BC Value-added Wood Products: Workforce Development Implementation 2025

Programming and research conducted by BC Wood Specialties Group

This program is funded by the Government of Canada and the Province of British Columbia.

Executive Summary

Back in 2018, BC Wood, a value-added wood (VAW), sector-led not-for-profit trade association, initiated a labour market (LMI) research project. This undertaking was funded by the Ministry of Advance Education and Skills Training's through their Sector Labour Market Partnerships (SLMP) program. The results of this research identified several workforce related challenges faced by this sector including:

- acute labour shortages;
- a lack of diversity in the workforce;
- low levels of awareness about the industry and career paths in particular; and
- a lack of effective and available training options.

To counter these BC Wood led the development of a VAW Workforce Development Strategic Plan which was similarly funded through the SLMP program. All these results directed BC Wood toward the current phase which was the Implementation of this Strategic Plan, which is comprises three components:

1. Direct to Work Program: A training initiative for entry-level woodworkers.
2. Workforce Development Supports (HR Toolkit): An online resource designed to enhance HR knowledge for small- to medium-sized enterprises (SMEs).
3. Skilled Production Worker (SPW) Process: A method to assess and address skill gaps in experienced workers, improving productivity and performance.

The current phase was initially costed in early 2022 and resulting from post-pandemic realities some planned components required modification. Initially, the Direct to Work Program was planned to be delivered at five institutions, this was reduced to three institutions across four sites (North Island College, Port Alberni and Courtenay; Okanagan College, Salmon Arm; The College of New Caledonia, Prince George) due to increased delivery costs. These institutions were contracted to supply a total of 47 individuals, however, only 26 attended and completed the first cohort. The average cost per participant was $5,845, covering all delivery expenses, including personal protective equipment (PPE) and some meals (excluding taxes).

The Direct to Work Program was designed as a comprehensive initiative, spanning four weeks (35 hours/week), with some Institutions employing a modified schedule due to shop availability. The program included a balanced mix of classroom instruction (73.5 hours), hands-on shop training (35.0 hours), and industry exposure through tours and presentations (31.5 hours) totaling 140 hours.

The HR Toolkit was developed as a free online resource (www.bcvalueaddedwood.com) to support SMEs, typically with fewer than 60 employees and no dedicated HR personnel. The toolkit includes templates, checklists, and guides tailored to improve HR practices. It was tested through one-on-one coaching sessions with multiple organizations.

The Skilled Production Worker Process targets workers with 4–5 years of industry experience, aiming to identify and address knowledge gaps that impact productivity. Targeted resources are then provided to fill those gaps, improving worker performance and overall efficiency. The process was validated through interviews with employers and employees.

In effort toward the future sustainability of the three programs, BC Wood continues to conduct outreach to potential training institutions to establish their interest to acquire the Direct to Work curriculum once it becomes public domain - these connections are under continuous development. From the validation process, the HR Toolkit has garnered interest among industry participants and is complementary to BC Wood's current activities. As such, BC Wood is evaluating options to incorporate this program into regular programing. The SPW program has been validated and has received interest from industry participants and core information will be housed on the project website.

Partnerships

Throughout this project the BC Wood team connected with external stakeholders to both promote the program(s) as well as to seek synergies with external parties.

Direct to Work

While the graduate numbers fell short of plan there were positive outcomes inclusive of some participants taking additional woodwork training, where others took additional non-wood-based trades training. Post-program graduates are difficult to track, however, it is understood that some have located employment. A selection of lessons learned from the program delivery include: suggested use of wrap around supports; possible use of training wages; improved industry promotion; More flexibility in the schedule to address possible delays and greater recruitment time; as well as interest from potential participants in larger urban centres.

HR Toolkit

The HR Toolkit produced a substantial amount of material which is housed on the project website. From a sustainability perspective, BC Wood in consultation with their

Board of Directors is evaluating the inclusion of the HR Toolkit in their core activities.

Skilled Production Worker (SPW)

Feedback from value-added wood industry employers, supervisors, and SPW's across B.C. confirms strong support for the SPW Occupational Analysis Chart (also referenced as "competency profiles"). This is a complete and useful tool for identifying skills and learning needs and is aligned with the priorities of the 2024 VAW Employer Survey. Identified outcomes included a clear need for targeted regional and focused training (of short duration). Some survey participants suggested they would be willing to host such training in their facilities. As the project concludes, BC Wood will continue to house deliverables on the project website, however a new designated champion to further advance this work.

The role of this new champion will promote and coordinate regional supplemental training opportunities designed to assist individual employers and remove the burden of organizing such training. There is also strong interest in developing communities of practice to support peer learning.

The SPW micro-credentialing pathways are viewed as an effective way to structure learning, and industry will need to recognize workers with those credentials. In addition, these credentials will need to be from an identifiable organization, so completed workers can demonstrate both their program completion as well as having mastered meaningful industry skills. Key industry competency areas identified through this project were:

- Advanced Materials Knowledge;
- Design Tools & Systems;
- Installation; Process Optimization;
- Manufacturing Machine Maintenance;
- Production Systems;
- Specialized Finishing;
- Metal Working; and
- Advanced Manufacturing Techniques.

Sustainability

Across the three project pieces:

Direct To Work — To date 6 recognizable Institutions have downloaded the DTW curriculum

The HR Toolkit — Being evaluated by BC Wood to becoming integrated into their regular programing

Skilled Production Worker — In the interim the materials being housed on the project website. Further funding and an enthusiastic champion are required to progress this piece.

URL: https://bcvalueaddedwood.com/

Evaluation

The Workforce Development Project has been evaluated by Qatalyst Research Group (QRG). Qatalyst is a Canadian consulting firm focused on impact assessment and evaluation. We provide a full spectrum of program services, from evaluability assessments and the preparation of evaluation and performance frameworks to the implementation of evaluations of all sizes. QRG Team Member hold Credentialed Evaluator (CE) status. In this evaluation role we ensure that the Project objectives have been addressed and this process is complete. The approach was to interview various stakeholders and participants to enquire about their program experiences then tabulate those results, reporting on pertinent observations where necessary.

From the outset, the purpose of this project has been to support solutions to the labour challenges facing the value-added wood industry. These include low career awareness, difficulties attracting and retaining workers, shortages of qualified labour, limited access to effective and accessible training, productivity concerns, and the need to enhance HR capabilities across the sector.

Overall, the project design and delivery

- The Value-added Wood Implementation Project exemplifies the effectiveness of the multi-phase systemic approach embedded in the SLMP;
- The program components are well aligned with key labour market challenged faced by the VAW sector;

- The project was well managed and delivered effectively, benefiting from the leadership of BC Wood, their dedicated Project Manager, and strong industry support;
- The project may have benefited from a stronger focus on sustainability during the design phase; and
- There may have been additional opportunities to further integrate and coordinate the various activities across the three components.

The views and opinions expressed in this report are those of its author(s) and not the official policy or position of the Government of British Columbia.

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Project Lead/Management

The project was managed by BC Wood Specialties Group (BC Wood), a recognized not-for-profit trade association with over 30 years of experience representing the value-added wood industry in British Columbia (BC). The daily administration was carried out by the Project Manager, under the oversight of an Industry Governance Committee. The committee comprised members representing seven industry sub-sectors, ensuring diverse expertise and alignment with industry needs.

While the project team remained largely consistent throughout the project term, some changes occurred due to various circumstances.

Governance Committee

Governance Committee Membership Table

Role	Name	Position	Organization	Location
Ex-Officio	Pablo Beimler	Senior Policy Analyst	Ministry of Jobs, Economic Development & Innovation	Vancouver
Ex-Officio	Matt Boddy	Senior Program Manager	Ministry of Post-Secondary Education & and Future Skills	Victoria
Pre-built Housing	Logan Ashley	Partner	Adaptive Homes	Revelstoke
Log & Timber Frame	Kelly Marciniw	CEO	Zirnhelt Timber Frames	150 Mile House
Engineered Wood	Ken Kalesnikoff	President	Kalesnikoff Lumber Co. Ltd.	Castlegar
Furniture	John Lore	President	Live Edge Design	Duncan

Role	Name	Position	Organization	Location
Cabinetry	Kris Hall	Plan Manager	Norelco Cabinet Solutions	Kelowna
Education	Dr. Guido Wimmers	Dean, School of Construction	British Columbia Institute of Technology	Vancouver
Association	Jordan Perrault	Project Manager	Construction Foundation of British Columbia	Victoria

Governance Committee Engagement

The main type of Governance Committee engagement was through virtual meetings (conducted over Zoom) and email.

Governance Committee (GC) Meeting Schedule

Date	Venue	Purpose
March 21, 2023	Zoom	Kick-off
June 15, 2023	Zoom	Occupational Profile SPW
June 19, 2023	Zoom	Occupational Profile Entry-Level
September 15, 2023	Zoom	Update on Entry-Level & HR Toolkit (Part I)
September 28, 2023	Zoom	Update on SPW & HR Toolkit (Part II)
November 8, 2023	Email only	GC validate Draft Curriculum
May 2, 2024	Zoom	Update HR Toolkit (online resources)
November 5, 2024	Zoom	Update: HR Toolkit, Skilled Production Worker, Direct to Work Program

Date	Venue	Purpose
March 5, 2025	Zoom	Update: Skilled Production Worker, Project Evaluator update & discussion, Draft Final Report

Project Team

Project Team Role	Organization	Name	Title	Notes
Project Lead	BC Wood Specialties Group	Brian Hawrysh	CEO	
Communications	BC Wood Specialties Group	Ahnika Genge		
Project Evaluator	Qatalyst Research Group	Ted Weicker	President	
Project Manager		Sean Goldie		
Value-added Woodworker, Direct to Work Program Lead	Vancouver Island University (VIU)	Nancy Hamilton	Manager, Professional Development & Training	
Value-added Woodworker, Direct to Work Program (Entry-Level Worker)	CT Resources Inc.	Gregg Neelin	Training Consultant, President	Consultant & Sub-contractor to VIU (Curriculum Development)
Skilled Production Worker (Experienced Worker)	North Pacific Metrics Inc	Dan McFaull	Managing Partner	Consultant (Development of Gap Analysis Tool)

Project Team Role	Organization	Name	Title	Notes
Workforce Development Supports (HR Toolkit) Consultant	Exportspark Services Inc.	Rae Henderson	Co-Owner & Director	Consultant & (Developer of HR Toolkit content)

Additional Team Members

Organization	Name	Title	Notes
Zielke Consulting Ltd.	Jessi Zielke	Original Project Manager, later Project Evaluator	Stepped back to avoid perceived conflict of interest; replaced by Sean Goldie (PM) & Ted Weicker (Evaluator)
BC Wood Specialties Group	Randi Walker		Initiated work on the HR Toolkit prior to Rae Henderson

Direct to Work Program

Curriculum Development

The Direct to Work Program is an industry-supported training initiative developed in-house to prepare entry-level woodworkers to begin work in the value-added wood products sector. Initially, the program was referred to as “Work Ready.” However, feedback from stakeholders indicated that the term could be perceived as limiting or unclear. To better align with the program’s goals and objectives, it was renamed “Direct to Work.”

