



NEWFOUNDLAND AQUACULTURE
INDUSTRY ASSOCIATION

AQUACULTURE RECRUITMENT & RETENTION STRATEGY

for Newfoundland and Labrador

November 2018



submitted by:



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NL AQUACULTURE INDUSTRY RECRUITMENT & RETENTION STRATEGY

Executive Summary

The recruitment strategy was developed through a combination of best practice research, and the findings from the Labour Market Analysis (LMA) and Training Capacity Review (TCR).

LMA/TCR



- Key informant (KI) interviews with stakeholders in the aquaculture industry
- Survey of aquaculture workers
- Site visits
- Secondary research

Key Findings



Retention is not currently an issue.

The reason current workers are in the industry (primarily because it is a chance to live and work in their communities) may not help future recruitment efforts.



Recruitment is not currently a major issue; however, *future recruitment challenges are anticipated.*



As the industry becomes increasingly sophisticated the *demand for skilled and semi-skilled workers will increase* as the industry grows, technology evolves, environmental regulations change, and R&D brings new techniques and practices

RECOMMENDATIONS

1. Create a Positive Profile



Create a unified voice.

Strengthen branding, awareness, promotion, and take advantage of existing resources.

2. Build an Online Portal to Support Recruitment and Learning



Create a centralized source for industry promotion and information.

Provide stakeholder-specific information, tools, and resources.

3. Target Recruitment Efforts



Focus on youth engagement and build a youth engagement activity action plan.

Take advantage of existing employment programs & explore incentives to work in aquaculture.

4. Strengthen Collaborative Processes



Strengthen collaboration between aquaculture businesses, supporting organizations, educational institutions, NAIA, and other stakeholders.

5. Identify Gaps in Social Infrastructure



Identify key areas to develop social infrastructure in rural areas to increase attractiveness to those outside the local area.

INTRODUCTION

In 2014, the Newfoundland and Labrador Department of Fisheries and Aquaculture (DFA) released an updated Sustainable Aquaculture Strategy 2014 – a strategy focused on ensuring the environmental, financial, and social sustainability of the province’s aquaculture sector¹. The 2014 Strategy focuses on sustainable management practices, support capacity, and research and development.

- **Aquaculture Sustainable Management** refers to management practices that “improve the standard of living by protecting human health; conserving the environment; using resources efficiently; and advancing long-term economic competitiveness” (pg. 3), including aquatic animal health management; aquaculture waste management; limiting environmental impacts; waste water treatment; and limiting farmed and wild fish interactions.
- **Aquaculture Support Capacity** includes financial programs, human resources planning, infrastructure, planning, governance renewal and communication. Specifically relevant to this report is the human resource strategy that will address recruitment (including attraction) and retention challenges in the Newfoundland and Labrador aquaculture industry.
- **Research and Development** has several key priorities, including investment, human resources, innovation, fish health strategies, marketing assistance, and governance structures.

Through The Way Forward Cabinet Committee on Jobs, industry and the Provincial Government are collaborating to support economic growth and foster private sector job creation. As part of this work, the Provincial Government and the Newfoundland Aquaculture Industry Association (NAIA) and partners have developed the Aquaculture Sector Workplan.

This Aquaculture Sector Workplan identifies the development of an Aquaculture Attraction and Retention Strategy to address employment issues, strengthen the human resource capacity of the industry, and undertake new initiatives to attract and retain workers. Government of Newfoundland and Labrador has provided funding through the Canada – Newfoundland and Labrador Labour Market Development Agreement to support this initiative.

NAIA has contracted the services of MQO Research in partnership with Training Works to develop an Aquaculture Human Resources Plan, which would include including three components: (a) a labour market analysis (LMA), (b) a training capacity review (TCR), and (c) a recruitment and retention strategy (RRS) – which is outlined in this report.

¹ Department of Fisheries and Aquaculture, Government of Newfoundland and Labrador (2014). *Sustainable Aquaculture Strategy 2014*. Retrieved from: http://www.fishaq.gov.nl.ca/publications/pdf/Sustainable_Aquaculture_Strategy_2014.pdf

BACKGROUND

Newfoundland and Labrador Labour Market Overview

From the most southern coast of the island portion of the province and extending to the far northern tips of the Ungava Bay, Newfoundland and Labrador's population of almost 520, 000 expands across almost 371, 000 km². Of the total population, nearly half (205, 955) reside within St. John's and the surrounding area on the island portion of the province³.

Newfoundland and Labrador currently faces a number of demographic challenges. The average age of the population in Newfoundland and Labrador (43.7 years), is slightly older compared to the national average of 41.2 years⁴. The provincial population is expected to continue aging at a rapid pace with ongoing youth out-migration and declining birth rates. This is particularly true for rural populations, which has the added factor of increased out-migration of people from rural coastal communities to urban areas⁵.

As of October 2018, the top sectors employing Newfoundlanders and Labradorians included: health care and social assistance; wholesale and retail trade; construction; public administration; educational services; and accommodation and food services⁶. The current unemployment rate in Newfoundland and Labrador (12.7%) is the highest among the Atlantic provinces and is more than double the national average (5.8%)⁷.

Historically, the economies of rural communities across the island have been largely dependent on the fishery. However, the 1992 cod moratorium drastically changed the economic landscape of Newfoundland and Labrador, particularly in rural areas of the province. Additional issues such as youth out-migration, urbanization and low birthrates have also contributed to the hardships faced by rural economies in the province. As a result, aquaculture has been a key point of interest for rural economic development.

² Statistics Canada, 2016 Census of Population.

³ Statistics Canada, 2016 Census of Population.

⁴ Statistics Canada, 2016 Census of Population.

⁵ Simms, A., Ward, J. (2017). *Regional population projections for Newfoundland and Labrador 2016-2036*. Retrieved from: https://www.mun.ca/harriscentre/PopulationProject/Population_Projections_for_NL.pdf

⁶ Statistics Canada. Table 14-10-0355-01 Employment by industry, monthly, seasonally adjusted and unadjusted, and trend-cycle, last 5 months (x1,000)

⁷ Statistics Canada. Table 14-10-0287-01 Labour force characteristics, monthly, seasonally adjusted and trend-cycle, last 5 months

Snapshot of Aquaculture in Newfoundland and Labrador

Atlantic Canada is the fastest growing region for aquaculture development in Canada⁸. Newfoundland and Labrador has seen tremendous growth over the past decade in the aquaculture industry, with total value reaching \$276 million in 2016 (an increase of more than 70% compared just one year ago)⁹, with total value up from almost \$14 million in 2000¹⁰. In 2017, aquaculture accounted for 17% of the total fish and seafood production value¹¹.

Currently, the primary species farmed include salmonids (Atlantic salmon; steelhead trout) and blue mussels. There are also a few arctic char farms¹². The majority of licensed aquaculture sites are in Notre Dame Bay (shellfish) and the Coast of Bays Region/Connaigre Peninsula (salmonid/hatcheries), with other sites located around the island's coast.

Through the Way Forward and The Aquaculture Sector Workplan, NAIA and the Provincial Government share a vision of growing the aquaculture industry in the province. Their shared goal of growing aquaculture to 50,000 metric tonnes of salmon and 10,750 metric tonnes of mussels will require an additional 1,100 jobs throughout the province. As a result of the anticipated demand for workers, a human resources recruitment strategy is necessary to cultivate a strong, skilled labour force to ensure the success of this planned industry growth.



⁸ Canadian Agricultural Human Resources Council (2016). Aquaculture Labour Market Forecast to 2025, Retrieved from https://cahrc-ccrha.ca/sites/default/files/files/Labour-Employment/Dairy_reportE_R.pdf

⁹ Fishery and Aquaculture. The Economy 2017. Government of Newfoundland and Labrador. Retrieved from: <https://www.economics.gov.nl.ca/E2017/Fishery.pdf>

¹⁰ Department of Fisheries and Land Resources, Government of Newfoundland and Labrador (2016) Seafood Industry in Review 2016. Retrieved from http://www.fishaq.gov.nl.ca/publications/pdf/SYIR_2016.pdf

¹¹ Seafood Industry in Review 2017, Department of Fisheries and Aquaculture, Newfoundland and Labrador

¹² Manning, F. & Hubley, E. (2015) Standing Senate Committee on Fisheries and Oceans. Volume one – aquaculture industry and governance in Canada Retrieved from <https://sencanada.ca/content/sen/Committee/412/pofa/rep/rep12jul15Vol1-e.pdf>

¹³ The Way Forward on Aquaculture. <http://www.flr.gov.nl.ca/aquaculturesummit/>

DEVELOPING A RECRUITMENT STRATEGY

The recruitment strategy presented in this report was developed through a combination of best practice research, and the findings from the Labour Market Analysis (LMA) and Training Capacity Review (TCR). A series of key informant interviews with employers, educators, and other stakeholders in the aquaculture industry; a survey of aquaculture workers (hatchery workers, growers/harvesters, processors, and other occupations); a series of site visits; and extensive secondary research was conducted as part of the LMA and TCR.

