIZED INDUSTRY CERTIFICATION FOR HIGH DEMAND OCCUPATIONS	15
4.2 INVEST IN LOCAL SOURCES OF LABOUR.....	16
4.3 PROMOTE THE VALUE OF APPRENTICESHIPS TO EMPLOYERS	16
5. MEASUREMENT AND METRICS	18
BENCHMARKING AND MEASUREMENT OF RESULTS OF STRATEGY/IMPLEMENTATION PLAN ACTIVITIES	18
6. TIMELINE	20
APPENDIX A – INDUSTRY CONTEXT FOR STRATEGY	21
APPENDIX B – SUB-SECTOR LMI STUDY KEY FINDINGS & RECOMMENDATIONS	23
APPENDIX C – CONSULTATION FINDINGS	27
SCHEDULE OF CONSULTATIONS.....	27
OVERVIEW OF APPROACH.....	27
FINDINGS.....	30
SUPPORT FOR HR STRATEGY THEMES.....	30
SPECIFIC HR ACTION ITEMS THAT SHOULD BE PURSUED	34
EVALUATION FRAMEWORK	38
CHALLENGES	39
APPENDIX D– POTENTIAL FUNDING SOURCES	40

1. Introduction

In 2016 the Association of British Columbia Marine Industries (ABCMI), with the support of the Ministry of Advanced Education, Skills and Training; initiated a Sector Labour Market Partnership (SLMP) program to better understand and respond to workforce challenges faced by British Columbia's (BC) Industrial Marine Sector. SLMP programs follow distinct project phases defined by the Ministry of Advanced Education, Skills and Training.



In March 2018, ABCMI commenced an SLMP Phase 3 Strategy Development project for the Industrial Marine Sector. The current project follows a Sector Engagement Project carried out in 2016¹ and a Labour Market Information (LMI) Study carried out in 2017. The aim of the current project is to produce an evidence-based workforce development strategy, including an implementation plan, to address the key workforce issues faced by the BC marine industry as identified in the labour market research phase.

ABCMI has developed this human resources strategy and implementation plan to address significant human resource challenges, in particular in the areas of HR strategy coordination, attraction & recruitment, education & training, and retention, which present a threat to the long term stability of the sector. It is anticipated that these strategies, if implemented, will help to ensure the sector has sufficient qualified skilled individuals to meet business needs in the near and longer term. This strategy was developed through sector input, including a series of stakeholder workshops, interviews, and draft reviews in response to current labour market research information as well as secondary research on best practices from other sectors.

This strategy and implementation plan is intended as a comprehensive, actionable approach to help the BC Industrial Marine sector ensure a skilled, qualified workforce for the future.

¹ The Governance Committee, which was established during Phase 1, continues to advise and oversee this phase of work. The Governance Committee is comprised of at least one representative from each sub-sector plus representatives from labour, manufacturing, the Chamber of Shipping, education and training, and ABCMI. R.A. Malatest & Associates Ltd. (Malatest) have been contracted to facilitate all activities related to Phase 3 of the project.

2. Background

The BC Industrial Marine sector is facing a challenge: how to ensure a stable, qualified labour force to meet operational needs in the future. The next 10 years will be characterized by increasing employee attrition due to the retirement of a significant portion of the employee population and continued competition for employees from other sectors.

Data from BC Industrial Marine LMI (2017) indicates that employers within the sector are already having difficulties:

- retaining workers due to competition from other sectors (oil and gas; construction) and low wages;
- attracting youth and recruiting new workers, particularly women and Indigenous workers;
- supporting industry training at appropriate levels; and
- maintaining educational and training programs.

In looking to the future, the report suggested that:

- there will be significant hiring requirements to fill the positions vacated by retiring workers and to off-set the current job vacancy rate;
- employers are experiencing difficulties in identifying qualified available candidates, particularly in specialized positions;
- there is a limited ability of local populations to fill vacancies for skilled trades-people, and;
- attraction and retention will continue to be a challenge.

The Human Resource Strategy and Implementation Plan described herein was developed through comprehensive industry input and focuses on the themes and actionable items identified by the 2017 BC Industrial Marine Sector LMI Study, which sector stakeholders viewed as their main areas of concern (namely, HR strategy coordination, attraction & recruitment, education & training, and retention). As a result, this strategy provides the sector with an industry/employer driven actionable plan to address human resource capacity challenges prioritized by industry. The specific HR challenges addressed in this strategy and implementation plan are:

HR Strategy Coordination

- In order for the sector to act on the prioritized HR challenges, employers expressed the need to establish a human resources committee to act as an organizational body and coordinator of the implementation of the action items described in the labour market strategy.

Attraction & Recruitment

- Employers identified the following barriers in attracting youth and other potential job seekers: job security; employment conditions; cost of living; and lack of brand recognition.

- Employers feel that the public, especially youth, have a less favourable perception of the industry and that this is presenting as a barrier from attracting new workers to the sector.
- The following factors were identified as deterring individuals from pursuing a career in the industry:
 - Unfavourable employment conditions such as a dirty and unsafe work environment;
 - Unawareness of the Industrial Marine Sector in general;
 - Lack of job security;
 - Competition from other sectors;
 - Uncompetitive wages and benefits.
- Combining job requirements across all sectors (retirement, turnover, and current vacancies), 82.1% of the Industrial Marine workforce will need to be replaced over the next 10 years if the sector is to keep up with projected growth and meet existing commitments.
- In total, 16,559 job openings will need to be filled over the next decade, an average of 1,660 jobs each year.

Education & Training

- Employers believe that current training programs are not adequately preparing new entrants for work in the sector. Given the unique and specialized nature of work in the sector, employers often spend years training new hires.
- Innovative industry-led training/programs are currently filling some of the training gaps, especially within the small craft marine sub-sector.
- 89% of BC Industrial Marine LMI (2017) survey respondents noted that their greatest challenge in hiring skilled workers was a lack of qualified candidates.

Retention

- The retirement rate in 2017 for the Industrial Marine Sector was 4.8%, more than double the BC average of 2.3%. By 2027, almost 40% of the current workforce will have retired.
- Employers identified competition with other sectors (oil and gas; construction) and low wages as the main retention challenges and reasons for turn-over.
- Transfer of knowledge and skills from one generation of workers to the next becomes problematic as the timeframe for new hires to shadow and learn from existing employees is diminished.

More comprehensive information about the HR challenges identified in the 2017 BC Industrial Marine Sector LMI Study is included in Appendix A – Industry Context for Strategy.

3. Strategy

Successful implementation of the proposed human resources strategy will be instrumental in the Association of British Columbia Marine Industries achieving the following:

Vision

The Industrial Marine Sector in BC has a strong talent ecosystem where talent is readily attracted and retained.

Mission

Produce an evidence-based workforce development strategy, including an implementation plan, for the BC Industrial Marine Sector, to address the key workforce issues identified in the labour market research.

Purpose

The strategic framework will guide the sector through both existing and anticipated labour market challenges.

Goals

- To increase awareness of the breadth of employment opportunities across the six sub-sectors for those outside BC's Industrial Marine sector.
- To increase the ability of employers to obtain the skilled and qualified individuals they need, when they need them;
- To promote strong employee/employer relationships throughout the sector; and,
- To cohesively implement the labour market strategy while encompassing the views and interests of all sub sectors, and the Industrial Marine sector as a whole.

Values

- That the sector be open to participation of a diverse workforce
- That the sector adopt human resource policies and programs that will help build on the current and future skills and aspirations of BC workers and employers

Action Items

The overarching principles guiding the prioritized activities and action items are that they:

- be industry and employer driven;
- be practical and implementable;
- be inclusive of all sector stakeholders;
- are built on collaborative work that is already being done in, and across the sector; and,
- be sustainable through industry engagement, leadership, and support.