Additionally, an early term used during development, “Value-Added Woodworker (VAW),” was revised after stakeholders noted the potential for ambiguity in its interpretation. To ensure clarity and focus on the program’s intent, the full term “Value-Added Woodworker” was used consistently in all references.

The Direct to Work Program initial budgeted allocation was $50,000 for each of five delivery partners. This funding was intended to support training for 12 to 14 participants per partner, with a total goal of 60 to 70 participants. However, post-pandemic inflation, new union contracts, and other economic factors rendered the original budget insufficient, resulting in higher delivery costs and schedule adjustments.

One primary objective of the program was to expand the candidate talent pool by focusing on underrepresented groups in the workforce, specifically youth, women, newcomers/immigrants, and Indigenous individuals. While these groups were prioritized, the program remained inclusive of other interested and qualified candidates.

Curriculum Development Process

Environmental Scan

- A milestone in the development process, the Environmental Scan was completed and submitted on March 31, 2023.
- This research and review exercise explored globally available resources to determine if similar content existed. Identified resources were assessed for potential use or adaptation through collaboration or licensing agreements.

Occupational Profile (OP) Development

- The OP was created with input from a Technical Working Group (TWG)

consisting of Subject Matter Experts (Experts). The Experts, typically supervisors, business owners, or other industry leaders, contributed their knowledge of required sector-specific skills.

- The OP development was iterative, with repeated refinement and validation through TWG reviews until a consensus was achieved. While initially planned as in-person consultations, the process shifted to virtual meetings due to time constraints for many of the Experts.

For further information see Appendix A —VIU Final Report (pg.63) and Appendix A - Occupational Profile (pg. 67)

Curriculum Design

- The approved OP served as the foundation for curriculum development. Each cataloged knowledge area was systematically mapped to specific learning objectives.
- The drafted curriculum underwent a peer review process involving the Project Manager, Vancouver Island University (VIU), and the Governance Committee. Final approval was granted once all groups reached agreement.

Technical Working Group (TWG)

The following table lists the members of the group of Experts who contributed to the development of the Direct to Work Program. These individuals represent various organizations and sub-sector within the value-added wood industry. While some participants could not attend development meetings in person, they provided valuable content feedback to the process.

Name	Organization	Notes
Ken Kalesnikoff	Kalesnikoff Lumber Co. Ltd.	
Georg Woernle	Canadian Bavarian Millworks & Lumber Ltd.	
Ari Sundstrom	Live Edge Design	
Kris Hall	Norelco Cabinets	
Dan Rempel	Spearhead Inc.	
Jake Power	PowerWood	

Logan Ashley	Adaptive Homes	
Daniel Kilchenmann	European Timberframe Corp.	
Terry Hall	Surelog Homes	
Tom Blackburn	Roundwood Log Homes	
Will Duggan	Creative Woodcraft	
Jennifer Lowe	Woodtone	Reviewer (R) – Provided content feedback
Johnny Matak	Daizen Joinery Ltd.	Reviewer (R) – Provided content feedback

Program Schedule and Structure

The finalized Direct to Work Program was designed as a comprehensive 140-hour training initiative, spanning four weeks. Participants attended training for 7 hours per day, 5 days a week. The program included a balanced mix of classroom instruction, hands-on shop training, and industry exposure through tours and presentations.

Detailed Program Breakdown

Activity	Duration	Description
Tours/Presentations	31.5 hours	Industry site visits and presentations to provide participants with real-world insights.
Classroom Instruction	73.5 hours	In-depth theoretical training covering core concepts, safety protocols, and foundational skills.
Shop Training	35.0 hours	Practical, hands-on experience working with tools, equipment, and materials.

Total	**140.0 hours**	**A balanced and intensive training schedule combining theory, practice, and industry exposure.**

This structured approach ensured that participants gained a well-rounded understanding of the value-added wood industry while developing the practical skills needed for entry-level positions.

Delivery Partner Selection

During the curriculum development phase, the Project Manager initiated outreach to potential delivery partners. The selection process focused on organizations that could provide geographical representation, suitable facilities, and prior experience with similar training programs. This proactive engagement ensured that the selected partners aligned with the program's goals and logistical requirements.

Delivery Partner Selection Considerations

The selection of delivery partners for the Direct to Work Program was guided by specific criteria to ensure alignment with the program's objectives and budgetary constraints. The key considerations included:

- Budget Alignment: How closely each institution's proposed budget matched the allocated funding.
- Geographical Representation: Broad provincial coverage to maximize accessibility for participants.
- Submission Comparisons: How proposed budgets compared against the estimates provided by the Curriculum Developer.

This iterative evaluation led to the selection of three delivery partners, with budgets exceeding $50,000 per site. Due to higher-than-expected costs, the program was scaled down from five to four delivery sites.

Selected Delivery Partners and Locations

1. College of New Caledonia – Prince George
2. Okanagan College – Salmon Arm (Trades Facility)

3. North Island College – Port Alberni
4. North Island College – Courtenay

Reasons for Non-Selection

Non-participating institutions were excluded for one of the following reasons:

1. Lack of capacity (e.g., facilities or instructors were fully committed).
2. Proposed budgets significantly exceeded project allowances.

Direct to Work Program – Fee Highlights

The following table below outlines the fees and participation of the selected delivery partners:

Cost Category	College of New Caledonia (CNC)	Okanagan College (OC)	North Island College (NIC)	Total
Budget per Site	$57,073	$59,863	$53,176/site	$223,288
Number of Sites	1	1	2	4
Contracted Participants	12–13	8–10	24	47
Actual Participants	10	6	10	26

Delivery Partners held responsibility to recruit and register the contracted number of participants. BC Wood promoted the program to Industry and others through channels which included Newsletters and Social Media with interested parties referred to the closest site.

** Delivery Partner contracts included a specified number of participants which was aligned with the project plan. While this was the starting point, Delivery Partners negotiated participant levels based on their unique situation like their shop size, availability, tool availability, participant safety and class size. Two of the Delivery Partners increased their participants levels (from 8 to 10 and 12 to 13). Apart from CNC who came close to fulfilling their commitment, other Institutions fell short.*

For further information see Appendix A — Delivery Partner Engagement Schedule (pg.52)

Project Schedule Adjustments

The project schedule was extended by approximately 54 days to support the continued development and refinement of key milestones. While this adjustment shifted the schedule, it allowed for a more thorough development process and ensured the quality of the outcomes. Program delivery began in Q2 of 2024, aligning with the readiness of delivery partners and other resources. The key adjustments are outlined below:

Key Reasons for Schedule Changes

Task	Planned Delivery Date	Actual Delivery Date	Adjustment
Draft Curriculum for Entry-Level Program (Direct to Work)	August 15, 2023	November 2, 2024	54 days
Finalize and Submit Program Materials (Curriculum, Direct to Work)	September 30, 2023	December 18, 2024	54 days

Delivery Partner Contracts Sent Out	December 21, 2023	Staggered Dates in 2024: - North Island College (NIC): January 22, 2024 - College of New Caledonia (CNC): February 12, 2024 - Okanagan College (OC): April 8, 2024 20–95 days	

Delivery Partner Contracts

To formalize agreements with delivery partners, a contract template was developed by Watson Goepel LLP. This template served as the foundation for the Professional Service Agreements (PSA), which were tailored for each delivery partner and finalized through a detailed negotiation process.

For further information see Appendix A — Educational Service Agreement Template (p.53)

Contract Execution Schedule

All delivery partners received their contracts on December 21, 2023, with execution dates as follows:

- North Island College (NIC) on January 22, 2024
- College of New Caledonia (CNC) on February 12, 2024 (with an amendment for
- 13 participants on May 24, 2024)
- Okanagan College (OC) on April 8, 2024.

Delivery Partner Program Delivery Schedule

The Direct to Work Program was delivered across four sites, each following a customized schedule to accommodate local needs and resources:

NIC Tebo Campus (Port Alberni): Monday to Thursday, May 6 – June 6, 2024
NIC Campus (Courtenay): Thursday, Friday, Saturday, May 9 – June 22, 2024
CNC (Prince George): Monday to Friday, May 27 – June 21, 2024
Okanagan College (Salmon Arm): Monday to Friday, May 13 – June 14, 2024

Program Scheduling – North Island College

North Island College (Port Alberni site) received community feedback indicating that weekend scheduling conflicted with Indigenous gatherings, family responsibilities, and other commitments. As a result, full-time access to the shop, which began in early June, was prioritized to better accommodate participant needs. Although NIC received this input their program commenced in May 2024 which was aligned with the suggested program completion timing.

Participant Selection

Target Candidate Profile

The ideal candidate was identified as someone with the potential to thrive in a workplace environment following the completion of training. Attributes such as punctuality, clear communication (e.g., notifying an employer when unwell), a strong work ethic, enthusiasm, and active engagement were considered key indicators of readiness for the program.

The Governance Committee underscored the value of industry involvement in the candidate selection process to ensure alignment with real-world workforce needs. While delivery partners retained responsibility for filling program seats, Industry Representatives contributed important industry knowledge and regional expertise, demonstrating their support for the program.

Identified Industry Representatives

- North Island College (NIC): The San Group
- College of New Caledonia (CNC): Zirnhelt Timber Frames
- Okanagan College (OC): Gorman Brothers *did not occur*

The San Group joined NIC's recruitment efforts later in the process. While their involvement was limited due to the timing of their onboarding, their presence demonstrated industry interest and support for the program. Conversely, Zirnhelt Timber Frames actively participated in CNC's recruitment process, offering valuable insights and guidance.