A summary of the key findings from the LMA and TCR:

- Retention is not currently an issue;
- Recruitment is not currently a major issue; however, projected industry growth and future retirements point to *anticipated future recruitment challenges*;
- The reason current workers are in the industry (primarily because it is a chance to live and work in their communities) may not help future recruitment efforts (limited local labour pool to draw from);
- No major knowledge/skills gaps were highlighted among the existing workforce, however, as the industry becomes increasingly sophisticated the *demand for skilled and semi-skilled workers will increase* as the industry grows, technology evolves, environmental regulations change, and R&D brings new techniques and practices; and
- Recruiting workers (1) who are armed with the appropriate skill level (2) will be required to build the necessary human resources capacity to sustain the anticipated industry growth.

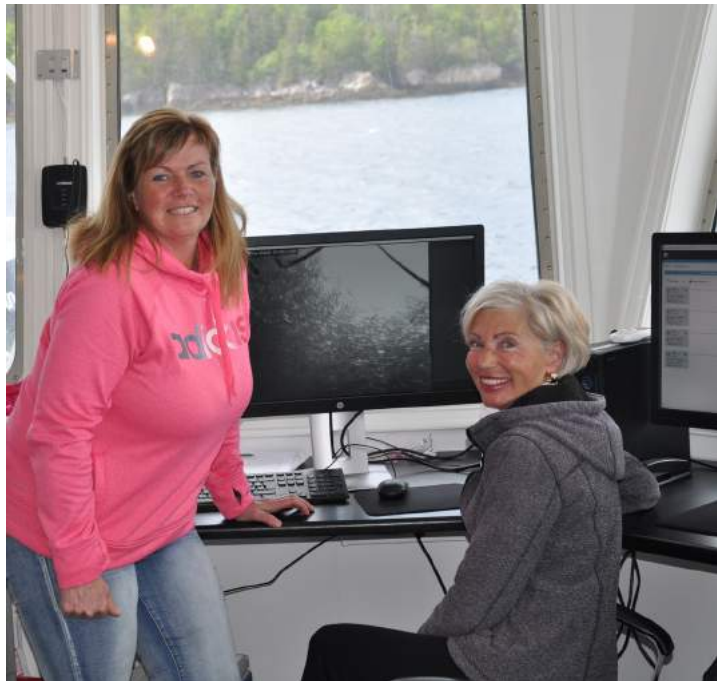
Please see Appendix A for further details on the alignment of the key findings from the LMA and TCR with the recommendations provided in this strategy.

Note on this Strategy

In order for the recommendations from this strategy to be successfully implemented cooperation between various aquaculture stakeholders (associations, businesses, government, etc.) is required. Additionally, these recommendations are intended as long-term recruitment strategies that will address the projected growth of the aquaculture industry (CAHRC¹⁴ estimates that the Canadian industry is expected to require 5,800 workers by 2025¹⁵). As there is some overlap between the recommendations, they can be implemented individually, or taken together as a comprehensive recruitment strategy.

¹⁴ Canadian Agricultural Human Resource Council

¹⁵ Canadian Agricultural Human Resource Council (CAHRC). Aquaculture: Labour Market Forecast to 2025. Retrieved from: <http://www.aquaculture.ca/newsletter-winter-2017-ma2/>



RECOMMENDATIONS

Recommendation 1: Creating a Positive Profile

In order to draw new workers into the aquaculture industry in Newfoundland and Labrador it is key that positive awareness be fostered. A challenge cited in CAHRC’s recent labour market analysis was that young people do not see aquaculture as a career choice and/or have a negative image of the aquaculture industry¹⁶. General negative perceptions of the industry have also been highlighted as a challenge to overcome in CAHRC’s Labour Market Forecast to 2025 for aquaculture¹⁷. It is important that steps be taken to not only increase general awareness of the aquaculture industry, but to also ensure that positive associations are being made consistently in the minds of the public.

Create a Unified Voice: Branding and Public Awareness

There is an opportunity to promote the aquaculture industry in Newfoundland and Labrador to create greater visibility for the industry, highlight its strengths, as well as potential job opportunities to attract new workers into the industry. A strong unified voice for the industry can serve as a tool for attracting potential workers to the industry, attracting new business and investments, and building a positive profile with Newfoundlanders and Labradorians.

As the industry association for the province, NAIA is in a natural position to provide a strong and unified voice for the aquaculture industry in Newfoundland and Labrador. NAIA should consider developing a strategy for the “brand” of Newfoundland and Labrador aquaculture. Furthermore, a public education and public awareness campaign could be used to promote the NL aquaculture brand and help create that positive profile of the industry.



¹⁶ Canadian Agricultural Human Resource Council (CAHRC). Farm Profiles: Practices in Recruitment and Retention in Primary Agriculture. Retrieved from: <http://www.cahrc-ccrha.ca/sites/default/files/files/publications/Farm-Profiles/Marine%20Harvest%20Canada%20Profile.pdf>

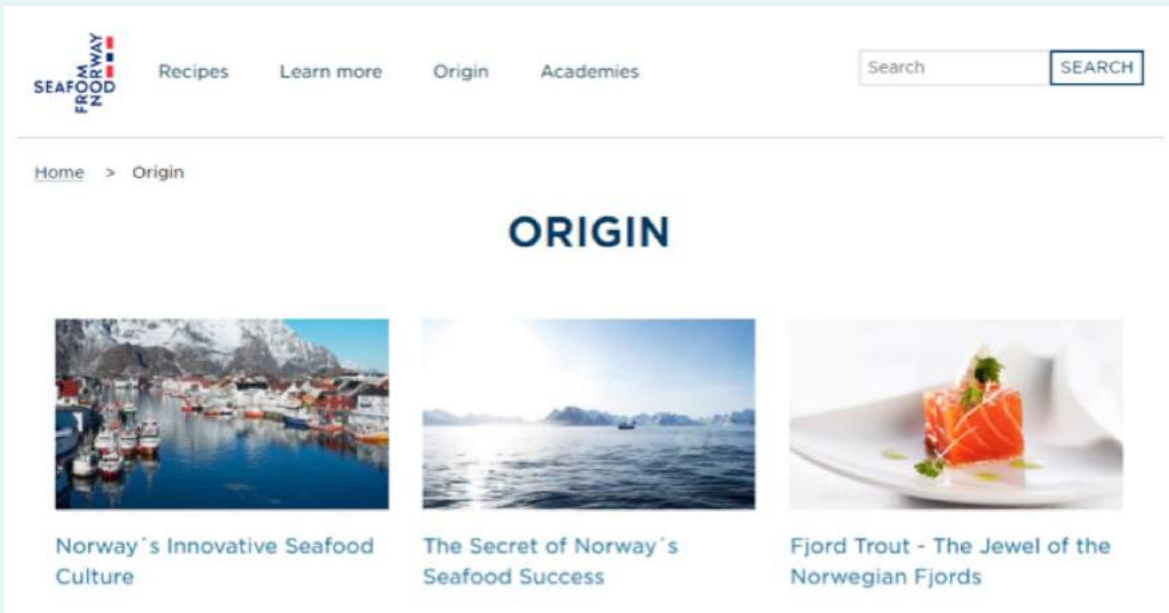
¹⁷ Canadian Agricultural Human Resource Council. Aquaculture: Labour Market Forecast to 2025. Retrieved from https://cahrc-ccrha.ca/sites/default/files/files/Labour-Employment/AQU_reportE.pdf

When considering a unified voice for the aquaculture industry NAIA should look to Norway for inspiration.

Example 1: Norway’s Aquaculture Industry

Norway is the world’s second major exporter of fish and fishery products and eighth in terms of aquaculture production¹. Norway’s aquaculture industry is an applicable example here because of how the industry is promoted. One aspect that quickly becomes apparent when performing a search for Norway aquaculture is that websites for individual businesses rarely appear. Although there are many independently owned aquaculture businesses in Norway, the websites that appear at the top of the search list present a unified “Norway aquaculture” voice.

For example, *Seafood from Norway* is a website dedicated purely to highlighting why Norway’s seafood exports are of excellent quality². The use of a single source also creates a sense of transparency for the industry because there are not multiple sources of information with potentially differing facts.



¹ UN. The state of world fisheries and aquaculture. 2016. Retrieved from <http://www.fao.org/3/a-i5555e.pdf>

² Seafood from Norway. Origin: Why Norwegian Seafood Origin Matters. Retrieved from: <https://fromnorway.com/en-us/origin>

Create a Unified Voice: Website for Industry Promotion and Information

In addition to branding and public awareness work, NAIA should also consider developing a website tailored to promoting aquaculture in Newfoundland and Labrador as a whole. The goal would not be to merely recreate what NAIA’s website already provides, but to be distinctly focused on the job-seeker and used as a major platform for showcasing ongoing corporate social responsibility initiatives.

Example 2: Nova Scotia’s My NS Future

In line with the idea of a unified voice, Nova Scotia elected to put effort into developing a website that acts as a portal for all students seeking a higher education in Nova Scotia¹. This portal provides comprehensive information about the benefits of studying in Nova Scotia, with links for practical concerns such as transfer credits and student loans.