Each recommendation is captured in tables in the next section to provide a comprehensive, detailed and viable plan for achieving the goals of the human resource strategy listed in order of priority.

These recommendations were identified and selected at stakeholder meetings for each subsector, held in summer 2018. Workshop participants voted on priority items using a 'Dotmocracy' approach (see Appendix C for more information on consultation findings).

Each table contains specific strategies and actions with anticipated outcomes, leadership suggestions, and timeline for execution for the activity. The timeline proposed for activities spans three years with activities assigned to specific quarters in each year. While this timeline is proposed, it is reasonable that activities may be shifted to some extent over the course of the project, based on industry need or interest and availability of funding sources. The timeline for implementation follows the recommended activities.

4. Strategy Implementation Plan

Within each activity described below, tables with a dark blue header were deemed to be of priority and were ranked in the top 5 strategies to be implemented. Strategies with a red heading were proposed in the sector stakeholder consultation groups but were not deemed a priority at this time. These activities are included here as initiatives the sector may wish to re-visit in the future.

Activity 1: Coordinate

Activities proposed here would support the BC Industrial Marine Sector to oversee and co-ordinate their sector-wide HR efforts.

Objective/Deliverable	1.1 Establish a Human Resources Committee / Organizing Body
<p>Specific Action Plan</p>	<p>The establishment of a Human Resources Committee/Organizing Body would be done with input and representation from a range of organizations including federal and provincial governments, local education and training providers, and employers. The role of this committee would be to monitor the labour needs of the sector and mobilize action plans to address these needs as they arise.</p> <p>Given the diverse needs and nuances of the marine subsectors that constitute the BC Industrial Marine Sector, and that the Association of BC Marine Industries (ABCMI) has already worked extensively on championing labour market strategies for all six subsectors, they are best positioned to be the focal point for this co-ordination role.</p> <p><u>Action Steps:</u></p> <ol style="list-style-type: none"> 1. Identify and unify sub-sectors that have similar workforce challenges. 2. Coordinate communication between employers and educational institutions to ensure, where possible, the right skills are being developed for employer needs. 3. Manage communication across multiple stakeholders in an effort to support the labour needs of the sector. 4. Oversee marketing strategy and recruitment initiatives (marketing budget included in objective 2.1 and 2.2 respectively). 5. Provide sub-sector reviews to determine if a critical mass can be established for the purposes of developing a new program (something that institutions require before developing new programs).

	<ol style="list-style-type: none"> 6. Focus on the retention of the labour force by monitoring competition from other sectors (oil and gas; construction) and putting strategies in place to dampen any competitive effects. 7. Document commitments from employers that prevent discriminatory practices and promote equal opportunity for everyone. 8. Manage on-going and/or future LMI studies that can be used to monitor progress in terms of addressing current and future human resource issues. 9. Provide a central focal point to collect LMI as well as “best practices” in human resource management for the sector. 10. Monitor progress of the various initiatives in terms of alleviating key HR pressures faced by the industry.
Participants	Human Resources Committee / Organizing Body, Employers, Governance Committee
Audience	Industry stakeholders
Associated Risk	Appropriate communications resources not in place
Risk Level	Low – ABCMI is an already established body that is well positioned in the sector to take on this role
Immediacy	Year 1 – Q1 ² onward

Activity 2: Attract & Recruit

Broad outreach activities should be undertaken to increase awareness of the BC Industrial Marine sector career and training opportunities to a wide audience. In this instance these activities are intended to attract people into the sector generally rather attracting specifically to a particular sub-sector. These activities are also an opportunity to “re-brand” the sector and promote benefits of industrial marine occupations which may have been lost on its intended audience given a lack of appreciation for, or misunderstanding of, the sector.

Objective/Deliverable	2.1 Develop Marketing Strategy to Improve Perception of Industry
Specific Action Plan	This activity entails developing a marketing strategy to promote the sector broadly and changing the misperceptions and information gaps associated with marine occupations. While the long term intended outcome is to increase the potential employee candidate pool, marketing efforts across several audiences will ensure greater understanding of, and interest in, the industrial marine sector. It is anticipated that marketing activities will

² The immediacy is articulated in terms of Q’s (fiscal quarters) with Q1 being the first term from which a project is launched.

	<p>promote good will about the sector and will yield positive perceptions (in particular those of career counsellors who often influence interest in specific professions and industries to job seekers). This broad marketing strategy with these overarching goals will help to guide more specific marketing outreach activities (outlined in objective/deliverable 2.2) targeting specific demographics.</p> <p>Other industries, such as tourism with <i>Destination BC</i>³, have done similar marketing campaigns and outreach efforts to re-brand the sector as a whole.</p> <p><u>Action Steps:</u></p> <ol style="list-style-type: none"> 1. Develop marketing goals and communication deliverables with stakeholders (which may include website development, social media campaigns, trade shows and job fair opportunities). 2. Establish budget for marketing activities and identify funding sources and partnership opportunities, where possible. 3. Assess and inventory resources available for adaptation, repurposing and deployment from other industry stakeholders, where possible. 4. Develop comprehensive actionable marketing strategy with budget and timelines for deliverables.
Participants	Human Resources Committee / Organizing Body /Communication Agents (could be HR Committee members or marketing specialists hired specifically to conduct outreach activities).
Audience	Industry stakeholders
Associated Risk	Inadequate funding to do justice to the marketing goals
Risk Level	Low – Activities can be carefully budgeted and targeted; creative/marketing team staff to be recruited based on experience with similar campaigns
Immediacy	Year 1 – Q1 onward

³ Destination BC. Our Brand. Retrieved September 18, 2018, from: <https://www.destinationbc.ca/getattachment/Resources/british-columbia-tourism-brand/Our-Brand.pdf.aspx>

Objective/Deliverable	2.2 Develop Marketing Materials and Conduct Outreach and Promotion
Specific Action Plan	<p>This activity entails developing and deploying communications and marketing materials to promote the industry as an attractive employment and career option. It will be important in this phase to utilize existing materials which could be modified and adapted as much as possible.</p> <p>In contrast to the action item described in Strategy 2.1 (above), this strategy involves the development of specific marketing materials that can be used by HR/ other professionals in the sector to advertize and promote the sector, as well as the development of materials (print, online, other) that can be distributed to “influence agents” to enable such individuals to have a better understanding of the sector with the goal of promoting the sector to youth and/or other potential labour entrants.</p> <p><u>Action Steps:</u></p> <ol style="list-style-type: none"> 1. Prioritize deliverables identified in the overall Marketing Strategy. 2. Identify potential partnerships for materials development and promotional activities. 3. Establish budget as well as funding sources and partnership opportunities. 4. Engage marketing specialist to develop and deliver marketing materials (and repurpose where possible). 5. Conduct outreach activities. 6. Measure effectiveness of outreach activities. 7. Make recommendations around continued activities or next steps.
Participants	Human Resources Committee / Organizing Body /Communication Agents (could be HR Committee members or marketing specialists hired specifically to conduct outreach activities).
Audience	<p>Influence agents – schools counsellors, employment co-ordinators, parents, etc.</p> <p>Prospective workers to the sector (recent graduates, skilled trades people employed in other industries, local labour sources etc.).</p>
Associated Risk	Inadequate funding to do justice to the marketing goals
Risk Level	Low – Activities can be carefully budgeted and targeted; creative/marketing team staff to be recruited based on experience with similar campaigns
Immediacy	Year 1 – Q2 onward