For Okanagan College, early discussions with Gorman Brothers did not result in a formalized partnership as the timeline for contract execution was close to the delivery commencement. While these challenges highlighted the iterative nature of the process, they underscored the importance of fostering strong connections with industry stakeholders early in future initiatives.

Program Admission and Eligibility Requirements

Eligibility for the Direct to Work Program was defined by a set of criteria to ensure participants were well-suited to benefit from the training. Applicants were required to meet the following conditions:

- Be unemployed, precariously employed, or facing multiple barriers to employment, as well as those seeking a career change.
- Legally entitled to work in Canada.
- International students or refugees needed appropriate documentation to work in Canada post-program.
- Reside in British Columbia at the time of training.
- Not be enrolled as a current student (high school or post-secondary).
- Not be participating in another provincially or federally funded labour market program at the same time.
- Possess essential skills: reading, writing, numeracy, and basic computer use.
- Have enough English comprehension to follow program instructions effectively.
- Be physically capable of working in a "shop environment," including lifting and carrying items weighing up to 20 lbs.
- Have basic math skills, comparable to those required in trades-related tasks.

For younger participants under the age of 19, delivery partners may have required additional screening, such as criminal record checks for other adult participants.

If applicants were legally considered adults, this criterion was waived. Youth participants were typically drawn from high school seniors, as they could be of legal working age. Students who had legally left the secondary education system after Grade 10 were also eligible to apply, creating a potential lower age limit.

In some cases, a valid Class 5 or 7 driver's license was recommended, depending on the nature of the work or the participant's location.

College of New Caledonia's Selection Process

The College of New Caledonia (CNC) employed a well-established recruitment process, refined through their experience with large, ministry-funded programs. The selection process included specific steps to assess applicant suitability for the program:

1. **Pre-Interview Assignment:** Applicants were required to complete an Intake Assignment designed to gauge their understanding of, and interest in, the value-added wood industry.
2. **Interview:** Following the assignment, candidates participated in a 30-minute in-person interview. The concise format allowed CNC staff to efficiently evaluate applicants while maintaining a structured and manageable process.
3. **Code of Conduct Agreement:** To reinforce program expectations, CNC implemented a Student Attendance & Participation Agreement. This agreement served as a social contract between the institution and the participant, outlining clear behavioral expectations such as punctuality, timely communication in cases of absence or illness, and notification of any delays caused by appointments. These measures ensured a professional and supportive learning environment for all participants.

Program Demographics

The Direct to Work Program served a diverse group of participants across four delivery sites. The following table summarizes the demographic composition of each cohort:

Location	Cohort Size	Women	Men	Indigenous	Newcomers	Youth
NIC (Port Alberni)	4	2	2	0	N/A	N/A
NIC (Courtenay)	6	2	4	0	N/A	N/A
CNC (Prince George)	10	3	7	2	4	8
OC (Salmon Arm)	6	3	3	1	2	N/A
Total	**26**	**10**	**16**	**3**	**6**	**8**

Notes:

1. *At CNC, eight participants were 30 years of age or younger, one of whom was also a woman.*
2. *There was no formal definition provided for the "youth" category during the program.*

Project Outcome

The outcome of the Direct to Work Program was the development of an Industry supported, 140 hours, entry-level woodworking training program delivered at four sites around the province. This pilot program provided 26 persons with the skills, knowledge and confidence to gain employment in the Value-added Wood Industry.

Certificates Awarded

Participants who completed the Direct to Work Program received a Certificate of Completion to recognize their achievement. The certificates were standardized across all delivery partners, with the only differences being the inclusion of the respective delivery partner's logo and the registrar's signature. For example, the College of New Caledonia issued certificates featuring its branding and signature (see illustration below).

Other certificates

The following are the certificates that participants received:

- College of New Caledonia – First Aid (OFA Level 1)
- Okanagan College – First Aid
- North Island College – WHIMIS, First Aid, CSA Class 1,4,5 Counterbalance Forklift

Direct to Work Program Recommendations

The Direct to Work Program provided valuable insights for future iterations. The following recommendations and observations highlight opportunities for enhancement:

Lessons Learned

Participant Supports

Wrap-Around Supports for Indigenous Participants: Providing additional supports such as accommodation, food, childcare, and transportation could enhance participation and engagement for Indigenous learners.

Training Wage Incentives: If not using a cost recovery model consider the introduction of an honorarium of approximately $50/day as suggested to encourage participation. While this was not included in the current project's budget, it would represent an additional cost of approximately $1,000 per participant, pro-rated based on attendance.

Participant Engagement

Early Exposure to the Industry: Introducing students to the value-added wood industry at an earlier stage, such as in middle school or high school, could inspire greater interest. Collaborating with high school woodshop programs could be an effective avenue for outreach.

Engaging School-Aged Students: Some industries successfully engage students

through school programs, presentations, or contests. Similar initiatives could be adapted for the value-added wood sector.

Summer Employment Opportunities: Hiring youth as summer students was recommended at the BC Technical Education Association (BCTEA) Conference. This approach allows students to gain work experience and earn income while enabling employers to assess their potential as future employees.

Promoting Inclusivity: Feedback from field trip participants indicated that some comments made by workers at tour sites made them feel unwelcomed. While these remarks were not directed at specific individuals, they highlight the importance of fostering a positive and inclusive environment. Introducing inclusivity training for industry workers, such as Equity, Diversity, Inclusion, and Social Justice (EDISJ) programs, could help ensure a supportive atmosphere for future (and existing) employees.

Project Delivery

Schedule Flexibility: Having additional flexibility in future schedules to mitigate delays could accommodate the iterative processes. This would help address such areas as: delayed Institution approvals leading to a late start which impacted participant recruitment.

Extended Recruitment Lead Time: Extending the recruitment period beyond the initial one month could provide additional opportunities to attract participants. A lead time of two to three months was recommended to achieve better enrolment results and broader outreach.

Stakeholder Communication: Strengthening communication with stakeholders, such as the First Nations Forestry Council, could better align available resources (e.g., funding for student support) with program delivery timelines.

Effective Use of Social Media: Social Media proved to be a successful recruitment tool, with many participants learning of the program through these Industry channels.

Interest from Urban Centres: Interest in the program was observed from larger urban areas like Vancouver, where approximately 10 individuals reached out for information. Future iterations could explore delivery in urban centres.

Delivery Partner Management: The contract for the Delivery Partner should include some performance criteria.

Hybrid Consideration for Future Delivery: Some remote content delivery followed by in-person shop time.

For further information see Appendix A - Pilot Program Review and Recommendations (pg. 65) and Appendix A - VIU Final Report (pg. 63)

Positive Outcomes

As of the end of Q4 2024, the program has yielded several promising results for participants:

- One participant from Okanagan College (OC) has successfully obtained employment.
- Three participants from the College of New Caledonia (CNC) have pursued additional training - two in Carpentry Foundations and one in Automotive Service Technician programs.
- One participant from North Island College (NIC) has enrolled in the fall cohort of the Joinery Program to further their skills.
- Delivery partners received and distributed job postings from Winton Homes (CNC) and Woodtone (OC) to participants, expanding their employment opportunities.

Summary of Course Reception

The course was very well-received by both students and instructors. Students found the content to be highly practical and applicable, particularly appreciating the hands-on shop time and field trips, which were frequently highlighted as standout aspects. The skills gained were seen as directly transferable to employment opportunities, and many participants expressed enthusiasm about the relevance of the material. Instructors praised the thorough and accessible curriculum, as well as the course's emphasis on communication, stress management, and healthy work practices.

There was also strong appreciation for the course's connection to local industry, which helped drive participant engagement and interest in the sector. Overall, feedback was overwhelmingly positive, and several individuals indicated they would recommend the course to others.

Individual Comments

"The content was practical, relevant, and applicable." **– Student**

"It has given me the knowledge to work on the tools and practical applications for future employment." **– Student**

"This program was an excellent hands-on introduction to woodworking and the available careers in the industry." **– Student**

"Students reported that the most enjoyable aspects of the course were the hands-on shop experience and field trips." **– Student**

"I would consider recommending this course to others." **– Student**

"I appreciated the emphasis on communication, stress management, and healthy work practices." **– Instructor**

"I liked how the course brought together many aspects of the wood industry into a single, well-rounded orientation." **– Instructor**

"Engagement with local industry was very important and significantly increased participants' interest in the sector." **– Instructor**

"I would suggest including more representation of small-scale carpentry." **– Instructor**

Validation Conclusions

Curriculum Improvements: While the curriculum was thorough and complete, minor rebalancing could improve its effectiveness. Suggestions included increasing shop time, reducing reliance on video content for Health & Safety training, and simplifying sections on math and Health & Safety.

Schedule Optimization: Additional shop time could be achieved by condensing field trips, presentations, and certain curriculum sections (e.g., math and Health & Safety), potentially freeing up an additional three to four days.

Youth Participation Incentives: To attract high school youth, additional incentives such as dual credit options or credits toward a high school diploma could enhance appeal. While not part of the current program, this would require additional coordination and time to implement.

Additional Certifications: Future program iterations could include additional certifications to align with employment needs across the seven sub-sectors. Potential options include:

- Chainsaw and Forklift Training: Revisiting these certifications could potentially reduce delivery fees, as these areas are often taught by non-union contractors.
- Heavy Trailer Certification: This certification, requiring a Class 5 or 7 driver's license, would enable workers to operate company vehicles for supply transportation.
- Fall Protection, Rigging & Lifting: These certifications were suggested by a Delivery Partner.

Delivery Partner Program Photos

NIC – Deck Chairs

NIC – Participant

CNC – Stool

OC – Toolbox

Workforce Development Supports (HR ToolKit)

The Workforce Development Supports, referred to as the HR Toolkit, are a suite of online resources designed to address a range of human resource (HR) needs. The BC Wood HR Toolkit was developed by Exportspark Services Inc. to assist VAW employers with the tools and supports to assist with their day-to-day HR needs. Human Resource Management refers to a range of functions needed to run a business: workforce planning, recruitment, onboarding, performance management, health & safety, internal communications, compliance, DEI and employee engagement. The information and best practices included in the HR toolkit were designed around the main pillars of HRM: HR Strategy, Recruitment, Employee Experience and Compliance. Employers will be able to use the information and tools to implement new initiatives that will attract and retain qualified workers, as well as identify opportunities that could improve the performance of employees and lead to increased productivity and profitability.