Then, there are easy to find links to individual institutions’ websites. The benefit here is for prospective students who are aware of Nova Scotia, but are unfamiliar with individual universities and colleges.

Similarly, Newfoundland and Labrador aquaculture would benefit from having a central site that makes it easy for job seekers who are not necessarily familiar with the individual businesses and locations to find information and job opportunities.



¹ My NS Future. Nova Scotia’s Higher Education Gateway. Retrieved from: <https://www.mynsfuture.ca/>

One way of ensuring positive associations with aquaculture is to promote companies engaging in corporate social responsibility (CSR) initiatives. CSR refers to *“actions on the part of the firm that appear to advance, or acquiesce in the promotion of some social good, beyond the immediate interests of the firm and its shareholders and beyond that which is required by law”*¹⁸. There is growing research showing that when employees perceive their organization to be socially responsible, they are more engaged at work, which is in turn linked to organizational productivity¹⁹. From a business perspective, consumers are becoming increasingly attentive to CSR. Research has also found that consumers are willing to pay a premium for products coming from CSR initiatives²⁰.

Example 3: Norway’s Seafood from Norway

Norway’s aquaculture industry is an excellent example of engaging in and promoting CSR activities. Alongside advertising the quality of their fishing exports, Norway is environmentally proactive and that fact is emphasized repeatedly. On the *Seafood from Norway* website, there are articles addressing different social issues such as food security, sustainable growth, and dispelling aquaculture myths¹. As well, Norway is dedicated to adhering to the United Nation’s sustainability goals. In a recent document, it is explicitly stated how Norway’s aquaculture goals directly relate to numerous goals of the UN². Due to the country’s public commitment and action taken towards these goals, the UN uses Norway as an example of best practice³, which further builds Norway’s aquaculture reputation as reliable, socially conscious, and of high caliber. It should be noted that Norway achieves this reputation for its aquaculture as an entire country. The same efforts undertaken by only a few companies would never reach the same degree of positive impact for the industry as a whole.

¹ Seafood from Norway. Norway: The World’s Leader in Aquaculture. Retrieved from: <https://fromnorway.com/en-us/origin/Norway-the-worlds-leader-in-aquaculture/>

² Aquaculture 2030: Think globally, act locally. Norwegian Seafood Federation. Retrieved from: https://sjomatnorge.no/wp-content/uploads/2014/04/Havbruk-2030_final_EN_pdf.pdf

³ UN. The state of world fisheries and aquaculture. 2016. Retrieved from <http://www.fao.org/3/a-i5555e.pdf>

If there were to be a website created especially for Newfoundland and Labrador aquaculture, it would be important for similar CSR efforts to be front and center. Especially in the case of targeting youth and students for recruitment, as research has shown that the inclusion of CSR information in job ads significantly increases the attractiveness of an organization to potential millennial applicants²¹.

In addition to a specific website for industry promotion and information, social media (e.g., Instagram, Facebook, etc.) should also be used for industry promotion - especially for engaging youth.

¹⁸ Waldman, D. A., Siegel, D. S., & Javidan, M. (2006). Components of CEO transformational leadership and corporate social responsibility. *Journal of Management Studies*, 43, 1703-1725.

¹⁹ Rupp D. E., et al. (2018). Corporate social responsibility and employee engagement: The moderating role of CSR-specific relative autonomy and individualism. *Journal of Organizational Behaviour*, 1-21. doi: 10.1002/job.2282

²⁰ Lerro, M., et al. (2018). Consumer’s side of corporate social responsibility: A nonhypothetical study. *Journal of Consumer Affairs*, 1-22. doi: 10.1111/joca.12182

²¹ Catano, V. M., & Hines, H. M. (2011). The influence of corporate social responsibility, psychologically healthy workplaces, and individual values in attracting Millennial job applicants. *Canadian Journal of Behavioural Science*, 48(2), 142-154.

Taking Advantage of Existing Resources

For those outside the industry, aquaculture in the province has a limited online presence. Information on businesses, job descriptions, and job opportunities is not readily accessible to job-hunting individuals.

Specifically, for someone who just wants to find general information and job postings for NL aquaculture, there is not a comprehensive website that has compiled that information. And unless the person already knows what private companies exist, it is difficult to find them online (e.g., Cooke, Marine Harvest). Although the ability to locate information online may not deter someone who is purposefully looking for a job in aquaculture, individuals who have a passing interest may be deterred by the lack of information when they could have been enticed to apply if the information were easy to locate.

There are, however, existing resources that could be used immediately to relay information without a large expenditure of resources. For example, CAHRC has a dedicated aquaculture information page where interested persons may read basic information on the types of jobs available in the aquaculture industry²². It would be beneficial if further information was added to the page as it currently only discusses finfish production. CAHRC’s website is easy to navigate and is a central destination for all Canadian aquaculture, other forms of agriculture, and related industries. Therefore, any information hosted there would benefit the entire aquaculture industry.

The Aquaculture Association of Canada (AAC) has an “employment opportunities” page where industry businesses from any province may list any open positions²³. The benefit of this website is the ease with which an individual can search based on position, location, and type of work (e.g., full-time, part-time). In addition, it is already being used by many Canadian aquaculture-related organizations but at this time there were no job postings for Newfoundland and Labrador on the website.



²² Aquaculture. Job Information and Tools. Canadian Agricultural Human Resource Council. Retrieved from: <https://cahrc-ccrha.ca/tools/agrijobs/aquaculture>

²³ Employment Opportunities. Aquaculture Association of Canada. Retrieved from: <http://aquacultureassociation.ca/jobs/>

Recommendation 2:**Build an Online Portal to Support Recruitment and Learning**

In addition to having an online presence for promoting NL aquaculture's priorities and social responsibility as an industry, it would be beneficial to have an online presence dedicated to current and prospective workers in aquaculture.

Learning/Information Management Portal:

an online resource that is a compilation of all existing information, links, courses, etc. regarding NL aquaculture that is tailored to the needs of different interested groups.

The learning/information management portal could be easily accessed via a link on the NL aquaculture promotional website (discussed in Recommendation #1). The portal is envisioned as a comprehensive compilation of industry information and learning resources that can be customized to different stakeholder groups.

The following are suggestions for different target groups.

Students and Youth

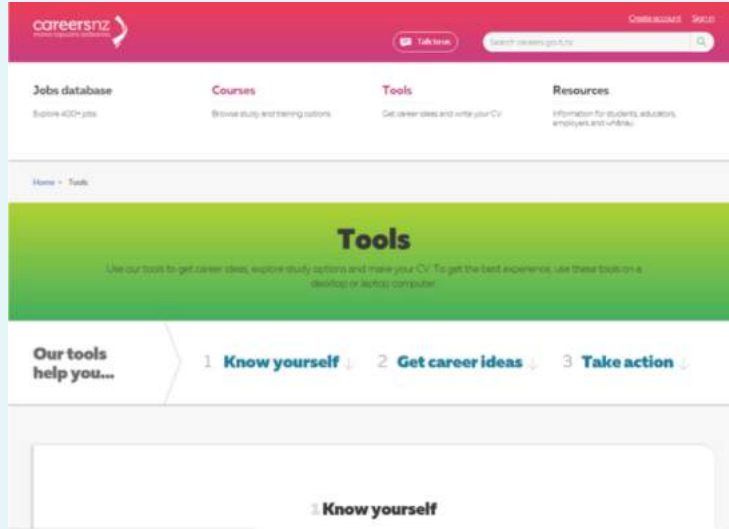
Youth are the future of all organizations and industries. It is therefore critical to capture the interest of students who will be graduating high school in the near future and entering the workforce or attending post-secondary institutions.

The youth section of the learning/information management portal would focus on educating youth who are interested in learning more about the opportunities available in aquaculture in a fun and engaging way. This could include YouTube™ videos, animations, outside links, information presented in infographics, etc. An interactive element could also be included. For example, the Government of Canada has a '*Career Navigator*' dashboard where individuals can create accounts and take quizzes to get recommendations for different occupations²⁴. The limitations of the *Career Navigator* website, though, are that it is difficult to find and does not do a great job of combining the results from the individual quizzes, resulting in fairly limited job recommendations. New Zealand has a similar website to the Government of Canada's *Career Navigator* website, but it is better constructed to attract youth.

²⁴ Plan your career with the Career Navigator quizzes. Government of Canada. Retrieved from: <https://www.jobbank.gc.ca/quizhome>

Example 4: New Zealand’s “careersnz”

The New Zealand site careersnz¹ is easy to navigate, colourful, and uses a lot of images. There is a dashboard that students can log into and complete career quizzes, but there are more features (e.g., skill matcher, career checker, compare study options, CV builder). There is also a dedicated page with different options for educators and employers².



¹ Tools. careersnz. Retrieved from: <https://www.careers.govt.nz/tools/>

² Resources. careersnz. Retrieved from: <https://www.careers.govt.nz/resources/>

NAIA could use a similar model of integrating and presenting information, career paths, and education options specific to the aquaculture industry – useful to both students exploring career options and job-seekers looking for more specific information.