Objective/Deliverable	2.3 Establish a “Women in Marine” Initiative
Specific Action Plan	<p>This initiative focuses on specific activities to increase the number of women working in the sector by addressing the key barriers that have led to their underrepresentation in the BC Industrial Marine sector.</p> <p><u>Action Steps:</u></p> <ol style="list-style-type: none"> 1. Gain industry commitment to establish goals or targets for hiring across the sector. 2. Identify, and then champion, specific action items that are within the industry’s control to address the major barriers to entry faced by women in the Industrial Marine Sector⁴ (i.e. societal, organizational, interpersonal and individual). 3. Work with consultants to develop a strategy to overcome barriers and establish best practices and protocols to recruit and retain women in the industry. Consider adapting existing materials developed elsewhere including, for example, the <i>BC Construction Workforce Equity Project (CWEP)</i>⁵ and/or HR materials (strategies developed by the Electricity Human Resources Canada (EHRC) such as the <i>Women in the Workforce Initiative</i>⁶. 4. Provide employer awareness training to increase awareness of barriers to women and solutions to mitigate the issue. 5. Assess effectiveness of programming relative to target established in Step 1 and monitor benchmarks of employment equity. 6. Make recommendations around continued activities.
Participants	Human Resources Committee / Organizing Body, consultants, employers, and industry associations.
Audience	Industry stakeholders/women
Associated Risks	<p>Without significant changes in the workplace culture, women attracted to the sector may soon leave the sector if systemic barriers are not addressed.</p> <p>Employers may have a bias towards male employment</p>
Risk Level	Medium – Ensure barriers are properly identified and communicated to

⁴ Whitmarsh, MJ. Services to Support Tradeswomen: A BC Environmental Scan. Retrieved September 13, 2018, from: https://www.workbc.ca/getmedia/01de8ba1-a1c6-433d-80af-7b48facb0500/Construction_Services_to_Support_Tradeswomen_Nov-2017.pdf.aspx

⁵ British Columbia Construction Association. Construction Workforce Equity Project: <https://www.bccasn.com/jobs-&-careers/equity/>

⁶ Electricity Human Resources Canada. Bridging the Gap: <https://electricityhr.ca/workplace-support/recruitment-retention/bridging-the-gap/>

	employers
Immediacy	Year 1 – Q3 onward

Objective/Deliverable	2.4 Develop an Integrated 'Career Path' Strategies
Specific Action Plan	<p><u>Objectives:</u> To attract/retain young workers to the industry and assist companies with succession planning.</p> <p><u>Suggested Tactics:</u></p> <ul style="list-style-type: none"> • Demonstrate to workers in entry-level positions the steps necessary to advance themselves into more senior roles, including supervisory and management positions. • Develop career path information for prospective workers showcasing the wide range of career types within the sector, actual examples of career paths for entry-level workers, and options for career advancement. This information could be presented as infographics, videos, dedicated section of ABCMI's website, etc. • Inclusion of education/training paths.
Immediacy	Year 3 – Q1 onward

Objective/Deliverable	2.5 Develop and Deploy an Indigenous Peoples Recruitment Plan
Specific Action Plan	<p><u>Objectives:</u> Increase diversity in the Marine Sector and encourage participating from underrepresented groups.</p> <p><u>Suggested Tactics:</u></p> <ul style="list-style-type: none"> • Understand why there are so few Indigenous peoples employed in the sector. • Address aspects of the corporate, sector and societal culture that discourages employment in the sector by Indigenous peoples. • Work with Indigenous organizations to develop a pilot program to engage, train, and employ local Indigenous employees for jobs and careers in the sector. • Identify and engage Indigenous peoples' project liaison for this goal. • Provide on-reserve specific recruitment drives and training

	programs.
Immediacy	Year 2 – Q3 onward (or one year after launch of ‘Women in Marine’ initiative)

Objective/Deliverable	2.6 Develop and Deploy a Recruitment Plan Geared to Immigration⁷
Specific Action Plan	<p><u>Objectives:</u> Increase diversity in the Marine Sector and encourage participating from underrepresented groups.</p> <p><u>Suggested Tactics:</u></p> <ul style="list-style-type: none"> • Understand why there are so few new Canadians employed in the sector. Consult with other sectors, such as the HR Council for the Nonprofit Sector, who have explored this issue in recent years.⁸ • Engage with Provincial and Federal governments on the need for immigration to fill specialized vacancies in the sector where little or no talent exists in the local labour pools. Develop and plan to streamline the immigration process. • Work with other groups to establish best practises and protocols to recruit new-comers to Canada (i.e. those on work visas or that hold permanent residency).
Immediacy	Year 2 – Q3 onward (or one year after launch of ‘Women in Marine’ initiative)

Activity 3: Retain

Recommendations for activities and initiatives to retain employees in high demand occupations may be undertaken at the sub-sector or sector level. Specific sub-sectors may wish to implement specialized strategies to retain their employees, while sector-wide initiatives may focus on retaining employees in the sector in general.

It has been articulated, anecdotally and through secondary research, that employers in this sector felt unable to retain employees since they cannot meet the escalating salaries offered by other

⁷ This initiative was added in response to the findings from the first three stakeholder sessions; participants identified the relative importance of ‘attracting and recruiting immigrants and new-comers to Canada’ as a strategic goal. It was not included in the original list of recommendations because it was not found to be a strong theme during the Phase 2 survey conducted in 2017.

⁸ HR Council for the Nonprofit Sector. Recruitment and retention of New Immigrants and Members of Visible Minorities in the nonprofit sector’s workforce. Retrieved September 18, 2018, from: http://hrcouncil.ca/documents/recruitment_newimmigrants.pdf

sectors (such as oil and gas and construction, in particular). However, there may be initiatives that employers could contemplate aside from untenable salary increases to retain this employee group. Employee retention is further exacerbated by the “boom and bust” pattern traditionally experienced in the shipbuilding sector. There is merit to further exploration on what drives employee engagement and loyalty; particularly when this discussion is had with particular employee populations and is evaluated on a more granular level.

Objective/Deliverable	3.1 Development of an Incentive Program to Retain Workers in the Sector
<p>Specific Action Plan</p>	<p>This activity entails conducting outreach with employees in high demand occupations to identify drivers of retention.</p> <p><u>Action Steps:</u></p> <ol style="list-style-type: none"> 1. Engage consultant to develop focus group strategy and input parameters. Some recruitment and employee retention strategies can be modified from existing literature, such as those developed by the Labour Market Framework for the Yukon⁹ or the Institute of Public Administration of Canada (IPAC)¹⁰, for example. 2. Conduct focus groups with employees to better understand their needs and values in order to tailor a retention strategy that is inclusive and serviceable to all. 3. Secure employer/sector partners for strategy development and assess partnership opportunities. 4. Identify high demand occupations on which to focus, based on sector or employer need. 5. Define outreach process to engage employers and employees. 6. Identify a group of employees in high demand occupations which are at risk of being recruited away from the sector. 7. Conduct third party, anonymous focus groups or surveys to define factors/value propositions that could be contemplated to retain in-demand employees. 8. Conduct research on best practices from other occupations/sectors to augment findings of #3. 9. Review outcomes/recommendations with sector and employers to determine impact and ROI on implementation. 10. Develop strategy for employers to use to retain high demand

⁹The Labour Market Framework for Yukon. Recruitment and Employee Retention Strategies. Retrieved September 18, 2018, from: <http://www.education.gov.yk.ca/pdf/employers/RER-strategies.pdf>

¹⁰ Institute of Public Administration of Canada (IPAC). Facing the Future: Exploring the Recruitment and Retention of New Public Servants in Canada. Retrieved September 18, 2018, from: <https://s3.ca-central-1.amazonaws.com/ipacreports/np-survey-eng.pdf>

	<p>employees.</p> <p>11. Assess potential impact of addressing retention issues based on practices identified in focus group.</p> <p>12. Make recommendations for continued activity or pilot program to test proposed strategies.</p> <p>13. Consider establishment of industry-wide marine “job board” in which marine sector employers/employees could advertise available positions, or where employers who are temporarily reducing their workforce can provide information about available workers. This would be similar to the <i>ECO Job Board</i>¹¹ hosted and maintained by ECO Canada.</p>
Participants	Employers/Consultant/Employees
Audience	In-demand employees and sector employees looking to remain in this group
Associated Risk	Intervention does not result in higher employee retention
Risk Level	Medium – Ensure barriers to retention are properly identified and communicated to employers
Immediacy	Year 1 – Q4 onward

Activity 4: Education & Training

Activities suggested within this theme would strengthen and expand industry-related programs in K-12, post-secondary schools/colleges and universities to increase the quantity and quality of locally-available candidates.