These resources are tailored to assist small- to medium-sized organizations, particularly suited to those without internal HR support or staff and with less than 60 employees. With the focus on improving employee relations, satisfaction, and retention through the effective application of HR practices.

The content was specifically developed for the VAW Industry in British Columbia. While the current materials are primarily geared toward value-added manufacturing settings, plans are underway to improve materials referencing additional Value-added environments. The resources were developed collaboratively with the Technical Working Group (TWG) through an iterative process to ensure relevance and practicality.

Project Outcome

The development of the HR Toolkit created resources that encompass templates, checklists and information tailored for small- to medium-sized organizations (suited to organizations of 60 persons or less) and lacking a dedicated in-house HR person. This content is housed on the project website (as seen above) and was validated through one-on-one coaching using these materials as well as incorporating feedback from those pilot sites.

Technical Working Group (TWG)

Name	Organization
Deborah Steiger	Kalesnikoff Lumber Co. Ltd.
Maria Mader	Fraserwood Industries Ltd.
Kris Hall	Norelco Cabinet Solutions
Sharlene Gammie	Live Edge Design
Heather Elliott	Merit Kitchens Ltd.
Jennifer Lowe	Woodtone
Linda Morita	Mitsui Home Canada Inc.
Kelly Marciniw	Zirnhelt Timber Frames
Steven Glemnitz	All-Fab Building Components

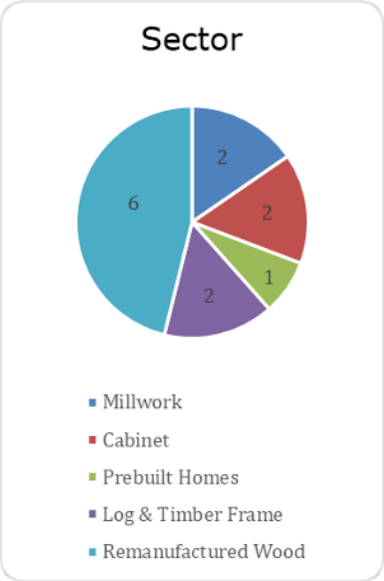
Available at no charge, these resources were piloted through one-on-one coaching with thirteen organizations. Feedback from test sites, guided by an HR Specialist, has been refined to improve the content.

The following is data that describes the value-added wood industry employers who participated in the Coaching Initiative for this project.

We worked with businesses located in all regions of the province of BC and one business in Alberta:

- 3 businesses from Vancouver Island
- 3 businesses from the Kootenays
- 4 businesses from the South Coast
- 1 from the Thompson/Okanagan
- 1 business from the Northern BC
- 1 business from Alberta

The participants came from: Remanufactured Wood, Millwork, Cabinet, Log & Timber Frame and Prebuilt Homes.



HR Toolkit Promotion and Engagement

The HR Toolkit was promoted through various channels and iterations, including the January 2024 issue of BC Wood's Connections Newsletter, to raise awareness and recruit 10 small- to medium-sized organizations for one-on-one coaching to validate the content.

As part of the roll-out, a webinar was hosted on July 9, 2024, to showcase the HR Toolkit. The webinar aimed to introduce the resources, encourage engagement, and identify potential pilot sites for validation coaching. The event was promoted to both BC Wood members and non- members. Excluding project team participants, 15 organizations registered for the webinar, with 7 individuals representing 6 organizations attending. Several attendees subsequently became pilot sites for coaching.

To expand outreach efforts, a supplemental list of over 50 non-member organizations was compiled during the project. This list was integrated with BC Wood's internal database to broaden communication and engagement activities.

For further information see Appendix B - HR Toolkit Webinar (pg. 75)

HR Coaching Topics

Initially designed to work with participants on either an HR Audit or a review of their onboarding process, these topics were expanded based upon interests identified during screening calls. Due to the limited time allotted for each participant for both the work and sessions, the topics were curated to meet the needs of the business as well as the coaching initiative. Below is the expanded list of topics that were covered.

HR Strategy	Building an HR Plan
Recruitment	Interview Questions Selection Criteria Compensation & Benefits Job Description

Employee Experience	Onboarding Process Internal Communication Rewards & Recognition Program Performance Management Coaching a Supervisor in Communication Techniques
Compliance	HR Audit Employee Handbook Review Employee Contracts Review Records Retention

HR Toolkit Content

HR Toolkit included the following subject matters and can be accessed through the web link provided below:

- Onboarding Guide
- Performance Management Guide
- HR Policy Checklist
- Employee Handbook Outline
- Employment Standards Act
- Personal Information Protection Act
- BC Wood HR Toolkit H&S Program
- BC Wood HR Toolkit Engagement
- BC Wood Diversity, Equity & Inclusion
- Workforce Planning Guide
- Recruitment Guide
- Resource List
- BC Wood HR Toolkit TechPage
- Occupational Profile (Entry Level Worker)
- Competencies Profile (Skilled Production Worker)
- Progressive Discipline Guide

- Code of Conduct Best Practices
- Leadership Self-Assessment
- Coaching for Supervisors' Template (Parts I & II)

These resources can be found at: https://bcvalueaddedwood.com/index.php/hr-toolkit/

Validation Conclusions

Below are examples of what we learned:

- Although a small sample size: Organizations that did not have an in-house HR Internal, we found they demonstrated low levels of HR competencies and this lack was evident.
- A driver of many conversations was on how to retain employees.
- Each small business had challenges prioritizing the time preparing for the HR coaching
- Further it is thought at if time availability was a challenge, then similarly, they could have difficulty blocking the time for structured HR processes.
- In each participating organization, the Employee Handbook was a topic of discussion with each organization having the strongest knowledge in Health & Safety.
- Discussions around the Employee Handbook included the importance of establishing a "code of conduct". Defining and communicating what is acceptable to employees creating a baseline behavior would be a helpful reference in future if needed.

For further information see Appendix B — BC Wood HR Toolkit Summary Addendum (pg.72)

Future Considerations

Several subject areas were discussed during the project but fell outside the scope of this initiative. These included:

Community & Employer Programs

The Governance Committee proposed adding a section focused on community and employer programs. While community services, such as those offered by WorkBC, are referenced in the Resource List, details on specific programs are not included. Given the dynamic nature of internet-based content, with programs frequently changing or

being discontinued, maintaining up-to-date links could lead to issues such as broken links. Instead, incorporating this information into blogs or newsletters was suggested as a more effective approach to ensure content remains current and relevant.

Job Boards

The inclusion of job boards was also discussed, but maintaining such a resource would require ongoing time and resources. Platforms like LinkedIn, Indeed, or similar services are better positioned to provide this functionality effectively.

Continued Access to Resources

Through the content validation which piloted these materials on small- to medium-sized businesses, it became apparent that there was a fundamental lack of HR knowledge across a wide variety of stakeholders within this targeted group. BC Wood, in consultation with their Board of Directors, is evaluating the possible continuation of these materials into their regular programing at a future time.

Skilled Production Worker Program

In British Columbia, the Value-Added Wood (VAW) manufacturing industry faces an increasing need for skilled production workers equipped with competencies aligned with the demands of modern manufacturing. To address this need, a comprehensive 18-month initiative was undertaken to develop a Skilled Production Worker (SPW) competency framework, credentialing pathways, knowledge assessment tool and potential delivery models for training. This initiative focused on enhancing performance on the job through creating short, targeted training; exploring multi-modal delivery methods; and adopting best practices from other jurisdictions.

The SPW Program Outline and the SPW Curriculum Framework and Training Outline was developed through a collaborative process that included research to identify existing competency frameworks and refinement via iterative facilitated dialogue with a Technical Working Group (TWG). The TWG was comprised of industry subject matter experts and business owners from across various VAW sub-sectors, ensuring that the outputs were both practical and reflective of the industry's diverse SPW competency needs. By grounding the framework in real-world application and leveraging insights from industry leaders, the initiative sought to produce a robust and actionable strategy for workforce development.

The SPW Needs Assessment Interview was an integral component of the SPW training initiative. The SPW Needs Assessment process involves a structured interview with the employer / supervisor and the SPW to discuss and establish specific learning needs. The process provides an opportunity for the designated Assessor / Trainer (knowledge provider) to directly engage with potential participants and their employers to gain insights into specific learning needs, competency gaps, and resource requirements. The information gathered directly impacts the finalization of training module content to target agreed needs and desired outcomes, as well as providing an opportunity for relationship development that will reduce barriers to effective participation.

Project Outcome

The SPW Program developed an Occupational Analysis Chart (Competency Profile), validated through industry review. A complementary Curriculum Framework, including a detailed Training Outline, was also created. Together, these tools help employers identify knowledge gaps and provide a clear pathway for addressing them. North-Pacific validated this approach through interviews with VAW employers, supervisors, and SPWs across various organizations and sub-sectors. The SPW competency descriptions aligned with interviewees' perceptions of their skills and training needs within the context of VAW manufacturing operations.

Participants of these validation interviews were provided with three documents for review in advance of our conversations:

- **SPW Occupation Analysis Chart** outlining the competencies critical to the SPW role in a chart format,
- **SPW Competencies Outline** providing a more detailed description of each competency area, and
- The drafted designs for three **SPW Micro-Credential Pathways** illustrating potential credentials for SPWs to achieve industry recognition for accumulated competencies.

For further Information see in Appendix C - Needs Assessment Validation Report (pg. 90), 'Competencies Profile' (pg. 11 in report), 'Competencies Outline' (pg. 14 in report) and 'Credentialing Pathway' (pg. 20 in report)

These documents provided a working example of materials to be distributed by an Assessor / Trainer in advance of an actual SPW Needs Assessment interview, to facilitate an informed discussion during each interview.

Not surprisingly, the skills required by a single sub-sector/employer may not necessarily apply across all groups as the aggregated skills list would be comprehensive. An employer is able to select from the listed skills only those that are pertinent to their needs and apply these short-listed skills to an employee to realize their working knowledge levels. Where a knowledge gap is identified, the employer can seek targeted training to fill that area. Ultimately, this process is believed to lead to improved employee/job satisfaction which in turn should improve employee retention. This profile was further refined and validated by the Governance Committee.