Employees

The learning/information management portal could also have a dedicated location for information useful to current employees of the aquaculture industry as well as job-seekers. It would begin as a place for NAIA to curate resources and links that would be beneficial to current employees, i.e., educational resources, existing college/university programs, how to get required certifications and more.

Initially, the purpose would be to promote existing resources and to centralize them, so it is easier for employees to access. In the future, however, NAIA could expand the portal to include actual training courses and online certifications for employees to complete. NAIA could pursue collaboration with Memorial University or the Aquaculture Association of Canada to organize official courses and certificate programs for employees to complete online. The Fish Site, a website dedicated to aquaculture news and industry developments, has a partnership with the University of St. Andrews in Scotland to offer full degrees in aquaculture online²⁵. With these two efforts, both recruitment and retention would be supported through professional development opportunities which are appealing to employees and job-seekers alike.

²⁵ Sustainable Aquaculture Online Courses. University of St Andrews. The Fish Site. Retrieved from: <https://thefishsite.com/learn>

Employers

One important function for an employer section of the online portal would be to enable the tracking of employee's progress in online courses and training. There are online learning resources such as SmartForceNL, powered by CoursePark®, which according to their website allows businesses to “assign, manage and track learning for employees, partners and customers”²⁶. Other possible solutions include iSpring Suite, Articulate Storyline, SkyPrep, Traineaze, and Shelf – some of the top-rated training software on Capterra²⁷. NAIA could choose to take advantage of an already existing product or develop a unique learning portal for aquaculture specifically.

Other employer-related information that would be beneficial for recruitment and retention would be up-to-date opportunities for collaboration within the industry. For example, conferences or meetings organized by NAIA, and promotional opportunities like school career fairs – any spaces where aquaculture can be collectively promoted for the benefit of all private businesses.

NAIA could also curate management resources that already exist, such as human resource toolkits provided by Newfoundland and Labrador²⁸ and CAHRC²⁹. A central depository for recent technological developments in aquaculture, relevant policy changes, and industry best practices would also improve the cohesiveness of aquaculture in the province.

Promotion of the Learning/Information Management Portal is Key

The overall key for the successful execution of this recommendation to be successful is promotion. NAIA would need to make an effort to promote the learning/information management portal and its various functions and benefits to private business owners, then to a wider audience of universities, colleges, high schools, etc. If the goal is to develop an easy-to-navigate, targeted, and informative service, there needs to be effort put into making it *the* destination for learning about the aquaculture industry provincially, nationally, and internationally – and the various job opportunities within the industry, including available opportunities in NL aquaculture.

²⁶ CoursePark Learning Networks: Smartforce. Retrieved from: <https://www.coursepark.com/nl/>

²⁷ Capterra is a free Web service owned by Gartner that aims to help businesses find the right software solutions. Training Solutions. Sorted by top-rated. Retrieved from: https://www.capterra.com/training-software/?utf8=%E2%9C%93&users=&sort_options=Highest+Rated

²⁸ The NL HR Manager. Retrieved from: <http://nlhrmanager.ca/>

²⁹ AGRI HR Toolkit. Canadian Agricultural Human Resource Council. Retrieved from: <https://hrtoolkit.cahrc-ccrha.ca/>

Recommendation 3: Target Recruitment Efforts

As identified earlier, one of the key challenges identified in the labour market analysis is future recruitment. While recruitment is not an immediate concern in the aquaculture industry, this is an anticipated challenge in the longer term.

Recruitment is challenged by a number of factors including the size of the local labour pool (limited by demographic challenges such as an aging population and low birth rate, as well as high rates of youth out-migration, and low rates of immigration) and is exacerbated by competition from other industries. These challenges have resulted in skills shortages in rural areas of Newfoundland and Labrador, and many communities struggle to achieve economic growth.

One strategy to address long-term challenges with recruitment is to focus resources on youth engagement to help create a path from school to work in the aquaculture industry. Youth engagement can be approached through a variety of methods, including utilizing online platforms such as social media, active recruitment at schools and career fairs, and accessing government employment programs. As the aquaculture industry in rural Newfoundland and Labrador grows, making rural areas attractive to youth will be critical to ensure the industry can meet its labour market needs.

In addition to recruitment efforts targeted specifically at youth, these efforts should also be targeted at those employed in other industries and those not currently employed (unemployed or not in the labour force) to ensure the size of the labour pool is maximized. This includes taking steps to ensure the full utilization of the workforce, including those who are *traditionally underrepresented* in the labour force such as women (in some cases), immigrants/newcomers, indigenous peoples, older workers/seniors, individuals with a disability³⁰. Two additional ways to assist recruitment efforts include 1) promoting and helping employers take advantage of existing employment programs and 2) providing incentives to work in the aquaculture industry.

³⁰ Meeting the Skills Challenge: Five Key Labour Market Issues Facing Atlantic Canada. Atlantic Provinces Economic Council. October, 2012. Retrieved online December 4, 2013 from: <http://www.apec-econ.ca/files/pubs/%7BBA615AD5-336A-4448-980F-A121DD036733%7D.pdf?title=Meeting%20the%20Skills%20Challenge%3A%20Five%20Key%20Labour%20Market%20Issues%20Facing%20Atlantic%20Canada&publicationtype=Research%20Reports>

Youth Engagement

Currently, a number of youth-focused programs exist to engage the province's younger population in industries within the province. Youth engagement provides a gateway for businesses, and the aquaculture industry as a whole, to access new workers as the industry continues to grow and new jobs are created. This section outlines current engagement efforts in the province.

Provincial NL Youth Website

Currently, Newfoundland and Labrador offers a website, known as NL Youth, that is dedicated to youth engagement across the province. Their mandate is to:

- Fully engage in all aspects of society in Newfoundland and Labrador;
- Provide opportunities for youth to develop their skills to succeed;
- Support youth in their education and training goals; and
- Provide youth with career and family options in Newfoundland and Labrador³¹.

The key resource offered through this website is the *Youth Engagement Guide* – an online collection of resources intended to help different stakeholder groups engage with youth in a productive and impactful way. A notable part of this resource is that the approach to youth engagement is a multifaceted one that offers tools and resources under the categories of well being, social media, civics and democracy, and entrepreneurship, among others³².

The majority of resources provided through the *Youth Engagement Guide* are links to organizations that can offer information directly to youth. The website is primarily targeted at youth as opposed to industries or businesses. For example, youth interested in leadership and skills development are directed to leadership programs, such as the Cadets, Scouts Canada, Skills Canada, and Vision Youth Leadership. While this can be an excellent guide for youth themselves, there is a gap in that it does not offer dedicated tools and resources that advise industry associations on how they can build their youth engagement efforts to help promote their industry as a viable career choice.

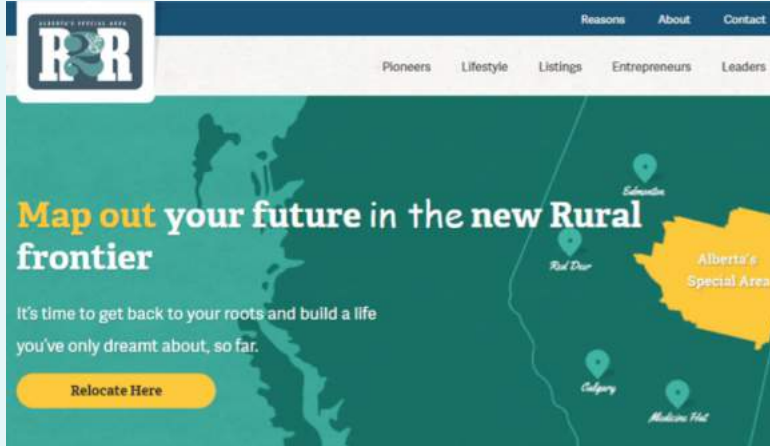
³¹ NL Youth. Retrieved from: <http://nlyouth.ca/about.html>

³² The full list of resources can be accessed at <http://nlyouth.ca/resources/YouthEngagementGuide.html>

Example 5: Alberta's Return to Rural (R2R) initiative

“Return to Rural is a rural development initiative focused on engaging, attracting and retaining youth”¹.

The initiative is focused on promoting rural areas (“Special Areas”) that fall under the Municipal District of Acadia #34 Region². Their official strategy is to *“leverage the internet, social media and advances in communication technology to engage and connect young people with the abundant opportunities now available in Rural Alberta’s Special Area”*.



¹ Alberta's Special Area. R2R. Retrieved from: <https://returntorural.ca/>

² Municipal District of Acadia #34. Retrieved from: <http://www.mdacadia.ab.ca/>

Building upon the NL Youth Initiative - Promoting Rural Living

One recruitment strategy that has been implemented in other Canadian provinces is a rural promotion initiative. The purpose of such an initiative is to promote and inform Canadian youth about the opportunities available in rural Canada. Although still in its development stages, one example of a rural promotion initiative is the Return to Rural (R2R) initiative in Alberta.