Objective/Deliverable	4.1 Develop a Standardized Industry Certification for High Demand Occupations
Specific Action Plan	<p><u>Objectives:</u></p> <p>Address the lack of marine-specific certificate programs and assist employers in assessing applicant skill sets and reducing significant training costs they currently absorb.</p> <p><u>Suggested Tactics:</u></p> <ul style="list-style-type: none"> • Structure the certificate to provide tangible recognition of specialized skills sets. • Have the certificate accredited so it is recognized by employers across the province (and potentially across Canada). • Ensure the certificate is widely advertised.

¹¹ ECO Canada. ECO Job Board: <http://www.eco.ca/jobboard/>

	<ul style="list-style-type: none"> • Make the certificate accessible to those who are exploring career options; for example, programs that are listed on association sites (e.g., Industry Training Authority). <p>The Industrial Marine Sector could mirror the Canadian Agricultural Human Resources Council’s approach. They have identified sector-wide primary occupations and defined the roles within these occupations, to be used by industry in attracting and retaining their labour force.¹²</p>
Immediacy	Year 3 – Q1 onward

Objective/Deliverable	4.2 Invest in Local Sources of Labour
Specific Action Plan	<p><u>Objectives:</u> Maximize the local labour workforce through training, outreach and removal of barriers to entry</p> <p><u>Suggested Tactics:</u></p> <ul style="list-style-type: none"> • Consider ‘Essential Skills’ and/or sector orientation (pre-employment training) to help equip current unemployed/under-employed workers to gain entry level positions in the sector. • Consider ‘Entry Level Trades Training’ (ELTT) for potential local workers interested in the Industrial Marine Sector. • Establish closer relationships with K12/college/university sector to expand exposure to potential new entrants via co-op/internship and/or mentorship programs. • Promote non-technical roles such as sales and marketing and project management in marketing campaigns.
Immediacy	Year 3 – Q1 onward

Objective/Deliverable	4.3 Promote the Value of Apprenticeships to Employers
Specific Action Plan	<p><u>Objectives:</u> Address the lack of qualified candidates interested in the marine sector</p> <p><u>Suggested Tactics:</u></p> <ul style="list-style-type: none"> • Educate employers on the benefits of apprenticeship programs, i.e. the Canadian Apprentice Forum suggests that each dollar invested

¹² CAHRC-CCRHA. National Agricultural Occupational Framework. Retrieved September 18, 2018, from: https://cahrc-ccrha.ca/sites/default/files/NAOF/National%20Agricultural%20Occupational%20Framework_EN.pdf

	<p>in apprenticeships yields a return to employers of \$1.47.</p> <ul style="list-style-type: none"> • Ask employers to consider: <ul style="list-style-type: none"> ○ Developing 'Apprenticeship Resource Kits' for employers. ○ Piloting 'front-loaded apprenticeship programs' in key trade areas to provide future apprentices with significant technical training prior to seeking employment sponsorship which ensures a more qualified, skilled apprentice. ○ Implementing a pilot program for 'advance entry' into key positions for individuals who have skills and knowledge gained through previous employment or education with advanced standing in trades training programs. • Increase the capacity for apprenticeship programs in post-secondary institutions.
Immediacy	Year 3 – Q1 onward

5. Measurement and Metrics

It will be important to measure the overall impact of the strategy implementation plan to ascertain to what extent it addressed the challenges identified in the 2017 BC Industrial Marine Sector LMI Study. It will be important for the Human Resources Committee / Organizing Body to assess and document progress toward re-branding the sector as an attractive and viable employer; attraction and recruitment of new workers, in particular women; and retention of employees (especially those in high demand occupations or that are about to retire). Effective measurement will also provide evidence for any program modification or adjustments which may be contemplated throughout the project.

The developed strategy should also retain some flexibility to accommodate emerging issues in the sector. For example, the selection of valid Key Performance Indicators (KPIs) could change should the industry decide that there are new labour market/human resource issues that should be addressed by the developed strategy. As highlighted below, it is not intended that the strategy be subject to an annual evaluation, but rather that once the evaluation framework is developed, there would be an ongoing monitoring of the strategy (limited data collection) with a full evaluation planned for Year 3 of the strategy.

Objective/Deliverable	Benchmarking and Measurement of Results of Strategy/Implementation Plan Activities
Specific Action Plan	<p>This activity involves measuring the impact of initiatives via the development of an evaluation framework that can be executed over the course of the human resource implementation strategy.</p> <p>Action Steps:</p> <ol style="list-style-type: none"> 1. Engage a consultant to develop metrics and a data capture strategy. 2. Develop evaluation framework and schedule, including discussion of data collection methods and process. It is expected that data monitoring would occur in Year 1 and Year 2, with a full evaluation occurring in Year 3. 3. Conduct annual or bi-annual measurement activities. 4. Review results of measurement to assess ongoing impact of strategy. 5. Make adjustments to activities, based on inputs and analysis of established metrics. 6. Implement full evaluation in Year 3 of the strategy. Make changes to the strategy as identified in the evaluation.

	<ol style="list-style-type: none"> 7. Highlight / report on findings at sub-sector and industry wide levels. 8. Make changes or modifications to evaluation framework and metrics as required (to reflect emerging issues/new focus).
Participants	Human Resources Committee / Organizing Body, Industry/Employers, Consultant
Audience	Industry stakeholders
Immediacy	Year 1 – Q2/3 onward, with annual review of results

6. Timeline

The timeline below outlines implementation of the deliverable activities listed in this report. This timeline is articulated under the assumption that project leadership (via a human resources/organizing body as detailed above) has been established and it also assumes that financial support for all activities have been secured. Delay of funding resources could result in significant impact to this timeline, as the deliverables/objectives presented for implementation of this strategy and evaluation framework are interconnected.

Assuming there are no foreseeable delays to the start of Phase 4, we propose that Year 1 would start in 2019, with some flexibility/adjustments to the quarterly divisions, as required, especially in the early approval process.

Activity Area and Initiative	Year 1				Year 2				Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
HR Strategy Coordination												
Establish an HR Committee/Organizing Body	Develop		Conduct									
Attraction and Recruitment												
Develop Marketing Strategy to Improve Perceptions of Industry	Develop		Conduct									
Develop Marketing Materials and Conduct Outreach Promotion			Develop		Conduct							
Establish a 'Women in Marine' Initiative			Establish		Conduct							
Retention												
Development of an Incentive Program to Retain Workers in the Sector			Establish		Conduct							
Benchmarking Strategy Implementation Plan Activities												
Benchmarking and Measurement of Results of Strategy/Implementation			Develop		Conduct							

Appendix A – Industry Context for Strategy

The key findings from the 2017 BC Industrial Marine Sector LMI Study are described below.