Technical Working Group (TWG)

Name	Organization
Brad Mason	Kalesnikoff Lumber Co. Ltd.
Stefane Dimopoulos	Live Edge Design
Barry Schick	Acutruss
Dave Dees	Cedarland Forest Products
Cameron Frenette	Vancouver Island University (VIU)
Sam Zirnhelt	Zirnhelt Timber Frames

Gordon Smith	Cowichan Woodwork
Georg Woernle	Canadian Bavarian Millworks & Lumber Ltd.
Joachim Strobel	Canadian Timber Frames
Sandra Carr	Camosun College
Robert Fischer	Giusti Wall Tech
Will Duggan	Creative Woodcraft

TWG and SPW Governance Committee Meeting Dates

TWG Meetings	SPW Governance Committee Meetings
June 21, 2023	June 15, 2023
August 17, 2023	September 28, 2023
October 5, 2023	May 2, 2024
March 7, 2024	July 11, 2024

Skilled Production Worker Program Timeline

Milestone	Date
Environmental Scan submitted	March 31, 2023
Competency Profile completed	July 17, 2023
Employer Survey launched (via Survey Monkey)	Late December 2023
Re-designed/Simplified Employer Survey	January 2024
Analysis of the survey data	Early 2024
Development of the Go-Forward Strategy	Early 2024

Survey and Data Collection for SPW Program

The first survey for the SPW Program was launched in late December 2023 and distributed to over 300 organizations. The VAW Employer Survey had three key purposes:

1. To share and validate the SPW Competencies with a wider group of VAW employers in BC;
2. To identify key SPW occupational roles in terms of the SPW Competencies; and
3. To prioritize the learning needs of SPWs in those occupational roles.

At the BC Log & Timber Building Industry Association Conference in April 2024, additional efforts to collect feedback resulted in 15 more responses. Combined with the online submissions, the survey gathered input from 37 organizations. These responses provided valuable insights, identifying 104 (see list below) roles within the industry. While early assumptions suggested some roles might be grouped based on similarities, further analysis confirmed the distinct nature of each role, highlighting the diverse needs across sub-sectors.

The simplified survey proved effective, with a 50% completion rate and an average completion time of 10 minutes, demonstrating the revised approach's success in engaging participants.

Pathways to Employment

A key strength of this course is its alignment with real-world employment opportunities in the wood industry. By equipping participants with foundational knowledge and hands-on experience, the program helps prepare individuals for a wide range of roles across the sector. Employers, in the sector, a sample of the 104 Skilled Production Worker occupational roles includes:

- Grader
- Finisher, Painter
- Feeder
- Cabinet Maker
- Timber Frame Installer
- Press Operator
- Sawyer

- Planer Operator
- Foreman
- Senior Joiner
- Production Coordinator
- Shop Lead
- Trims Operator
- Installation Lead
- Drafter / Modeller
- Quality Controller
- Machine Operator

Considerations for Content Delivery

Given the geographically dispersed nature of the industry, a Cluster/Mentoring or Community of Practice model(s) have been identified as a practical approach to delivering content. The Environmental Scan highlighted several existing resources that could serve as valuable references for program development:

- SkilledTradesBC: Trade competency standards for Carpentry, Saw Filer, Millwright, and Metal Fabricator roles.
- Australia/New Zealand Standard Classification of Occupations (ANZSCO): Advanced wood trade worker qualifications.
- WorldSkills Occupational Standards: Frameworks for Turning, Milling, Cabinetmaking, Joinery, and Carpentry.
- Woodwork Career Alliance of North America: Skills credentialing models.
- UBC Centre for Advanced Wood Processing (CAWP): Industry training programs.

Value-Added Woodworker Employer Survey Results

The survey participation level by sub-sector and region:

Sub-Sectors	Island	Lower Mainland	Okanagan	Kootenay	North	Other	Total	% Total
Cabinetry	6	6	3	0	0	0	15	14.42%
Engineered Wood	3	3	0	3	0	3	12	11.54%
Log & Timber	7	9	9	9	10	2	37	35.58%
Millwork	3	3	3	0	0	0	9	8.65%
Pre-Built	0	0	0	0	3	0	3	2.88%
Remanufacturing	6	10	6	6	0	0	28	26.92%
Total	18	26	24	21	13	5	104	100%

Region	Responses	% of Total
Island	18	17.31%
Lower Mainland	26	25.00%
Okanagan	24	23.08%
Kootenay	21	20.19%
North	10	9.62%
Other	5	4.81%

The top 6 Learning Needs (as identified by survey)

Training Topic	Significance (% Demand by Responses)	Key Focus Areas
Wood as a Manufacturing Material	64.4%	Characteristics, grades, variations, moisture content, etc.
Value-Added Woodworker Production Processes	56.7%	Fabrication, assembly, flow, inventory, automation, etc.

Quality Control Systems	54.8%	Quality management, variance analysis, control charting, etc.
Production Best Practices	48.8%	Design, inventory management, waste management, LEAN principles, etc.
Manufacturing Machine Maintenance	48.8%	Cleaning plans, lubrication types, spare parts inventory, maintenance schedules, etc.
Machine Adjustment for Optimum Production	46.2%	Calibration, testing, quality considerations, etc.

For further information see Appendix C — BC Wood Steering Committee Meeting - November 2024 (Slide 5, pg.122)

Overview of SPW Competencies

The SPW Competencies outline the key knowledge areas and technical skills essential for optimizing performance in the value-added wood industry. These competencies are grouped into core categories to address various aspects of production, design, installation, and advanced manufacturing techniques.

Category	Competencies
Advanced Materials Knowledge	Wood types and grades Composite and engineered materials Sustainability Materials handling and storage
Design Tools and Systems	Shop sketches and design CAD/CAM systems Component fabrication/assembly

Category	Competencies
Installation	Interior installation Exterior installation
Process Optimization	CNC programming (generic) Design production processes Optimize automation processes
Manufacturing Machine Maintenance	Lubrication Grinding and sharpening Using OEM documentation
Production Systems	Production processes Quality control Identify production criticalities Apply LEAN manufacturing principles
Specialized Finishing	Identification of surfaces Paints Coatings Treatments Polishing and waxing
Metal Working	Cutting metals Heat treatments Welding
Advanced Manufacturing Techniques	Milling Shaping Boring Sanding Clamping and laminating Joinery and assembly

SPW Curriculum Framework

The SPW Competency Modules focuses on key areas as identified through Surveys. As seen in the Top 6 Learning Needs Table (p.32), the top 6 learning needs illustrated the core knowledge areas that were common across multiple sub-sectors. Respondents indicated interest in several identical competencies, across organizational types and within the same geographic regions. This output supports the proposed content delivery model of Cluster and/or Assessor/Trainer approaches with further supporting documents (see Appendix C).

Curriculum Framework illustration:

MODULE 2:	**VAW PRODUCTION PROCESSES**
Competency Area(s):	PRODUCTION SYSTEMS (GAC – B)
	PROCESS OPTIMIZATION (GAC – I)
Competencies:	B1. Describe production processes
	I2. Design production processes
	I3. Optimize processes that incorporate automation
Employer Priority:	56.73%

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island ☒ Kootenays ☒ Okanagan ☐ Lower Mainland ☒ North	☒ Cabinetry ☐ Log & Timber ☒ Pre-Built Housing ☒ Millwork	☒ Remanufactured Wood Products ☐ Furniture Manufacturing ☐ Engineered Wood Products

Key Learning Objectives:

- Describe production inputs and outputs – B1(1)
- Describe precision measurement – B1(2)
- Describe fabrication and assembly processes – B1(3-4)
- Describe continuous process flow – B1(5)
- Design plant layout and production flow – I2(1)
- Develop inventory management system – I2(2)
- Optimize equipment usage and capacity – I2(3)
- Develop strategies to minimize waste – I2(4)
- Describe automation technologies – I3(1)
- Identify opportunities for automation in production processes – I3(2)
- Perform automation cost / benefit analysis – I3(3)

While the Top 6 learning need are designed as stand-alone pieces, several have common elements and could be combined to create a Micro-Credential pathway. These “higher level” knowledge areas include Process Optimization; Manufacturing Machine Maintenance and Advanced Manufacturing.

The training delivery model incorporates a variety of channels, including self-study, webinars, coaching sessions, in-person training, and potentially a “community of practice” where participants with similar training needs can share ideas and learn from one another. For some participants, prerequisite courses may be required as part of the micro-credentialing approach.

There are outstanding questions as this piece was funded up to the creation of Occupational Analysis Chart (also referenced as the Competencies Profile) and the Curriculum Framework and Training Outline:

- BC Wood has and will continue to champion for the SPW Program and both the Occupational Analysis Chart as well as the Curriculum Framework and Training Outline will remain active on the project website (under the Skilled Production Worker tab) accessible to any interested parties;
- As the current Implementation Phase wraps-up and if there is continued support for this development a new dedicated champion will be needed to

further build on this foundation and if so, Who? and

- What will be needed is a recognized organization/institution to lend it's gravitas to further support the development of this credentialling approach for both a la carte and micro-credential training?

A structured Curriculum Framework has been developed for all 16 identified learning needs, but beyond the Top 6 as referenced to the right, the needs are more specialized, prompting a focus here on the highest-priority topics (further information can be found in Appendix C). A Curriculum Framework has been developed for all 16 learning needs with an identical treatment (as described in the Curriculum Framework Illustration). At a broader level, several potential program and training facilitators have also been identified, as shown in the accompanying materials.

For further information see Appendix C — SPW Curriculum Framework & Training Outline (pg.141)

Potential Partner Institutions and Contributions

The following table outlines potential partner institutions and resources (high level discussions have occurred) that could support the development and delivery of training programs for the value-added wood industry.

Each partner brings unique expertise, resources, and focus areas, along with considerations for collaboration. This information helps identify the most suitable partners based on specific training needs and program objectives.