The premise of a rural promotion website would be to have a “one stop shop” through which individuals can find out about their options when considering living in rural Newfoundland and Labrador. This would include information such as employment opportunities, accommodation options (e.g., buying versus rental options in the area), as well as resources and contacts for additional support. This website could have a section dedicated to the various key industries in rural Newfoundland and Labrador, including aquaculture. If such a website is created, or even added to the existing NL Youth resources, it could become the primary platform through which young Canadians can find out about primary industries in rural Newfoundland and Labrador, such as aquaculture. This source would also be linked to the online portal identified in Recommendation #2 so that potential job seekers can readily access additional information about the aquaculture industry, including job postings.

This approach would add another dimension to what the province is already doing through the NL Youth website. First, it would address the issue of out-migration by promoting the province’s rural landscape. Showcasing accommodation options could help encourage out of province workers to move to rural communities. Additionally, creating a section dedicated to showcasing the province’s industries (like aquaculture) can help spread knowledge about the industry and its future in Newfoundland and Labrador.

HR Manager Toolkit

Currently, the Government of Newfoundland and Labrador has a toolkit that offers free and accessible guides and templates for Human Resources (HR) practices. This is offered through *NL HR Manager*, which can be accessed here: <http://nlhrmanager.ca/>. The toolkit is divided into seven sections, with each section offering a number of documents, templates and resources that local businesses can use for their HR activities. The table below summarizes the *NL HR Manager's* downloadable toolkit.

Section	Example Documents
The Basics of HR Templates	<ul style="list-style-type: none"> Employee Handbook Template Performance Review Template
General HR Topics Templates	<ul style="list-style-type: none"> Employee Survey Template Sample Harassment Complaint Form
Hiring Templates	<ul style="list-style-type: none"> Job Description Template & Guide Letter of Offer Template
Compensation and Benefits Templates	<ul style="list-style-type: none"> Going Rate Review Template Template Schedule of Pay
Managing Workplace Diversity Templates	<ul style="list-style-type: none"> Diversity Awareness Personal Bias Worksheet Sample Diversity Policy
Training and Professional Development Templates	<ul style="list-style-type: none"> Individual Development Plan Template Provincial Post-Secondary Offerings List
Social Media Marketing Plan Templates	<ul style="list-style-type: none"> Part 1: Getting to Know and Understand Social Media Part 2: Planning and Implementing your Social Media Part 3: Social Media Marketing Tactics

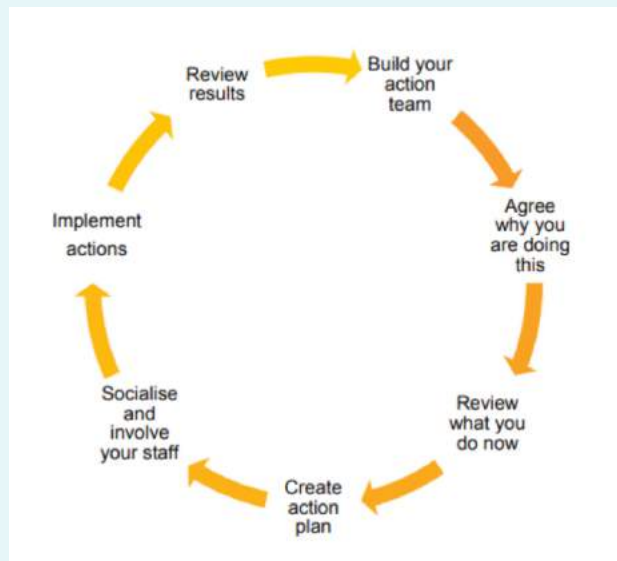
Building upon the HR Manager Toolkit – Tools for Recruitment Strategies

One aspect of HR management that is missing from this initiative is offering tools for recruitment strategies. The services offered through the NL HR Manager initiative do not address recruitment, although it is an integral aspect of HR. Offering recruitment tools can provide businesses and industry associations, such as NAIA, with ways to attract build their recruitment pool – particularly with youth. An example of a youth engagement toolkit is described in detail below. This toolkit represents a best practice example of how a recruitment pool can be built over the long-term.

Example 6: New Zealand’s Employers’ Toolkit

In 2017, the Government of New Zealand developed an Employers’ Toolkit¹ that outlines steps to engage with youth. One key benefit of this toolkit is that it is not specific to any particular industry; rather, it is designed to be moulded to fit any industry.

The toolkit itself is engaging and well designed. It provides step-by-step instructions for creating a comprehensive youth engagement platform



¹ Employer’s Toolkit: Engaging with young people. careersnz. Retrieved from: <https://www.careers.govt.nz/assets/Uploads/Employers-toolkit-2017.pdf>

Following New Zealand’s example (see insert *Example 6: New Zealand’s Employers’ Toolkit*), NAIA could work with the provincial government to develop a youth engagement toolkit that is tailored to the aquaculture industry.

The following section illustrates the major steps in how a comprehensive youth engagement platform could be created for the aquaculture industry.

STEP 1: *Why are you doing this?* The important questions to ask during this initial stage are:

- What problems are we trying to solve by attracting youth people to our industry?
- What are our skills needs over the next 5 years?
- What would success look like?

STEP 2: What the Newfoundland and Labrador aquaculture industry is *already doing* with regards to engagement with schools and students:

- What do we do now with regards to youth engagement?
- Which schools have been engaged with so far? What is the success rate of student recruitment in the past 2-3 years?
- What works? What does not work?
- What would make our current methods of youth engagement better?

STEP 3: Develop an *engagement activity action plan*. The priority here is to develop a list of engagement activities that target priority skills areas required for the aquaculture industry. The activities can range from general activities that are intended to create awareness (e.g., classroom presentations, social media, etc.) to activities that are directed towards streamlining students into jobs (e.g., job shadowing or work placements).

If not already doing so, NAIA can work with schools to increase exposure and awareness of the aquaculture industry in the province and the various career possibilities for workers. There are various avenues which could be pursued at different levels in the education system including 1) early exposure to aquaculture in science curriculum in primary, elementary, and junior high; and 2) target youth engagement activities for high school students by engaging with the Department of Education and Early Childhood Development in the development of career and co-operative education as identified under the Education Action Plan.

An example engagement activity action plan is shown below.

Activity	Purpose	Frequency	Target Audience	Internal or External Support Required
Classroom/assembly presentation <i>*Could incorporate into Career Development 2201</i>	To create awareness of the aquaculture industry in NL	1 to 2 times per year	Students in Grades 10 to 12	High school career advisor, industry representatives
Career fair	To pique general interest and increase awareness of aquaculture job opportunities	Once a year	All students in Middle School and High School	School representatives, industry representatives
Job shadowing	To give students an inside look at what a workday looks like	1 to 2 times per year	Grade 12 students	Business owners who are willing to participate
Career mentoring/planning	...	...	...	...
Mock job interviews	...	...	...	...
Resource creation	...	...	...	...
Summer work placements	...	...	...	...
Social media campaign	...	...	...	...

STEP 4: The final step is to **measure engagement success** to gauge whether these efforts are addressing recruitment challenges. Because youth engagement is a long-term recruitment process designed to draw in youth after their schooling, the activities may not be assessed until a few years after their implementation. Important considerations at this stage include:

- How is success being measured for each activity?
- What activities are working? Which ones are not?
- What can be improved for future engagement? What are the improvement actions?

Promote and Help Employers Take Advantage of Existing Employment Programs

A variety of government services and supports are available to support the aquaculture industry in building its labour force. Immigration presents an opportunity for employers experiencing persistent workforce shortages – while historically, immigration to the province has been modest, there are opportunities for addressing workforce gaps through permanent immigration programs (Atlantic Immigration Pilot Program and the Newfoundland and Labrador Provincial Nominee Program), which are easier to navigate than temporary immigration programs. In 2017, over 6,000 internationally-trained individuals settled in Newfoundland and Labrador – while approximately 20 per cent of this share are permanent residents, the remainder are international students and internationally-trained skilled workers who can help address aquaculture industry workforce gaps.³³

As a means of further building its recruitment pool, NAIA can consider offering its member businesses assistance and one-on-one support in utilizing existing government-funded employment programs. Assistance can be offered in a variety of ways, from program promotion and supplying eligibility information, to helping businesses through the process of applying to the programs, and assisting in the hiring process. The following programs are available for aquaculture businesses through the Newfoundland and Labrador Department of Advanced Education, Skills and Labour:

- **Canada NL Job Grant** – partial funding for training costs (new and existing employees);
- **Wage Subsidy Programs** – a variety of programs where employers receive funding to create employment opportunities for unemployed or underemployed individuals, students, recent graduates, apprentices and persons with disabilities:
 - JobsNL
 - Apprenticeship Wage Subsidy
 - Summer Employment Program – High School Students
 - Summer Employment Program – Post-Secondary Students
 - Student Mentorship Program³⁴.

³³ Department of Advanced Education, Skills and Labour.