The Industrial Marine Sector currently comprises an estimated 20,169 workers

- ➔ Sector employment is highest in the Lower Mainland/Southwest (64%) and Vancouver Island/Coast (31%) regions of the province. The North and Interior regions of BC consist of (5%) of the workforce.
- ➔ Industry sub-sectors are of relatively similar size (exception: ocean science and technology).
- ➔ Over half of workers employed by the sector hold Professional/Technical or Skilled/Trades credentials (65%).

The Industrial Marine Sector workforce is aging and has relatively few female and Aboriginal workers

- ➔ One in four workers in the Industrial Marine Sector workforce is 55 years of age or older (23%).
- ➔ 84% of management teams across the sector will retire by 2027.
- ➔ 87% of the sector is male. Women employed in the sector are typically employed in administrative/support roles.
- ➔ 3.3% of the sector's workforce is Aboriginal (representative proportion is 5.3%).

The current job vacancy rate for the industry is 4.9%, much higher than the provincial vacancy rate for all industries (3.2%)

- ➔ There are currently an estimated 1,048 vacant positions in the Industrial Marine Sector.
- ➔ Vacancies are highest in the small craft marine sub-sector (10% vacancy rate).

Industry demand is expected to result in an additional 5,456 jobs for the sector by 2027

- ➔ All sub-sectors are expected to demonstrate positive growth between 2017 and 2027.
- ➔ Marine industrial services and small craft marine sub-sectors are expected to outperform growth in the province across all industries (3.9% and 3.0%).
- ➔ In-demand jobs projected to result in the most number of openings in the coming decade are: project managers (754), welders (534), and fabricators/fitters (514).

The retirement rate in 2017 for the Industrial Marine Sector is 4.8%, more than double the BC average of 2.3%

- ➔ In 2017, 967 Industrial Marine Sector workers will retire.
- ➔ 10.5% of all workers in management positions will retire by the end of this year.
- ➔ By 2027, almost 40% of the current workforce will have retired.

Over the next 10 years, 82.1% of the workforce will need to be replaced if the sector is to keep up with projected growth

- ➔ An estimated 16,559 job openings are projected in the Industrial Marine Sector through 2027 – an average of 1,660 jobs each year.

89% of employers stated that a challenge in hiring new workers is the lack of qualified candidates

- ➔ Employers tend to source their labour locally, with national and international labour not currently used to fill job openings.
- ➔ Of the in-demand occupations, a number of engineering occupations were rated by employers as the hardest to hire. Commissioning engineers, power engineers, process control engineers and automation engineers all ranked in the top 5 hardest-to-hire positions.
- ➔ Sandblasters were ranked least difficult to hire.

Employers identified competition with other sectors (oil and gas; construction) and low wages as the main retention challenges

- ➔ Employers identified the following recruitment barriers: job security; employment conditions; cost of living; and general lack of awareness of the Industrial Marine Sector.
- ➔ Youth identified the following recruitment barriers: lack of awareness of the Industrial Marine Sector; lack of brand recognition; stigma of trades jobs.
- ➔ Interesting work was rated by youth as the most important job quality related to attraction.

Employers agree that the Industrial Marine Sector is not well supported by today's education and training programs

- ➔ Small craft marine, marine products and marine professional services sub-sectors appear to be the most dissatisfied with current education and training programs.
- ➔ Ocean science and technology employers are satisfied with the current internship/co-op opportunities.

Appendix B – Sub-sector LMI Study Key Findings & Recommendations

To allow for discussions regarding strategies that may be viewed as more ‘sub-sectors specific,’ workshops were grouped into the six (6) sub-sectors identified in Phase 1 of the program. Within each roundtable consultation, time was allocated to discuss the key findings and possible strategy options for that particular sub-sector.

A summary of the key findings alongside possible strategy options for each sub-sector that were discussed are described below. Strategy options in italics were added during the consultation groups for these sub-sectors.

SHIPBUILDING, REFIT, AND REPAIR	
New construction, modernization, conversion, maintenance, in-service support, barge fabrication and repair and industrial fabrication.	
Key Findings	Possible Strategy Options
<ul style="list-style-type: none"> • Older workforce/retirement • 73% of current workforce will need to be replaced by 2027 • 8% female employees versus 13% for the industry as a whole • Employers report limited numbers of qualified candidates interested in the sector • Employers report competition from other sectors as a barrier 	<ul style="list-style-type: none"> • Succession planning • Attraction/sector promotion across all demographics • Apprenticeships/Essential Skills/Entry Level Trades Training • Co-op/internship/mentorship programs • <i>Accommodation strategy to offset cost of living near shipyards</i>

MARINE PROFESSIONAL SERVICES	
Marine engineering, naval architecture, marine law, marine consulting, software development and sales, as well as education and training around industrial marine activities.	
Key Findings	Possible Strategy Options
<ul style="list-style-type: none"> • Older workforce/retirement • 70% of current workforce will need to be replaced by 2027 • Employers report limited numbers of qualified candidates interested in the sector • Employers report competition from other BC Marine employers as a barrier 	<ul style="list-style-type: none"> • Succession planning/ <i>Knowledge management strategy</i> • Attraction/sector promotion across all demographics • Greater use of co-op/internship programs • Better linkage with post-secondary education institutions to promote the sector • <i>Encourage older workers to offset retirement</i>
SMALL CRAFT MARINE	
Construction of all recreational, pleasure, and small commercial or government craft including rigid hull inflatables and submersibles. Also includes all boatyards, marine repair facilities, chandleries, and yacht brokerages and marinas that also do repair or maintenance.	
Key Findings	Possible Strategy Options
<ul style="list-style-type: none"> • 2017 vacancy rate 50% greater than industry rate • 96% of current workforce will need to be replaced by 2027 • Employers report limited numbers of qualified candidates interested in the sector • Employers report competition from other BC Marine employers as a barrier 	<ul style="list-style-type: none"> • Succession planning • Attraction/sector promotion across all demographics • Apprenticeships/Essential Skills/Entry Level Trades Training • Co-op/internship/mentorship programs • <i>Industry-led training</i> • <i>Business management training</i> • <i>Coordinated job board for prospective employees</i>

MARINE PRODUCTS	
All products that have a marine application and are used by companies in the Industrial Marine Sector.	
Key Findings	Possible Strategy Options
<ul style="list-style-type: none"> • Older workforce / retirement • 82% of current workforce will need to be replaced by 2027 • Employers report limited numbers of qualified candidates interested in the sector • Employers report competition from other sectors as a barrier 	<ul style="list-style-type: none"> • Succession planning • Attraction/sector promotion across all demographics • Apprenticeships/Essential Skills/Entry Level Trades Training • Co-op/internship/mentorship programs • <i>Move away from traditional approaches to the marine industry (re-branding)</i>
OCEAN SCIENCE AND TECHNOLOGY	
Research instrumentation, autonomous and piloted underwater vehicles, cabled observatories, “smart” buoys, marine acoustics, and marine renewable energy.	
Key Findings	Possible Strategy Options
<ul style="list-style-type: none"> • Employers report limited numbers of qualified candidates interested in the sector • Employers report competition from other sectors as a barrier 	<ul style="list-style-type: none"> • Attraction/sector promotion • Greater use of co-op/internship programs • Better linkage with post-secondary education institutions to promote the sector

MARINE INDUSTRIAL SERVICES

Construction and repair of port and marina infrastructure, marine renewable energy infrastructure, commercial diving and remotely operated underwater vehicles, underwater repair and underwater surveys, dredging, and pile driving.