Potential Partner Institution	Resource	Potential Topics	Additional Considerations
UBC Centre for Advanced Wood Processing (CAWP)	Training site Network of trainers Existing online courses in partnership with WMC (requires tutor)	Production planning Quality management and control Supply chain management	Limited capacity to engage tutors for online courses WMC online courses bundled into a 9-module management pro-gram (min/max en-rollment)

Potential Partner Institution	Resource	Potential Topics	Additional Considerations
Wood Manufacturing Council (WMC)	National presence Many print resources Content ownership for online courses	Similar topics to CAWP, with emphasis on national reach and digitization	Recent leadership changes Training materials need to be digitized
FPInnovations	Research on processing and advanced engineered products	Advanced wood as a manufacturing material	Primary focus on research and primary processing Secondary focus training; funding needed for content development ($50K+) unless substantial opportunity exists
Cariboo Wood Innovation Centre	N/A	N/A	In nascent stages of development. Possible introduction to trainers in the interior region
Wood Career Alliance	SoPs and videos aligned with competency framework	Certifying individuals for specific competencies	Licensing for a broader audience
Individual Trainers	Training module delivery Tutors	N/A	Flexible and adaptable to company needs May require existing content or development time

SPW Training Delivery Options

During the SPW Needs Assessment Validation interviews, we discussed various training delivery / structure options and encouraged participants to identify their learning experiences and preferences.

Value-added Wood Industry Employers / Supervisors and SPWs agree that shorter, focused, hands-on modules for smaller groups are preferred. Ideally, these would be available within easy distance of home and possibly based within a VAW manufacturing facility.

Below are examples of what they told us:

"I'd much rather go to an hour of relevant training than sit through four hours of training where half of it is not applicable. More customized training may require more investment upfront but would be much higher value-add." **– Production Supervisor**

"When it comes to training, we are not all in competition. I'm a firm believer in 'a rising tide raises all boats'. I think it's important for us to learn together." **– Employer**

"We'd be open to hosting workshops or training opportunities at our facility during off-hours. We'd also be highly supportive of our staff going to other facilities to learn from peers. There is nothing more practical than learning from other's experiences." **– Employer**

"Although there are substantial differences between operations including equipment used, shop layout and production processes, I think there would be value in sharing best practices and learning from each other." **– Skilled Production Worker**

"There is a lack of relevant training in our region. We have to send staff to Vancouver which makes it a substantial investment both for the employee and the company. We would prefer shorter in-person training with online resources or the ability to have a Facebook group that allowed staff to share and ask questions." **– VAW Employer**

"The apprenticeship model is great, but it's limited to us geographically. There also aren't that many people that are willing to invest the lengthy time and commitment away from paid work." **– Skilled Production Worker**

"To date, most of our learning has been on-the-job with higher performers passing on knowledge to newer ones. However, the breakdown is that many high performers don't know how to teach." **– Skilled Production Worker**

"We can't afford having staff off the job for six or seven weeks at a time. I've had to reschedule training multiple times because of operations." **– Manager**

"There are manuals for different equipment, but they tend to be a bit daunting. It would be really useful to have a decent framework for troubleshooting equipment and someone to talk to who's worked on the equipment. Unfortunately, there's a lack of that kind of hands-on training." **– Skilled Production Worker**

"There really isn't a lot of training for us other than rotations on the job." **– Skilled Production Worker**

For further information see Appendix C — BC Wood Steering Committee Meeting - March 2025 (pg.132)

Validation Conclusions

Based on our interviews with VAW Employers / Supervisors and SPWs representing various industry sub-sectors from across B.C., we highlight several key conclusions and observations that reflect consensus among participants, outlined below:

- There is a strong consensus that the SPW Competency Profile is complete and comprehensive. It is viewed as a valuable tool for identifying existing competencies and individual learning needs.
- Value-added Wood Industry Employers / Supervisors and SPWs largely agree with the learning priorities identified by different industry sub-sectors in the VAW Employer Survey conducted in 2024.
- Shorter, focused, regional training opportunities are considered more valuable and less costly than longer courses offered at a further distance.
- It is difficult and costly for individual employers to coordinate targeted skilled production worker training. There is an opportunity for regional and sub-sector level coordination to develop training mapped to the SPW Competency Framework. This could be best facilitated by BC Wood or possibly a third party.
- Safety must be incorporated as a priority in all training modules.
- In planning for any future SPW training, it will be vitally important to retain / incorporate the needs assessment function in order to ensure competency-based training experiences are relevant – especially in light of the varying production challenges and realities of VAW industry contexts (i.e.: the variations among operations and equipment).
- There is an opportunity within the industry to create 'communities of practice'

through social media or via regional meet-ups, to enable SPWs to share learning resources and experiences with each other.

- There is a need / opportunity to compile and centralize learning materials and other resources for SPWs to supplement future training initiatives.
- The SPW Micro-credentialing pathways are viewed as an effective means by which SPWs are able to structure their learning and broaden recognition of their competencies by employers.

For further information see Appendix C — SPW Pilot Proposal (pg.179)

Communication & Stakeholder Engagement

The project's Communication Strategy was to engage with potential stakeholders and this included the development of Project Website. Key Information was housed there and included Occupational/Competencies Profiles among others. Other avenues for stakeholder engagement included BC Wood's social media platforms LinkedIn, Instagram and Facebook.

The Project Manager created databases to engage with potential stakeholders within each delivery site region, connecting with groups such as First Nations, women's organizations, immigrant support services, youth organizations and local businesses, etc. These resources were used alongside BC Wood's existing databases to expand communication efforts beyond its membership. While not limited to this specific purpose, during the project these resources were also used to inform local value-added businesses about cohorts of students at institutions within their region. These direct communications were followed up with emails suggesting that, if interested, they could be connected with graduates through the school's coordinator. This approach was implemented across all delivery sites.

The project was promoted and supported through participation in key conferences, tradeshows, and stakeholder engagement events across 2023 and 2024. These activities helped raise awareness, strengthen industry connections, and enhance program alignment with sector needs.

Website URL: https://bcvalueaddedwood.com/

2023 Engagements

- Youth in Manufacturing Action Plan (Virtual): May 2023.
- BC First Nations Forestry Council (Virtual): June 2, 2023.
- BC First Nations Forestry Conference (In-Person): June 28–29, 2023, Vancouver.
- BC Technical Education Association (BCTEA) Conference (In-Person): October 19–20, 2023, Courtenay. BC Wood addressed this association of high school shop teachers, highlighting how the program could benefit their students.
- A presentation was delivered to the association's executive, followed by a facilitated break-out session during the conference.
- Career Education Society (CES) Conference (In-Person): November 20–21, 2023. BC Wood engaged high school guidance counselors, emphasizing the program's relevance to guiding students onto meaningful career paths.

2024 Engagements

- BC Value-Added Accelerators - First Nations Forest Forum (In-Person): February 28, 2024, Agassiz.
- BC Log and Timber Builders Association (BCLTBIA) Conference (In-Person): April 11–14, 2024, Salmon Arm. BC Wood presented and participated in a roundtable discussion on Industry Training & Education. The Project Manager and North Pacific Metrics (NPM) engaged attendees in completing an NPM survey, collecting 15 additional responses to improve the Skilled Production Worker (SPW) program.
- BC First Nations Forestry Council (In-Person): May 29–31, 2024, Penticton Although too late to promote the Direct to Work Program, BC Wood's participation demonstrated support for the sector.
- Northworks Career Fair (Prince George): Scheduled for March 6, 2024, but canceled due to illness.

Sustainability

BC Wood has engaged with the following Institutions/Organizations specific to the Direct-to-Work curriculum:

- Access Futures, Vancouver
- BC Regional Council of Carpenters, Vancouver
- Coast Mountain College, Smithers
- College of the Rockies, Cranbrook
- Disabilities Foundation, (Wood

Shop), Vancouver
- Kwantlen Polytechnic University, Cloverdale
- North Island College, Campbell River
- Okanagan College, Vernon (Futures Program)
- Selkirk College, Nelson
- University of the Fraser Valley, Abbotsford
- BC Technical Education Association, Vancouver
- Camosun College, Victoria
- College of New Caledonia, Prince George
- Continuing Education & Training Association of BC
- Emily Carr University, Vancouver
- Nicola Valley Institute of Technology, Merrit
- Northern Lights College, Dawson
- Seabird College, Agassiz
- Thompson River University, Kamloops
- University of Northern BC, Prince George
- Vancouver Island University, Nanaimo
- Women in Construction, Vancouver

To date Okanagan College (Vernon) has expressed interest in the Direct to Work curriculum for the Vernon and District Association for Community Living (VDACL), otherwise known as Venture Training as well as other local partner organizations. The VDACL is a Greater Vernon 'pioneering agency,' proudly supporting adults with developmental disabilities with social, educational and vocational skill-building since 1955 (https://vdacl.ca).

The following organizations have downloaded the Direct to Work curriculum:

- Okanagan College (Vernon)
- Northern Lights College (Dawson)
- Nicola Valley Institute of Technology (Merrit)
- North Island College (Campbell River)
- BC Technical Education Association (BC High School Shop teachers)
- Selkirk College (Nelson)

BC Wood is currently evaluating the incorporation the HR Toolkit into its current programming. There is a clear desire from industry for a continuation of the support provided within HR Toolkit. There are many similarities between the support provided within the HR Toolkit and the existing marketing and business development capacity building initiatives that BC Wood has been delivering for more than a decade. BC Wood will seek new sources of funding to take on and maintain the HR Toolkit as part of the supports it provides to industry.

Key components of the Skilled Production Worker Program will be housed on the Project website. These pieces include the Occupational Analysis Tool (Competencies Profile) as well as the Curriculum Framework and Training Outline. Further funding would be required to move this piece forward as well as a dedicated project lead. Foundational work has been completed on a first order budget to run this program as a pilot.

Program Evaluation

While BC Wood and its team led the planning and execution of the Workforce Development Project, Qatalyst Research Group (QRG) was engaged to evaluate the outcomes of Phase IV implementation. The evaluation focused on results achieved across project components, opportunities for improvement, sustainability, alignment with identified labour market challenges, and the overall effectiveness of project design and delivery.

The evaluation drew on multiple lines of evidence. Secondary research included a comprehensive review of outputs from previous phases, project deliverables, related documents and data, the project website and social media content, interim and final Phase IV reports, and sector-specific information on the value-added wood industry. Primary data was gathered through interviews, surveys, and meetings with key stakeholders—including the BC Wood CEO, Project Manager, Governance Committee members, component consultants, Technical Working Groups, students in the Direct to Work training, and employers engaged in the HR Toolkit component.

The main report presents the findings by project component. The overall findings of the project are summarized as follows.