³⁴ This program provides wage subsidies for employers who are in the agriculture, aquaculture, oil and gas and technology industries. Source: <https://www.aesl.gov.nl.ca/students/mentorship.html>

Provide Incentives to Work in Aquaculture

The province's unemployment rate is significantly higher than the national average (14.5% versus 5.8%)³⁵. One way to assist recruitment is to ensure full participation in the labour force. That means engaging with the untapped workforce in Newfoundland and Labrador, such as those who are traditionally underrepresented in the labour force, and providing them with incentives to work.

Wages are one way to incentivize workers. One point of discussion to be had within the aquaculture industry is to increase the average wage for aquaculture workers to ensure wages are competitive. Wages should also be considered in relation to what would be received through Employment Insurance (EI). Although the labour market analysis conducted as part of this strategy work did not identify challenges with retention, the Newfoundland and Labrador Department of Fisheries and Land Resources' Vision 2018 report³⁶ did find that some organizations face retention challenges due to employees working only a portion of the year to qualify for EI, which can be an impediment to accessing locally available labour. It should also be acknowledged that in some cases, individuals who may be available to work full time with supports in place may be working a partial year because better accommodations may be necessary. As a result, a critical eye should be put to wages for aquaculture work to ensure that compensation is fair and adequate to incentivize workers and that supports are in place for those who may be available for work but may require accommodation.

There are other non-financial incentives to consider. Research suggests that offering supportive family policies increases attraction, retention and job satisfaction. The irregularity of work hours (particularly for seasonal workers in in-shore plants) can complicate the issue of childcare, as parents have to find childcare depending on their shift hours, which may not necessarily be between 9am and 5pm³⁷. The promotion of supportive childcare services (e.g., on-site or subsidized childcare for workers with families, flexible shifts) can help to increase the job satisfaction of workers already in the industry, but also create an attractive workplace culture for potential employees.

³⁵ Which does not include those classified as not in the labour force, which could include discouraged job seekers who no longer actively look for work.

³⁶ Department of Fisheries and Agriculture, Government of Newfoundland and Labrador (2014). *Vision 2018: Sustainable aquaculture development a summary of what we heard: aquaculture consultations*. Retrieved from <http://www.fishaq.gov.nl.ca/publications/pdf/whatweheard.pdf>

³⁷ Cahill & Martland (1993). Retrieved from <http://www.dfo-mpo.gc.ca/Library/166380.pdf>

In addition to incentives targeted at Newfoundland and Labrador's untapped workforce, there are other incentives which could be considered to help attract students to the aquaculture industry. In collaboration with NAIA's membership and post-secondary institutions in the province, there are a number of possible incentives that NAIA could consider which would help recruit students into the aquaculture industry before they graduate from their program. This may include scholarships for post-secondary programs relevant to the aquaculture industry and guaranteed jobs in aquaculture for students graduating from specific programs that are in high demand by industry.



Recommendation 4: Strengthen Collaborative Processes

This recommendation emphasizes the need for, and benefits of, encouraging aquaculture businesses to collaborate with NAIA, each other, and other supporting organizations to strengthen the industry as a whole and provide capacity to address human resources challenges such as recruitment and retention.

Businesses operating in aquaculture in the province, businesses supporting the industry, industry stakeholders, education institutions, trainers, workers, and students were engaged as part of the labour market analysis (LMA) and training capacity review (TCR) feeding into the development of this strategy. In addition to engaging these stakeholders, secondary research, such as jurisdictional reviews and best practice research, was also used to feed into the LMA, TCR, and the development of the Aquaculture Recruitment Strategy for Newfoundland and Labrador. This process has highlighted the importance of information sharing among various aquaculture stakeholders and the opportunity to increase inter-organizational collaboration within aquaculture in the province.

Some level of resistance to information sharing and collaboration among industry stakeholders is not entirely unexpected. One of the concerns raised during the engagement of industry for this project revolved around the competition among private businesses and a resistance to communicating for fear of losing a market advantage (e.g., technology and process sharing). This is an important concern that needs to be addressed. Information sharing and collaboration need to revolve around strengthening the industry as a whole, for all businesses, rather than pitting private businesses against each other in the marketplace.

NAIA, being an organization purely concerned with the health of the aquaculture industry, is in the perfect position to bridge the gap between businesses and other industries (e.g., education). If privately owned companies were able to align around a common vision for developing human resources in the aquaculture industry, improvements would occur significantly faster. The challenge, then, is to encourage an abundant rather than a scarcity mindset regarding the aquaculture market, and to show businesses that a benefit to one is a benefit to all. The Norwegian aquaculture industry described in Recommendation 1 is again an excellent example of the long-term benefits of having a unified front for marketing purposes.

To begin developing a collaborative culture within Newfoundland and Labrador's aquaculture industry, a first step would be to identify efforts that do not put any individual company at a competitive disadvantage. With the expected growth of the aquaculture industry in the province and the anticipated demand for workers increasing over the next ten years – now is the time for human resources planning. The recommendation here is to begin tracking recruitment and retention relevant data which would be beneficial to all businesses in the industry.

Track Recruitment and Retention Data

The success of this initiative is entirely dependent on collaboration between stakeholders in the aquaculture industry (i.e., businesses, education institutions) and NAIA. As part of the information sharing and collaboration between industry and NAIA there are a number of metrics which could be collected, shared, and tracked to inform recruitment and retention efforts industry-wide. It is envisioned that stakeholders (e.g., private businesses) would share some key metrics with NAIA on a regular basis and that NAIA would track this information and disseminate information back to stakeholders to convey the state of the industry. These metrics should be collected as frequently as is feasible. Given constant technological advancements and what is now known about data tracking best practices, taking the pulse of an industry or organization can no longer be justifiably done every 12 months³⁸.

To move this tracking initiative forward NAIA will have to consult with stakeholders to see if they are willing to collect and share the required information. It is envisioned that stakeholders will be contacted periodically (not more than quarterly) and asked to provide key information about human resources/training. To ensure cooperation with stakeholders this process should be quick and efficient, such as filling out a few questions on an online form.

Tracking key metrics would provide an excellent resource for informing recruitment and retention efforts. There are many benefits to data tracking including:

- Performance Measurement: Being able to clearly mark progress, which can be used to get stakeholders on board.
- Efficient use of resources: Highlighting areas to put more effort and resources into that would have the most impact.
- Identifying best practices:
 - helps to inform recruitment and retention practices, leading to a larger, more qualified applicant pool; and
 - helps to inform targeted recruitment efforts, helping to eliminate costs from searching for and training new employees that may end up leaving.

³⁸ Arellano, C., DiLeonardo, A. & Felix, I. (2017). Using people analytics to drive business performance: A case study. McKinsey Quarterly. Retrieved from: <https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/using-people-analytics-to-drive-business-performance-a-case-study>

An overview of possible metric³⁹, proposed sources of information, and suggestion of how frequently to collect each metric is provided in the table below.

Metrics	Possible Sources	Collection Frequency
Number of employees	Employers	Quarterly or Biannually
Number of employees from out of province	Employers	Quarterly or Biannually
Number of current vacant positions	Employers	Quarterly or Biannually
List of current vacant positions	Employers	Quarterly or Biannually
Number of projected vacancies in the short term (next 5 years)	Employers	Quarterly or Biannually
Number of projected vacancies in the long term (5-10 years)	Employers	Quarterly or Biannually
List of positions with anticipated vacancies	Employers	Quarterly or Biannually
List of aquaculture programs in NL	TCR/Educational Institutions	Quarterly ⁴⁰
List of aquaculture programs in NL with co-ops	TCR/Educational Institutions	Quarterly ⁴¹
Number of graduates from each aquaculture program in NL	Educational Institutions (e.g., Marine Institute)	Quarterly ⁴² /Annually
Number of graduates working in aquaculture one year after graduation	Educational Institutions/Trainers	Annually

The aquaculture industry can be more collaborative by sharing key metrics to track recruitment and retention efforts, those metrics can then be combined and insights shared with industry stakeholders, keeping all members aware of how the aquaculture industry is progressing in the province. It is envisioned that NAIA will use the metrics collected and shared by industry to:

- Measure industry growth over time;
- Measure performance of recruitment and retention efforts;
- Identify key trends and/or best practices in recruitment and retention efforts; and
- Identify any gaps in training.

³⁹ Metrics may include, but are not limited to, those identified in the presented table. Collaboration between NAIA and industry will be crucial to determine what information should be tracked and what information can readily be collected and shared.

⁴⁰ Check quarterly with institutions if there have been any additions/changes.

⁴¹ Check quarterly with institutions if there have been any additions/changes.

⁴² For short-term training programs (e.g., March, June, September, December)

This information would be disseminated in aggregate back to industry stakeholders to inform their individual recruitment and retention practices/efforts. This will be overall industry data, not company specific data so that competitive business information is not exposed. This information could be conveyed in a brief industry snapshot focused on human resources that is released on a regular basis (e.g., quarterly or biannually). NAIA could consider adding an industry snapshot to the quarterly release of their Cold Harvester Magazine which would be a natural mechanism to disseminate this information to their members, colleagues, senior officials, academia and other stakeholders. Additionally, the industry snapshot can be publicly available on the online portal (see Recommendation 2) which can be used by students, job seekers, employers, and potential investors to attract to the industry.