Key Findings	Possible Strategy Options
<ul style="list-style-type: none"> • Older workforce/retirement • 94% of current workforce will need to be replaced by 2027 • Employers report limited numbers of qualified candidates interested in the sector • Employers report competition from other sectors as a barrier 	<ul style="list-style-type: none"> • Succession planning • Attraction/sector promotion across all demographics • Apprenticeships/Essential Skills/Entry Level Trades Training • Co-op/internship/mentorship programs • <i>Removal of barriers for entry of new employees (immigration programs, union controlled training and placement)</i>

Appendix C – Consultation Findings

SCHEDULE OF CONSULTATIONS

As part of phase 3 of ABCMI’s Sector Labour Market Partnership (SLMP) program, six stakeholder workshops were organized to facilitate consultations with all six sub-sectors in BC’s Industrial Marine sector. The primary focus during phase 3 of this research is strategy building and sustainability planning, thus it was of significant importance to the strategy that stakeholder feedback was collected and included in the draft strategy to ensure industry input and influence in the research.

SUB SECTOR	WORKSHOP DATE	WORKSHOP LOCATION	NUMBER OF PARTICIPANTS
SHIPBUILDING, REFIT & REPAIR	August 21 st 2018	North Vancouver, BC	7
SMALL CRAFT MARINE	June 28 th 2018	Sidney, BC	5
MARINE PRODUCTS	August 22 nd 2018	Richmond, BC	7
OCEAN SCIENCE & TECHNOLOGY	June 26 th 2018	Victoria, BC	7
MARINE INDUSTRIAL SERVICES	August 23 rd 2018	North Vancouver, BC	10
MARINE PROFESSIONAL SERVICES	July 17 th 2018	Victoria, BC	6

OVERVIEW OF APPROACH

All roundtable consultations followed the same format in order to maximize comparability between sub-sectors and incorporate key findings into a sector-wide strategy.

Each session had the following structure:

a) Overview

A brief overview of the Sector Labour Market Partnership (SLMP) program; the current phase of the program; and the purpose and objectives of the roundtable consultations.

b) Key HR Challenges

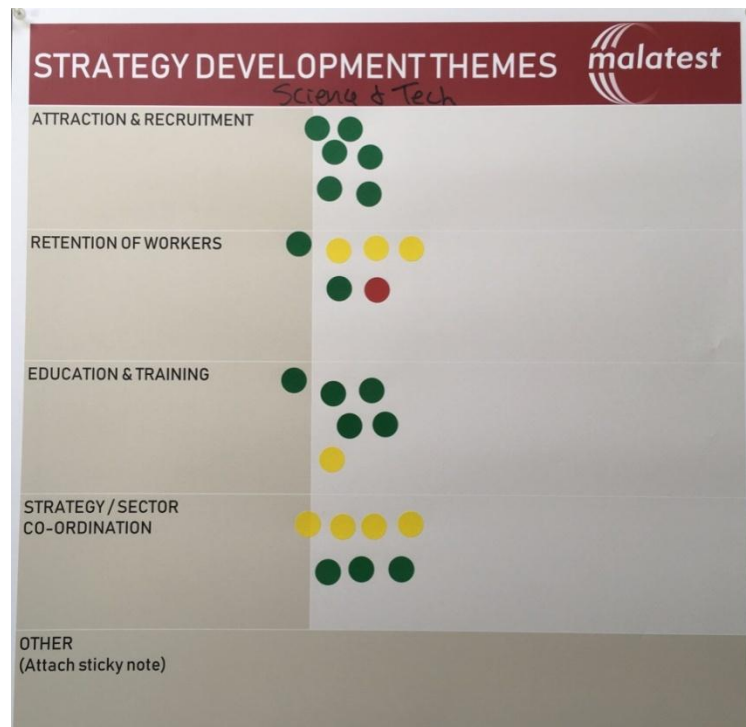
Review findings from the 2017 BC Industrial Marine Sector LMI Study, with special interest given to impending labour shortages in the sector.

c) Strategy Themes

Facilitated in-depth discussion of the strategy development themes that emerged from the recommendations of the 2017 BC Industrial Marine Sector LMI Study, namely; attraction & recruitment, retention of workers, education & training, and co-ordination.

d) Dotmocracy

Activity where participants voted on themes they identified as priority areas for the proposed labour market strategy, using colours dots on a poster board. Green represented a high level of support, yellow represented partial support, and red signified no support for a particular theme.



Example Dotmocracy exercise from the Ocean Science & Technology stakeholder session. Attraction and Recruitment received unanimous support, while Retention of Workers had a very mixed level of support.

e) Discussion of Possible Action Items

Presentation of proposed recommendations to address the human resource capacity challenges for the sector. Discussion centered on the level of support for each recommendation as well as the identification of new/additional options not currently included in this Interim Report.

f) Dotmocracy

Activity where participants voted on recommendations they identified as priority areas for the proposed strategy, using colour dots on a poster board. Blue represented a high level of support, yellow represented partial support, and red signified no support for a particular theme. In contrast to the first Dotmocracy exercise, blue (high priority) dots were limited to four (4) per participant.



Example Dotmocracy exercise from the Marine Professional Services stakeholder session. Additional recommendations brought forward by the group were included as sticky notes under their associated theme.

g) Evaluation Approach: Stakeholder Preferences

Discussion of key metrics to measure the extent to which the strategy has achieved its objectives, as well as reasonable timelines to expect results from its implementation.

FINDINGS

The first Dotmocracy exercise focused the discussion around, the top priority themes established in the 2017 BC Industrial Marine Sector LMI Study, namely: attraction & recruitment, retention of workers, education & training, and sector/strategy co-ordination.

Table one outlines the level of importance placed on each theme by sub-sector grouping.

“In some ways we feel so far behind that everything is important.”

-Stakeholder, Small Craft Marine

SUPPORT FOR HR STRATEGY THEMES

On the whole, all six sub-sector groups placed a high level of importance on all of the key themes proposed, highlighting the broad range of current HR challenges faced by the Industrial Marine sector.

1. Attraction and Recruitment

‘Attraction and Recruitment’ received the highest level of support and agreement across all six sub-sector groups. All groups highlighted the impending labour shortages due to high levels of retirement over the next ten years coupled with the difficulties attracting qualified candidates to the marine sector. Emphasis was put on consolidating efforts to attract more workers to the sector in both the short and long term to tackle labour market demands. Attraction strategies aimed at targeting underutilized demographics such as women, First Nations and immigrants/new Canadians were discussed along with a general outline for a sector wide strategy to broaden the workforce and labour pool.

We have a very niche industry in BC, career paths aren't clearly defined for high school kids, they aren't aware of what jobs are available in the marine sector – Stakeholder, Marine Products sub-sector workshop

Discussion of attraction and recruitment efforts often centered on immigration policies and programs, and how these programs could be used or improved upon to attract talent outside of local labour pools. Participants noted that in highly specialised and technical occupations, the skill sets are often lacking in domestic candidates. Employers noted that international recruitment efforts have been hindered by several factors including recertification of technical skills to meet Canadian industry standards, security clearances required to work on some marine vessels, and the often cumbersome processes involved with navigating Canadian immigration policies and programs.

New Canadians were also discussed as a demographic that could be tapped into to fill available positions that require on-the-job training and/or apprenticeship opportunities to build their skill set to the particular requirements of in-demand occupations in the industrial marine sector.