Opportunities for Improvement

Direct to Work Program

Future delivery of the Direct to Work program would benefit from placing a stronger emphasis on connecting graduates with employment opportunities in the sector. Follow-up surveys with 16 participants revealed that three secured employment in the sector and three pursued additional training related to the industry. While most participants expressed continued interest in working in the value-added wood sector and felt they had developed important skills, many had not yet obtained employment.

Building stronger, ongoing relationships with employers and community partners is also essential. Employers play a key role in referring applicants, presenting to students, hosting field trips, offering work placements or internships, hiring graduates, and advising on program content. In addition, partnerships with industry associations, secondary schools, and organizations that support women, youth, Indigenous people, and newcomers can help expand outreach and impact. While outreach efforts were made during the project, a more formal communication and marketing strategy is recommended to strengthen these connections.

Reducing barriers to participation—particularly for underrepresented groups—should also be a priority. Offering training allowances and additional supports such as transportation and childcare would help make the program more accessible and inclusive.

Finally, program content should be streamlined, and more time should be allocated to in-shop technical training, which is critical for hands-on skill development. The current volume of material is too broad to be effectively delivered within a four-week timeframe, and adjustments would improve both learning outcomes and participant readiness for the workplace.

HR Toolkit and Coaching

Awareness of the HR resources was initially a challenge in recruiting companies to participate in the coaching services, and it likely remains a barrier to broader use of the HR Toolkit. Promotion efforts included social media and direct outreach, but a key challenge is that employers who might benefit from these resources may not be aware of their availability—or may not associate HR support with BC Wood, an organization more commonly linked to market development.

Improving HR practices in the sector requires a three-step approach:

First, employers must recognize the value of effective HR. This will require ongoing promotion and education to shift perceptions and increase understanding;

Second, employers need tools to assess their current HR practices and identify areas for improvement. While the coaching services were effective in this regard, they reached only a limited number of companies. A potential solution would be to develop an online self-assessment tool that helps employers evaluate their HR practices and prioritize improvement opportunities; and

Third, employers need to be connected to practical resources and support to implement changes. Stakeholders provided suggestions for enhancements that could be incorporated into future versions of the HR Toolkit to better meet these needs.

Although originally intended for smaller businesses, the program was expanded to include medium and larger companies, revealing that organizations of all sizes could benefit from HR support. Coaching sessions also highlighted the need for more customized and nuanced assistance than originally anticipated. This finding suggests that future initiatives may need to be structured differently, potentially incorporating formal assessments and even AI-driven tools to provide more tailored and scalable support.

Skilled Production Worker Program

A key next step will be to pilot and evaluate the training model and framework in a real-world setting. The outcomes of this pilot should inform refinements to the system and approach, help demonstrate its value to employers and stakeholders, and support the identification of a champion—or champions—who can lead its ongoing implementation. In hindsight, the Skilled Production Worker component would have benefited from additional time and resources to pilot the model within the current project.

While the decentralized delivery model offers flexibility, it should be complemented by additional strategies. Certain modules could be well-suited to online delivery, whether through live sessions, recorded video content, or interactive, AI-based training tools. An online platform could also support pre-training assessments, enabling trainers to tailor content to the specific needs and desired outcomes of employers and workers. Furthermore, the development of communities of practice could enhance peer learning and support ongoing skills development. The model should also allow for

flexible participation, enabling workers to pursue formal micro-credentials or access training on an à-la-carte basis.

Successful implementation will require strong promotion. The initial training sessions will likely need substantial outreach to generate interest and participation, though this challenge is expected to ease over time as awareness develops. These promotional efforts should be closely aligned with broader outreach initiatives related to the Direct-to-Work training and the HR Toolkit to ensure a cohesive and coordinated approach.

Sustainability

Each project component successfully developed its intended outputs and validated them with key target groups. These outputs address important gaps that have limited recruitment, development, and retention of workers in British Columbia's value-added wood sector. The next critical step is to ensure these materials are used consistently and effectively. It should not be assumed that uptake will occur on its own; continued effort and support will be needed to encourage adoption and integration.

The sustainability of the Direct-to-Work Program depends on the extent to which training partners adopt and apply the materials to train the next generation of workers. BC Wood has made significant progress by making key resources, such as the Trainer-Provider Administrator Guide, available to the public. In addition, the Project Manager has actively reached out to potential training partners to explore their interest in using the curriculum. So far, several colleges and a teacher association have downloaded the materials, and one college has shown interest in implementing the program. Ongoing outreach will be necessary to expand adoption, with the goal of establishing the program as a regular offering through colleges and the secondary school system. Given current financial pressures on institutions, especially those resulting from reduced international student enrollment, adding a course focused on developing local industry-ready workers could help offset some of those revenue losses.

Among the three components, the Skilled Production Worker initiative faces the greatest challenges in terms of long-term sustainability. It has produced a training model, Competency Profile, Curriculum Framework, and Training Outline that offer a promising solution to long-standing barriers in skilled worker development. These resources are now available to employers, employees, and trainers. However, their impact will depend on the extent to which they are actively used. Further investment and the identification of a committed champion or group of champions may be necessary to lead the broader rollout and implementation of this model.

The HR Toolkit is the most straightforward to maintain, since the resources are already posted online. Nevertheless, additional efforts are needed to increase

awareness and use. This may involve creating promotional and educational materials to highlight the importance of effective HR practices, offering tools to help employers assess and improve their current systems, and regularly maintaining and expanding the toolkit to keep it up to date. Regular updates will be important to ensure the materials remain relevant, especially as legislation changes or new programs become available. BC Wood, in consultation with its Board of Directors, is considering making the HR Toolkit a permanent part of its core programming. However, it is still unclear whether additional funding will be available to support further development and increased adoption.

Overall Project Design and Delivery

1. The Value-added Wood Implementation Project exemplifies the effectiveness of the multi-phase, systemic approach embedded in the SLMP.

The SLMP program is unique in its ability to bring together industry and other stakeholders, assess the factors impacting recruitment, development, and retention of workers, develop targeted strategies to address those challenges, and provide support for the implementation of those strategies.

2. The program components are well aligned with key labour market challenges faced by the sector.

The characteristics of the value-added wood sector present notable constraints on its ability to attract, develop, and retain the workforce it needs.

> **First,** the sector produces a wide variety of secondary manufactured wood products, requiring diverse skills, processes, machinery, technologies, and services.
>
> **Second,** it is highly decentralized, with many operations located in communities with populations under 10,000.
>
> **Third**, the sector is dominated by small companies (typically employing 15 to 40 people), which often have limited HR capacity and financial resources. This smaller scale makes it difficult to release staff for training lasting more than a few days.

As a result of these characteristics:

- Awareness of employment and career opportunities in the sector has been low, making it harder to attract new workers.
- Delivering training through traditional, centralized classroom models has been challenging. The lack of skilled worker training has slowed career progression and contributed to lower employee retention.
- Employers have struggled to access HR expertise to attract, develop, and retain workers or to implement effective HR practices.

The Value-added Wood Implementation Project addressed these challenges by introducing entry-level training, developing a model for providing SPW training to existing workers, and improving employer access to essential HR tools and resources.

3. The project was well managed and delivered effectively, benefiting from the capabilities of BC Wood, the Project Manager, and strong industry support.

The project leveraged BC Wood's network and expertise. The Governance Committee emphasized the importance of having a dedicated Project Manager to provide leadership and coordination. The project also benefited from consistent engagement by industry representatives, who actively participated in Governance Committee meetings (held eight times to date) and contributed oversight and direction. Additional hands-on support came from the Technical Working Groups.

4. The project may have benefited from a stronger focus on sustainability during the design phase.

Greater attention to sustainability planning early in the project could have helped clarify how deliverables might be leveraged to address ongoing labour market challenges. This may have influenced the project design, such as integrating automated assessment tools into the SPW and HR Toolkit components, and supported the identification of champions to carry the work forward.

5. There may have been additional opportunities to further integrate and coordinate the activities across the three components.

While some synergies existed—such as alignment between the Direct-to-Work Occupational Profile and SPW Competencies, and some referrals between Exportspark and the SPW program—the components were largely managed as

separate initiatives. Project consultants did attend all Governance Committee meetings, whether presenting or not, which supported information-sharing. However, the project could have benefited from deeper coordination efforts in areas such as industry awareness, relationship-building, participant recruitment across the Direct-to-Work, HR Toolkit, and SPW initiatives, and further alignment between the two training-related components.

For further information see Appendix D — Evaluation Slide Deck (pg. 205) and 'Evaluation of the BC Wood Value-Added Strategy Implementation Report' (pg. 214)

Appendix A — Direct To Work Program

Delivery Partner Engagement Schedule

The table below highlights the timeline of outreach efforts to potential delivery partners:

Delivery Partner	Engagement Dates (2023)	Additional Notes
Selkirk College	May 3, Dec 8, Jan 23 (2024)	Zoom
Okanagan College (OC)	May 4	Zoom
VIU, OC, Selkirk, UFV	June 26	Group meeting
University of Fraser Valley (UFV)	July 27	Zoom
College of the Rockies (COTR)	August 18	Zoom
North Island College (NIC)	October 6, October 19	In-person meeting
College of New Caledonia (CNC)	October 27	Zoom
Seabird College	October 30	In-person meeting
British Columbia Institute of Technology (BCIT)	December 11	In person meeting

WG DRAFT – December 7, 2023

This Educational Program Service Agreement (this "**Agreement**") is made effective [Date] (the "**Effective Date**")

BETWEEN:

B.C. WOOD SPECIALTIES GROUP ASSOCIATION, a British Columbia Society with an office at 200 – 9292 200th Street, Langley, BC V1M 3A6

("**B.C. Wood**")

AND:

[NAME OF PSI], a British Columbia post-secondary institution with a registered office at [address]

(the "**Service Provider**")

(herein, B.C. Wood and the Service Provider are each referred to as a "**Party**" and collectively referred to as the "**Parties**")

BACKGROUND

A. The Service Provider is an accredited institution of higher education with expertise in providing educational programs.

B. B.C. Wood has developed the Program (hereinafter defined) in consultation with industry stakeholders, partners, and subject matter experts and wishes to engage the Service Provider to deliver the Program and provide educational services on its behalf.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained in this Agreement, the Parties agree as follows:

1. Educational Program

1.1 Description of Program: The Service Provider shall provide the Value-Added Wood Manufacturing Work-Ready Orientation and Skill Building Program on behalf of B.C. Wood all strictly in accordance with the lesson plans attached hereto as Schedule "A" (the "**Program**").