Although individual businesses could attempt to track these metrics on their own, NAIA is in a much better position to do so effectively. NAIA is concerned with the health of the aquaculture industry as a whole and is therefore a non-biased entity. Tracking labour market metrics related to Newfoundland and Labrador’s aquaculture industry would be a natural task for NAIA to undertake and then disseminate to the various stakeholders and the general public. NAIA is already in an established position to be the face of Newfoundland and Labrador aquaculture, and just needs greater visibility and backing by private business owners.

Create Structured On-the-job Training

Currently, the industry relies heavily on job-related training for the transfer of skills and knowledge, and while some of that training may be structured and standardized, other aspects of training are unstructured or informal such as job shadowing and mentoring. While unstructured on-the-job training can be very useful to train new employees, it can also compromise the efficiency of production (training may be disruptive to production; training may result in more production waste) and training (focusing on meeting production needs may be a distraction to the training function; supervisors and/or experienced employees providing the training are typically not trained to be a trainer).

An alternative to unstructured on-the-job training is **structured on-the-job training** or SOTJ training. SOTJ training is intentional and purposeful and can be linked to the use of standardized work practices and processes. To develop SOTJ training, a series of written procedures, work instruction packages, and other job aids would need to be created to ensure consistent and standardized training for new employees. As the provincial industry association, NAIA is in the perfect position to lead the development of a SOTJ model for key positions in aquaculture in collaboration with industry.

Collaborate on Student Work Experience

As mentioned previously, one of the key findings from the LMA and TCR is the expectation that the demand for skilled and semi-skilled workers will increase as the industry grows, and as technology evolves, environmental regulations change, and research and development bring new techniques and practices to the industry. Furthermore, it can be difficult for post-secondary institutions to keep pace with technology and industry changes and adjust curriculum accordingly. These factors highlight the importance of including work experience as part of training for the aquaculture industry – and require collaboration between industry and educational institutions.

Two of the main ways that students gain work experience are through apprenticeships and co-op placements. Both apprenticeships and co-ops provide industry experience through work placements but may differ in the timing, duration, supervision, or other factors. Apprenticeship programs typically require logging a certain number of hours to progress through a program and require oversight from a journeyman (i.e., expert in the field) to ensure the skill-level is to a specific standard. Aquaculture apprenticeship programs are available in other jurisdictions, such as the UK.

Example 7: Scotland's Modern Apprenticeship Program

There are more than 70 Modern Apprenticeship Frameworks in Scotland. Each framework is designed around a minimum standard of competence defined by employers through various levels.

Each framework contains:

- A relevant SVQ
- Core skills
- Industry specific training¹

SVQ 4 Aquaculture Management at SCQF level 9

The Scottish Vocational Qualification (SVQ) level 4 in Aquaculture Management at SCQF level 9 allows candidates to demonstrate competence in job-related skills in their particular area of work and expertise.

This qualification covers areas such as managing the aquatic production environment for farmed fish/shellfish, and managing the production of farmed fish/shellfish for sale or transfer. It also covers planning and managing of shellfish depuration operations, implementation of the site fish health plan, fish/shellfish hatchery production, and a variety of operational and managerial units.



¹ A Modern Apprenticeship in Agriculture level 3. Framework Document for Scotland. Retrieved from: <https://www.skillsdevelopmentscotland.co.uk/media/41481/agriculture-level-3.pdf>

² SVQ 4 Aquaculture Management at SCQF level 9 excerpt (insert) from: <https://www.sqa.org.uk/sqa/76765.html>

Collaborate through Engagement

There are a variety of avenues for collaboration between NAIA, industry, and other stakeholders through various engagement activities. Much of this work is ongoing and efforts should be made to continue these important collaborative activities and expand or increase collaborative engagement where possible. Some key opportunities for collaboration through engagement are highlighted below:

Cold Harvester Magazine & Cold Harvest Annual Conference and Trade Show: Both the magazine and annual conference and trade show are key avenues for connection between NAIA, private businesses, researchers and other stakeholders. The magazine provides an opportunity for NAIA to connect with its membership and colleagues, senior officials, academia and other stakeholders to provide updates on NAIA's activities and events, other industry news and events, as well as sharing research, innovative technology, and other relevant information. Similarly, the annual conference and trade show allows for an opportunity for learning (e.g., innovation, research and development, technology, human resources, etc.) and networking between NAIA, private businesses, researchers and other stakeholders. The conference, in particular, provides a real opportunity to build relationships between stakeholders and celebrate progress and growth in the industry. The Cold Harvester magazine and Cold Harvest Annual Conference and Trade Show are important methods for NAIA to engage industry and provide opportunities for industry stakeholders to network, build relationships, and collaborate.

Engaging youth: NAIA should continue to work with industry and other stakeholders to promote and increase awareness of the aquaculture industry by engaging youth in the K-12 system. See Recommendation 3 for further details.

Promoting the industry via social media: Social media channels such as Facebook, Twitter, and Instagram provide an opportunity for NAIA and industry stakeholders to collectively promote the industry. Posting photos and stories can be a useful tool in engaging with the public. Additionally, information can be readily viewed across various sources (e.g., NAIA, aquaculture businesses, general public, etc.) by using a hashtag such as **#nlaquaculture**. For further details on social media use for industry promotion and youth engagement, please see Recommendation 1 (industry promotion) and Recommendation 3 (youth engagement).

Recommendation 5: Identify Gaps in Social Infrastructure

A final recommendation that can be taken into consideration by the aquaculture industry is to support social infrastructure development in Newfoundland and Labrador. In this context social infrastructure refers to the infrastructure needed for communities and regions to be successful and thrive. Investing in strategic infrastructure is critical to the economic progress, growth of a region, and support for recruitment and retention of workers to rural Newfoundland and Labrador.

In collaboration with the provincial government, NAIA can consider proposing a best practice research project to examine what social infrastructure and services are necessary in communities that support the aquaculture industry and innovative approaches to supporting economic growth.. This research can also identify how government, in partnership with industry leaders and organizations can support social infrastructure development in these communities.

Key stakeholders for this research should include representatives from certain government ministries/ departments, the private sector, non-profits, and subject-matter experts/academics⁴³.

⁴³ Strategic Infrastructure: Steps to Prioritize and Deliver Infrastructure Effectively and Efficiently (2012). Retrieved from http://www3.weforum.org/docs/WEF_IU_StrategicInfrastructure_Report_2012.pdf

The key objectives of the best practice research would be to:

1. Identify **key gaps in social infrastructure** in the identified communities;
2. Establish the **connections between lack of social infrastructure and recruitment shortages** within key communities in the aquaculture industry in Newfoundland and Labrador;
3. Identify **best practices in rural social infrastructure development** in other rural communities across Canada

Although the research would identify gaps in social infrastructure specific to drawing workers into specific areas of the province, rural communities across Canada may share some common issues. For example, in rural Ontario, a group of organizations and political groups (e.g., Canadian Federation of Agriculture, Ontario Federation of Agriculture, Rural Ontario Municipal Association) have been lobbying for many years to increase prioritization of improving infrastructure in rural Ontario, with key concerns being *improvements to roads/bridges, and reliable broadband internet for rural businesses*⁴⁴. Lobbyists state that deficiencies in these areas pose threats to economic growth, making it challenging for rural industries and businesses to compete with the productivity and growth of urban areas.

Residents of smaller communities have the same expectations of having modern, reliable, and accessible infrastructure, just as residents in larger urban centers do⁴⁵. Thus, improving the overall accessibility of services to rural communities can, over time, help to curb out-migration and promote economic growth in the region.

⁴⁴ Brantford Expositor. Retrieved from: <http://www.brantfordexpositor.ca/2015/10/15/oct-19-federal-election-infrastructure-gap-is-growing-in-rural-areas>

⁴⁵ Infrastructure Spotlight: Canada's Small and Rural Communities (2012). Retrieved from http://publications.gc.ca/collections/collection_2012/inf/T94-5-4-2012-eng.pdf



CONCLUSIONS

The purpose of this strategy was to offer recommendations to the Newfoundland Aquaculture Industry Association (NAIA) on how to foster growth within the aquaculture industry in Newfoundland and Labrador. The recommendations provided in this strategy address the gaps in the recruitment efforts by providing aquaculture-specific recruitment initiatives that can help grow the industry in the long-term.

First, creating a positive profile of the aquaculture industry will address a key challenge with regards to recruiting new (including out-of-province) workers. It is important that the aquaculture industry in the province has a unified voice and the public has a positive impression of the industry – and that means raising the public profile. Increasing public awareness and promoting the industry will help to highlight its strengths and will allow prospective workers to get an image of what working in the aquaculture industry could be like.

In addition to positioning and branding of the industry to help foster a positive profile, it is also key to have a centralized source for industry promotion and information such as an online portal. This site can serve as both a promotional website, showcasing ongoing corporate social responsibility initiatives, and link to a learning and information management portal dedicated to aquaculture. This portal would provide stakeholder-specific information, tools, and resources for students/youth and job seekers, employees, and businesses. Creation of such a portal would unify all the different segments of the aquaculture industry and provide one place where all stakeholder groups can access the information that is relevant to them.