Over the last five years we've brought in 150-170 direct full time staff from overseas, and another 500 contractors. We will be bringing in trades folks soon too because we don't have enough access to local talent – Stakeholder, Shipbuilding, Refit and Repair

2. Retention of Workers

Stakeholders discussed how the seasonality of work and cyclical nature of shipbuilding projects often leads to retention challenges. Competition with other sectors that require a high proportion of skilled trades workers also leads to retention issues, particularly the oil and gas industry which pays much higher wages than industrial marine employers.

Another factor that may affect the retention of workers has been the absence of a defined career path to advancement within the industry. There was discussion around whether offering essential skills training or mentorship programs could help employees gain the required skills to advance to management roles and progress their careers rather than leaving the industry due for other roles. Incentives to offset retirement and the establishment of a sector retirement plan were two other possibilities discussed in this theme.

'Retention of Workers' received a high level of importance from all groups with the exception of the ocean science and technology group, who noted having less of a cyclical cycle in their projects and the nature of the tech industry culture being a more stable workforce. As a result, this sub-sector did not see retention issues as high priority.

Given how many people are in that 'retirement within the next 10 years' phase- that's a big chunk of the workforce. Just try to keep them longer could make a substantial difference here. Instead of people retiring at 60 or 65, maybe under this goal, we should think about programs that say we'll be more flexible and allow people to come back when they're not on vacation in Arizona for example. It's short term, but if you get another 5 years out of them, it will help alleviate some of the workforce issues. – Stakeholder, Marine Professional Services sub-sector workshop

3. Education and Training

Discussion of this theme centered on training requirements for entering marine occupations. While most of the sub-sectors can hire from similar labour pools, stakeholders in the ocean science and technology noted that their educational and training needs are notably different than the other sub-sector groups. This difference appears to stem from the nature of occupations in ocean science and technology requiring a university degree or advanced technical skill set. The ocean science and technology sub-sector also does not have apprenticeship training programs, but rather co-op opportunities for fresh post-secondary graduates. The other five sub-sectors noted labour intensive positions and the requirement of trades training or particular certifications to fulfil workforce demands.

The need to establish industry standards for certifications, particular to marine occupations, was emphasized as a way to introduce those undertaking Red Seal trades training to the sector. It was also noted that this theme was of lesser importance to the labour market strategy since the labour pools of other labour intensive industries can be accessed in attracting those with the skills required.

You have to establish industry standards for certification first - develop a set of competencies and standards to build certifications around – Stakeholder, Marine Products sub-sector workshop

4. Strategy/Sector Coordination

Coordination of a HR strategy for all six sub sector groups was an important theme of discussion amongst all stakeholder groups. Some commented that the human resources departments were already overcapacity and there was skepticism that the companies would have the resources to implement such a strategy. It was also noted that there would be difficulties encountered in coordinating a HR strategy across the entire sector without an oversight coordinating body to track progress and lead these efforts.

Due to the diversity of marine occupations across all six sub-subsectors, it was generally agreed that ABCMI was well positioned to take on the role of acting as an organizational body and coordinator of the implementation of the labour market strategy. There was also agreement across the sub-sector group participants that ABCMI would be well positioned to encompass the views and interests of all sub-sectors, and can provide informed representation for the Industrial Marine sector as a whole.

The sub-sectors are so broad and from an economic standpoint, we can't afford to do it on our own – Stakeholder, Small Craft Marine Workshop.

Table 1: Support for Proposed HR Strategy Themes

SUB SECTOR	ATTRACTION AND RECRUITMENT	RETENTION OF WORKERS	EDUCATION AND TRAINING	STRATEGY / SECTOR COORDINATION
SHIPBUILDING, REFIT & REPAIR	✓✓	✓✓	✓	✓✓
SMALL CRAFT MARINE	✓✓	✓✓	✓✓	✓✓
MARINE PRODUCTS	✓✓	✓✓	✓	✓
OCEAN SCIENCE & TECHNOLOGY	✓✓	☒	✓✓	✓
MARINE INDUSTRIAL SERVICES	✓✓	✓✓	✓✓	✓✓
MARINE PROFESSIONAL SERVICES	✓✓	✓✓	✓✓	✓✓

- ✓✓ Very high level of support
- ✓ Moderate to high level of support
- ☒ Not generally supported

SPECIFIC HR ACTION ITEMS THAT SHOULD BE PURSUED

Based on the findings from the Dotmocracy exercise, the top five priority action items are listed below. See Table two for a sub-sector breakdown of priority action items.

1. Establish a Human Resources Committee / Organizing Body

The highest ranked recommendation among the stakeholder groups was the need to establish a human resources committee that acts as an organizational body and coordinator of implementation of the labour market strategy. Although it was not directly proposed to participants that ABCMI should take on this role; stakeholders overwhelmingly agreed that ABCMI was best positioned for this responsibility, given they are an already established association advocating for the sector. Respondents viewed the addition of an organizing body to its mandate would build off current momentum rather than establishing a new organizational body. It was felt that ABCMI is also well positioned to encompass the views and interests of all sub sectors, and can provide informed representation for the Industrial Marine sector as a whole.

Instead of making a new association to strategize/coordinate, let's just promote ABCMI. Everyone is busy on the shop floor; they have no time or interest to join more committees.
– Stakeholder, Small Craft Marine Workshop

2. Develop a Marketing Strategy

Development of a marketing strategy was ranked second overall across the sub-sector groups in importance. There was broad agreement that developing a marketing strategy for the Industrial Marine sector as a whole is a key foundational strategy. It was emphasised that the marketing strategy needs to highlight advanced science and jobs that require technical expertise, as the perception is that the marine industry is not cutting edge in this marketplace, which lessens the appeal of marine occupations to youth and other prospective workers.

Participants discussed various elements of a potential outline for marketing along with specific target audiences. Emphasis was placed on defining the target audiences (youth, skilled trade workers, residents of other provinces, new Canadians) and proper distribution channels.

Stakeholders agreed that the basis of the marketing strategy needs to speak to those with transferable skills working in other industries that aren't necessarily aware that their skill set is applicable to occupations within the marine industry.

On the West coast, a key challenge is competition with other 'cooler' tech companies like Microsoft and Boeing, where they have huge brand recognition. How can we possibly start to counter the appeal of Microsoft? – Stakeholder, Ocean Science and Technology Workshop

Maybe we start with light marketing efforts and if we don't have a good response then focus more heavily on marketing. – Stakeholder, Marine Industrial Services Workshop

3. Develop Marketing Materials and Conduct Outreach and Promotion

Participants thought it was important to start with a broad marketing strategy outline, and then move to a more detailed approach to outreach and promotional efforts. Some stakeholders pointed out that a number of marketing tools and information sources have already been developed (i.e. career pathways) and needs to be better utilized, and disseminated, to the proper channels to distribute target audiences. Participants in both ship building and small craft marine emphasized the importance of utilizing the career path tool specifically as the information is current, and has been developed by industry stakeholders in consultation with the provincial government.

Industry has participated in developing resources with the province under the career pathways program, this information is current and well informed, why isn't this information being more widely used and marketed? – Stakeholder, Shipbuilding Refit and Repair Workshop

4. Retain Existing Workers within the Sector

To alleviate the pressure on attraction and recruitment, it was emphasised that efforts to retain workers need to be expanded and supported. Introducing incentives such as the ability to retire later and/or fostering workplace cultures that are attractive to the workforce and more competitive with those offered by other industry groups. Discussion centered on examples of providing flexible work schedules and providing assistance with cost of living.