With regards to targeted recruitment efforts, it is critical to engage youth in this exciting industry to help support industry growth in the long-term. NAIA should take advantage of existing sources to engage with youth (e.g., social media tools; *NL Youth*; *HR Manager Toolkit*), build upon existing sources where necessary, and develop a comprehensive youth engagement activity action plan where success can be measured. Other targeted recruitment methods to consider include promoting and helping employers take advantage of existing provincial employment programs, and offering incentives to work in the aquaculture industry such as higher wages, supportive family policies, and scholarships and/or employment sponsorships for students.

To strengthen the industry for the future, collaboration between aquaculture businesses, supporting organizations, educational institutions, NAIA and other stakeholders is key. To foster more collaboration within the industry, NAIA can collect a variety of metrics with the goals of tracking industry growth, measuring the effectiveness of recruitment efforts, identifying key trends in aquaculture, and highlighting any gaps in training. By disseminating this information to industry stakeholders through a snapshot report, the industry can become more collaborative on achieving its long-term goals. Other opportunities for collaboration include creating a structured on-the-job training model, partnering with educational institutions in developing work experience as part of

student training, and broad-based collaboration with all stakeholders to maximize engagement activities. With regard to skills development, collaboration of key stakeholders will be essential to create a flexible and agile skills development system that is responsive to industry needs. Today, learning occurs everywhere, in the workplace, on-line, in the classroom, from peer networks, etc. and it is becoming increasingly critical that individuals become lifelong learners. Non-traditional partnerships between post-secondary and private trainers, suppliers, employers and industry will be required.

Finally, NAIA should collaborate with the provincial government on studying best practices in social infrastructure and services necessary in communities that support the aquaculture industry and exploring innovative approaches to supporting economic growth. This can help increase the overall attractiveness of re-locating to rural communities.



APPENDIX A

Human Resources Challenges and Recommendations

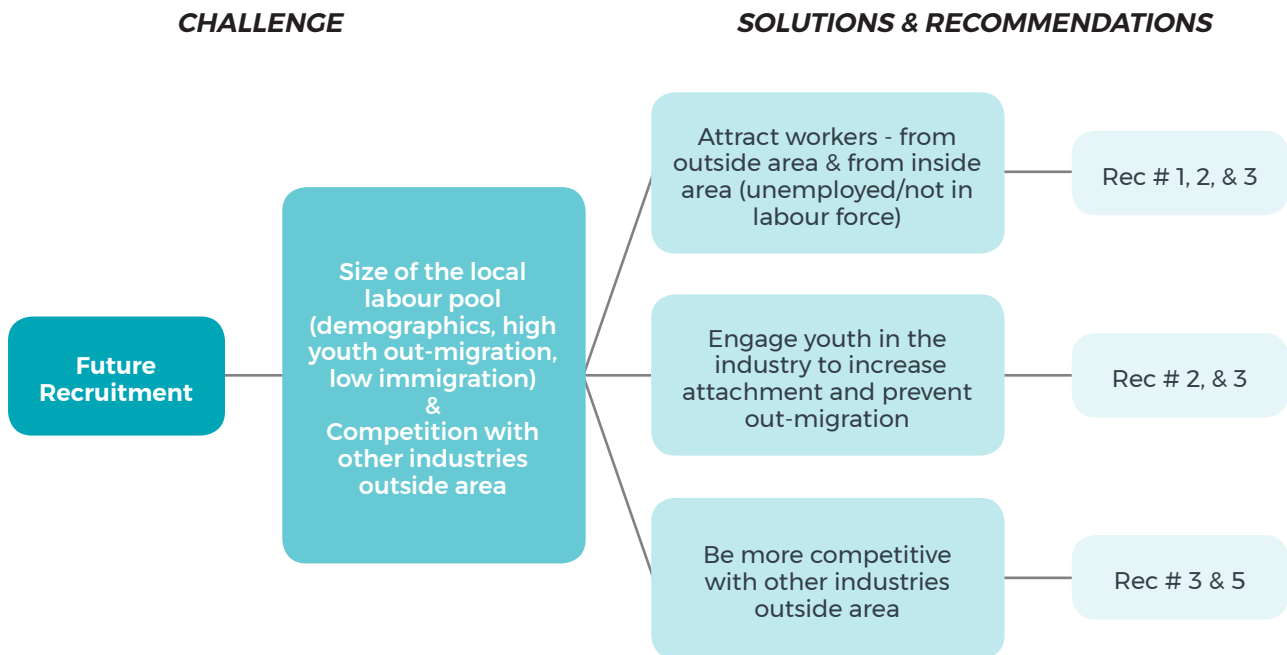
Summary of Recommendations from Strategy

1. Create a Positive Profile
2. Build an Online Portal to Support Recruitment and Learning
3. Target Recruitment Efforts
4. Strengthen Collaborative Processes
5. Identify Gaps in Social Infrastructure

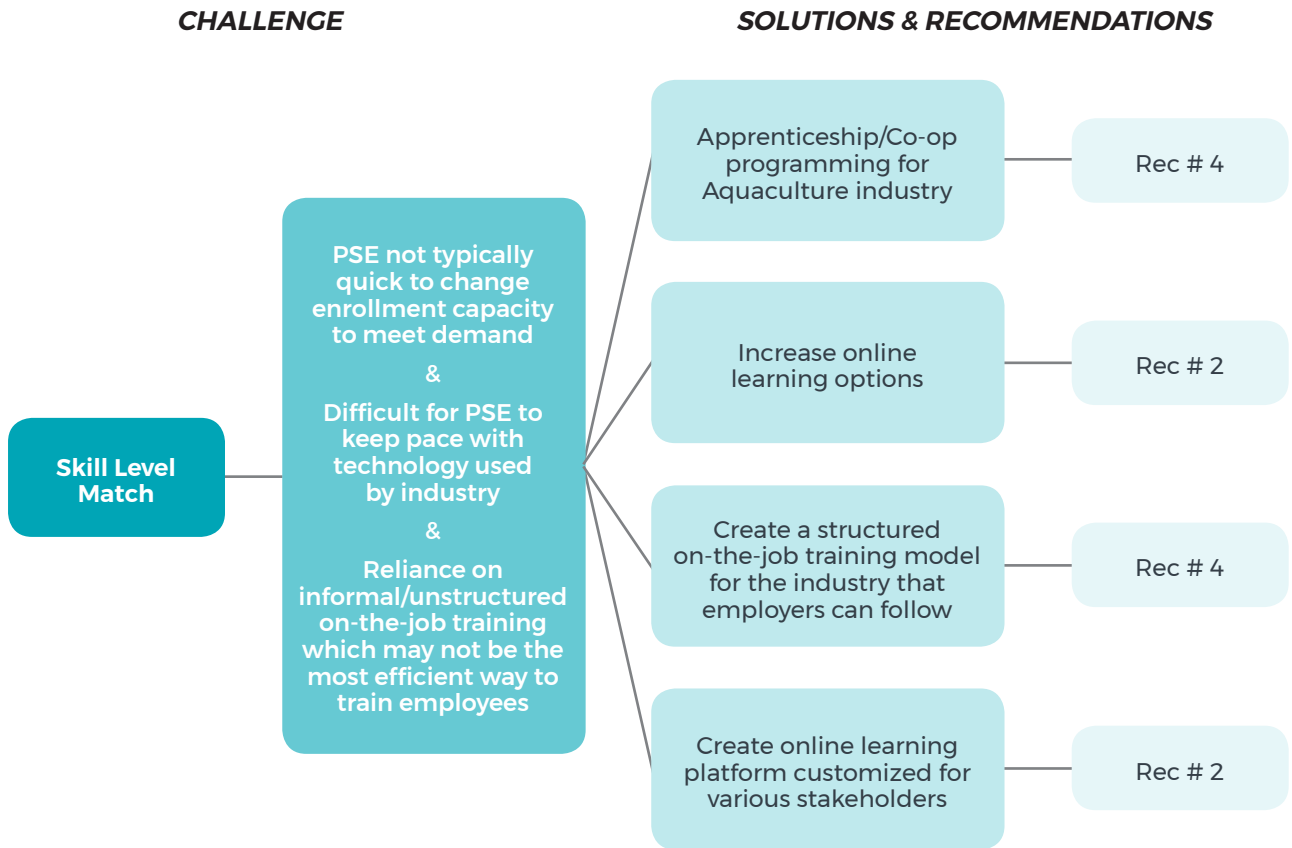
Challenges, Solutions & Alignment of Recommendations

The following graphics identify the two main human resources challenges facing the aquaculture industry in Newfoundland and Labrador, as well as the solutions to address these challenges and the alignment of the specific recommendations in this strategy.

CHALLENGE #1: Future recruitment (general)



CHALLENGE #2: Future demand for workers with appropriate skill level (entry-level, mid-level, management)





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