Discussion also emphasised the need for marine industry jobs to be better advertised via an integrated job board that emphasises positions known to be in high demand for future workforce needs. In efforts to maintain workers within the sector, retention activities should also be based around sharing labour resources between the sub sectors with high crossover of specific skill sets. This focus on retention would help the identified challenge of workers switching industries.

We need to better describe the opportunities in the marine sector so that when people change jobs they don't jump industry - Stakeholder, Marine Industrial Services sub-sector workshop

5. Establish Women in the Marine Sector Initiative

Stakeholders acknowledged an unbalanced ratio of male/female workers in Industrial Marine. In discussion of this recommendation, participants noted that there has been an increase in women entering into Red Seal trades and apprenticeship programs in other industries, yet this increase in female enrolment of training programs has not translated into an increase in female workers for the Industrial Marine sector. Participants wondered if there are barriers specific to the industry, or

particular sub sectors, that are lessening the attraction of marine occupations. It was recommended that marketing efforts focus on overcoming these barriers via re-branding of the sector and of particular in-demand occupations.¹³

At the University level, there seems to be a high proportion of women going into [STEM] programs and when we advertize for positions, however, we have very few responses from newly graduated women. And I can't explain it. I am curious if there are any hidden barriers that we're not aware of.
– Stakeholder, Ocean Science and Technology Workshop

¹³ Although the rebrand recommendation was suggested by the respondents, the authors acknowledge that rebranding will not address core issues. In order to remove gender barriers in the workplace, efforts should focus on equity at the structural and organizational levels. The proposed strategy will be developed in concordance with these ideas and seek input from subject matter experts in order to be inclusive and forward thinking.

Table 2: Top Priority Action Areas by Sub-sector

ACTION ITEM	SHIPBUILDING, REFIT, AND REPAIR	SMALL CRAFT MARINE	MARINE PRODUCTS	OCEAN SCIENCE AND TECHNOLOGY	MARINE INDUSTRIAL SERVICES	MARINE PROFESSIONAL SERVICES	OVERALL RANKING
1	Develop Marketing Materials and Conduct Outreach and Promotion	Establish a Human Resources Committee / Organizing Body	Establish a Human Resources Committee / Organizing Body	Establish a Human Resources Committee / Organizing Body	Develop a Marketing Strategy	Develop Marketing Materials and Conduct Outreach and Promotion	Establish a Human Resources Committee / Organizing Body
2	Develop a Marketing Strategy	Industry-led Training	Develop a Marketing Strategy	Establish Women in the Marine Sector Initiative	Establish Women in the Marine Sector Initiative	Promote the Value of Apprenticeships to Employers	Develop a Marketing Strategy
3	Retain Existing Workers within the Sector	Develop and Deploy an immigration Recruitment Plan	Retain Existing Workers within the Sector	Develop a Standardized Industry Certification for High Demand Occupations	Invest in Local Sources of Labour	Retain Existing Workers within the Sector	Develop Marketing Materials and Conduct Outreach and Promotion
4	Establish a Human Resources Committee / Organizing Body	Business Management Training	Develop an Integrated 'Career Path' Strategies	Develop Marketing Materials and Conduct Outreach and Promotion	Develop an Integrated 'Career Path' Strategies	Establish a Human Resources Committee / Organizing Body	Retain Existing Workers within the Sector
5	Accommodation Strategy	Promote the Value of Apprenticeships to Employers	Promote the Value of Apprenticeships to Employers	Invest in Local Sources of Labour	Retain Existing Workers within the Sector	Knowledge Management Strategy	Establish Women in the Marine Sector Initiative

EVALUATION FRAMEWORK

The workshop concluded with discussion around identifying metrics that would enable the sector to evaluate the impact of the labour market strategy in achieving its objectives. Evaluation measures and timelines were proposed for reviewing the strategy's impact post implementation. The following ways in which to measure the effectiveness of the labour market strategy were reviewed and considered:

The strategy is working if there is considerable support/ "buy-in" from employers

Potential Measures:

- Number of employers who join ABCMI
- Number of employers who provide resources (i.e. in-kind, direct contributions) to identified HR initiatives
- General support for the strategy as measured in a future employer survey

The strategy is working if some/all of the recommendations supported through the study are fully/partially implemented in three (3) years

Potential Measures:

- A review of the state of implementation of the recommendations in 3 years time
- Employer perceptions of the impact of the recommendations as measured in a future employer survey

The strategy is working if we see improvements in key human resources metrics

Potential Measures:

- Reduction in the vacancy rate (number of unfilled positions)
- Increase in apprenticeship / co-ops / internships
- The sector becomes more inclusive and diverse
- Increase in the proportion of females and indigenous people in the marine workforce
- Employer adoption and pro-active HR strategies including succession planning
- The sector increases the number of qualified workers in the sector
- Coordination efforts are decreasing concerns of employers obtaining workers
- Employees are being retained by the sector while advancing in their careers.

Stakeholders across all the sub-sector workshops agreed that the evaluation measures presented were effective metrics for reviewing the progress/success of the strategy. It was generally perceived that some HR improvements should be actionable right away and yield results within 3-5 years time.

CHALLENGES

Workshops were initially scheduled for late June / early July, with three taking place in Victoria BC and the other three taking place in Vancouver (North Vancouver and Richmond, respectively). A significant level of effort was undertaken to engage stakeholders to attend and participate in the workshops that aligned with their company's sub-sector grouping. The summer scheduling proved a barrier to attendance, with many employers noting that it was their busiest time of year, and although there was an interest in the research, they simply couldn't spare the time. The initial workshop schedule was revised to allow additional time to undertake recruitment efforts and ensure attendance at the sub-sector workshops.

Over 900 companies across BC were contacted in the workshop recruitment segment of the project, by way of both telephone and email invitations. When contacts were not reached, or requested a call back at another time, additional follow up was undertaken to ensure all stakeholders had the opportunity to participate. Stakeholders were also engaged through continuous email contact and communication with a member of the research team who spoke with them about the importance of the research and strategy goals, with conversation centering on discussion of the various issues and challenges facing BC's Industrial Marine sector. This continuous engagement with stakeholders fostered a greater interest and awareness about the labour market challenges facing the sector, and helped to develop a commitment to participation.

Appendix D– Potential Funding Sources

Program	Objectives	Website
Labour Market Partnerships Program	Proposed activities must focus on an identified labour market issue and be assessed as likely to have a positive impact on the labour market. All activities must involve partnership. Within these parameters, a Labour Market Partnership (LMP) agreement may support activities related to human resource planning and labour force adjustment.	https://www.workbc.ca/Employer-Resources/Funding-and-Programs/Sector-Labour-Market-Partnerships.aspx
Western Diversification Program	Provides grants for business development, community economic development and policy, advocacy and coordination, including a number of partnership programs undertaken with other levels of government.	http://www.wd-deo.gc.ca/eng/home.asp
Skills Link	Client-centered program that provides funding for employers and organizations to offer eligible activities to youth facing barriers to employment.	http://www.servicecanada.gc.ca/eng/epb/yi/yep/newprog/skillslink.shtml
Union Training and Innovation Program	Aims to address barriers that prevent key groups, such as women and Indigenous people, from succeeding in the trades. This program also provides funding for cost-shared purchases of equipment and materials for apprenticeship training.	https://www.canada.ca/en/employment-social-development/programs/union-training-innovation.html

The Human Resources Committee / Organizing Body is encouraged to stay current on funding opportunities available for specific initiatives through organizations such as the Immigrant Employment Council of BC, the Industry Training Authority, and the Resource Training Organization. While these organizations do not offer funding on a standing like those listed in the above table, there are periodically special project funding resources available which may align with the needs of the Industrial Marine Sector.