1.2 Program Particulars: The Program instructor, location, class size and schedule, including start and end dates, class hours, and any breaks, shall be as mutually agreed upon by the Parties and detailed in Schedule "B".

2. Responsibilities of the Service Provider

2.1 Program Delivery: The Service Provider shall be responsible for delivering the Program, including, instruction, materials, and evaluations/assessments in accordance with the lesson plans attached hereto as Schedule "A" all subject to advanced approval by B.C. Wood.

2.2 Instructors: The Service Provider shall provide qualified instructors to teach the Program.

2.3 Materials: The Service Provider shall provide necessary course materials and resources or specify requirements for materials to be provided by B.C. Wood.

2.4 Marketing: The Service Provider shall plan and develop marketing strategies and where appropriate undertake joint marketing activities with B.C. Wood.

2.5 Enrollment: The Service Provider shall be responsible for participant enrollment including recruitment, evaluation and admissions of suitable candidates, and collection of participant fees, if any, all subject to advanced approval by B.C. Wood.

2.6 Facilities and Equipment: The Service Provider shall provide suitable facilities, equipment, including, without limitation, personal protective equipment, and support services necessary for delivering the Program, as agreed upon by the Parties.

2.7 Health and Safety: The Service provider shall adhere to the British Columbia Human Rights Code and ensure the health and safety and personal wellbeing of the Program's participants.

2.8 Service Quality: The Service Provider represents and warrants that it possesses all relevant qualifications, licenses, expertise, resources and experience required to perform its obligations under this Agreement in accordance with all applicable legal and regulatory requirements and the Service Provider shall deliver the Program and perform its duties and responsibilities faithfully and to the highest professional standards and shall dedicate sufficient resources to deliver the Program within the timelines or schedules agreed to herein.

2.9 Reporting: The Service Provider shall facilitate the participants' evaluation of the Program and provide B.C. Wood with a full report with detailed feedback and recommendations upon completion of the Program and where necessary provide B.C. Wood with access to the instructors and participants.

3. Responsibilities of B.C. Wood

3.1 Curriculum: B.C. Wood is responsible for development of the Program curriculum and has provided the lesson plans attached hereto as Schedule "A" to the Service Provider.

3.2 Fees: B.C. Wood shall pay the Service Provider the fees agreed upon in Schedule "C" in a timely manner.

3.3 Marketing: B.C. Wood shall participate in the planning and development of marketing strategies for the Program by leveraging network connections and where appropriate undertake joint marketing activities with the Service Provider.

4. Financial Arrangements

4.1 The financial arrangements, including program fees, payment terms, and any additional costs, are outlined in Schedule "C" attached hereto.

5. Term and Termination

5.1 Term: This Agreement commences on the Effective Date and continues until the completion of the Program unless terminated earlier in accordance with the terms herein (the "**Term**").

5.2 Termination: Either Party may terminate this Agreement upon thirty (30) days written notice to the other Party.

6. Relationship

6.1 The Service Provider is an independent contractor, and neither the Service Provider nor the Service Provider's employees or contract personnel are, or shall be deemed, B.C. Wood's employees. Nothing in this Agreement or in the provision of services hereunder constitutes or implies an employment relationship, partnership, joint venture, or any other legal form of relationship. The Service Provider does not act as B.C. Wood's agent or otherwise act on B.C. Wood's behalf except as expressly set out in this Agreement or as B.C. Wood specifically authorizes in writing. The Service provider shall supply and pay for all labour, materials, equipment, tools, facilities, and licenses necessary or advisable to deliver the Program and perform its obligations under this Agreement. B.C. Wood may, from time to time, give such instruction to the Service Provider as B.C. Wood considers necessary in connection with the provision of the Program, but the Service Provider is not subject to the control of B.C. Wood with respect to the manner in which such instructions are carried out. All employees, agents or subcontractors of the Service Provider delivering the Program remain at all times the employees, agents or subcontractors of the Service Provider and not of B.C. Wood, and are not entitled to and will not receive any benefits, allowances or rights in any way associated with employees of B.C. Wood.

7. Business Licenses, Permits, and Certificates

7.1 The Service Provider shall and shall cause the Service Provider 's employees and contract personnel to comply with all federal, provincial, and local laws requiring permits, licenses, approvals, and certificates required to provide the Program and carry out the services to be performed under this Agreement.

8. Provincial and Federal Taxes

8.1 B.C. Wood is not responsible for withholding any taxes from the Service Provider's payments or making any tax payments on the Service Provider's behalf, making provincial or federal employment insurance contributions on the Service Provider's behalf, or withholding provincial or federal income tax from the Service Provider's payments. The Service Provider shall pay when due all taxes, duties, fees or assessments incurred while performing services under this Agreement including all applicable income taxes. Upon request, the Service Provider shall provide B.C. Wood with proof that such payments have been made.

9. Insurance

9.1 The Service Provider shall, at its own expense, maintain adequate insurance coverage for the duration of the Term and the Program, including WorkSafeBC liability insurance and any

additional insurance which the Service Provider is required by law to carry, or which B.C. Wood considers necessary to cover risks not otherwise covered by insurance specified above in B.C. Wood's sole discretion, and shall provide evidence of same to B.C. Wood upon request.

10. Workers' Compensation

10.1 B.C. Wood is not responsible for obtaining workers' compensation insurance on behalf of the Service Provider or the Service Provider's employees. If the Service Provider hires employees to perform any work under this Agreement, then the Service Provider shall cover those employees with workers' compensation insurance to the extent required by law and provide B.C. Wood with a certificate of workers' compensation insurance upon request.

11. Indemnities

11.1 The Service Provider shall release, indemnify and save harmless B.C. Wood its directors, officers, employees, servants, volunteers and agents from and against any and all losses, claims, damages, actions, causes of action, costs, expenses, judgments, fines and fees of whatever kind, including solicitors' fees on a solicitor and own client basis, that B.C. Wood may be required to pay in respect of income tax, pension, unemployment insurance, workers' compensation, or health care assessment relating to any amounts payable under this Agreement.

11.2 The Service Provider shall release, indemnify and save harmless B.C. Wood its directors, officers, employees, servants, volunteers and agents from and against any and all losses, claims, damages, actions, causes of action, costs, expenses, judgments, fines and fees of whatever kind, including solicitors' fees on a solicitor and own client basis, that B.C. Wood or any other person may sustain, incur, suffer or be put to arising out of or in connection with any breach of this Agreement or negligent act or omission of the Service Provider, its agents, employees or subcontractors in the performance of, or failure to perform, under this Agreement.

12. Confidentiality

12.1 The Parties may exchange confidential information during the Term in connection with this Agreement. The Parties shall protect and not disclose such confidential information except as required by law or with the express written consent of the disclosing Party. The Parties shall comply with either the requirements of *Freedom of Information and Protection of Privacy Act* (British Columbia) or the *Personal Information Privacy Act* (British Columbia), whichever is applicable.

13. Intellectual Property

13.1 All documents, software, records, work papers, notes, memoranda, and similar records of, or containers of, intellectual property produced by the Service Provider in connection with the Program at any time or made available to the Service Provider at any time during the Service Provider's engagement with B.C. Wood (whether before the Effective Date of this Agreement or thereafter), including all copies thereof, are the property of B.C. Wood and belong solely to B.C. Wood, and shall be held by the Service Provider solely for the benefit of B.C. Wood and delivered to B.C. Wood by the Service Provider upon completion of the Program or termination of this Agreement or at any other time upon request by B.C. Wood.

13.2 The Service Provider acknowledges that any intellectual property produced in connection with the Program is the property of B.C. Wood, which has the exclusive right to any patents, trademarks, copyrights, licences, or any other protection that may be issued thereon or that may arise with respect thereto. The Service Provider assigns to B.C. Wood all the Service Provider's right, title, and interest in such intellectual property and all the Service Provider's right, title, and interest in any patent, copyright, trademark, licence, or other protection that may be issued or that may arise with respect thereto. The Service Provider shall execute and deliver all such instruments as B.C. Wood may require in order to establish and protect its rights of ownership in any patent, copyright, trademark, licence, or other protection referred to herein.

13.3 The Service Provider hereby waives all moral rights under the *Copyright Act* (Canada) or any rights to similar effect in any country or at common law that the Service Provider may have with respect to any and all intellectual property related to the Program, whether or not conceived or developed during the Term.

14. Governing Law and Dispute Resolution

14.1 This Agreement is governed by and construed in accordance with the laws of the Province of British Columbia and the laws of Canada applicable therein. Each of the Parties irrevocably and unconditionally submits and attorns to the non-exclusive jurisdiction of the courts of the Province of British Columbia to determine all issues, whether at law or in equity, arising from this Agreement. [NTD: Alternative: All disputes arising under the terms of this Agreement shall be resolved by arbitration. Judgment on any award rendered in any such arbitration may be entered in any court having jurisdiction.]

15. Entire Agreement

15.1 This Agreement, including each schedule attached hereto, constitutes the entire agreement between the Parties with respect to the subject matter hereof and supersedes all prior discussions, negotiations, and agreements, whether oral or written.

16. Survival

16.1 Sections 11.1, 11.2, 12.1, 13.1, 13.2, 13.3 and 14.1 of this Agreement survive the expiration or earlier termination of this Agreement.

17. Severability

17.1 Each section of this Agreement is distinct and severable. If any portion of this Agreement becomes illegal, invalid, void, or unenforceable in any jurisdiction, that error does not affect the legality, validity, or enforceability of the remaining sections of this Agreement, in whole or in part.

18. Amendment and Waiver

18.1 This Agreement cannot be amended or terminated except by a written agreement executed by both Parties. If a Party waives its rights over one section of this Agreement, or is deemed to waive its rights because of its delay or failure to exercise a right, that waiver does not constitute a waiver of any other section, nor does it constitute a continuing waiver unless expressly provided.

19. Further Assurances

19.1 Each Party shall, at the requesting Party's cost and expense, execute and deliver any further agreements and documents and provide any further assurances, undertakings and information as may be reasonably required by the requesting party to give effect to this Agreement.

20. Assignment and Enurement

20.1 Neither Party may assign any right or obligation under this Agreement without the prior written consent of the other Party. This Agreement benefits and is binding upon the Parties and their respective heirs, executors, trustees, personal or legal representatives, successors and permitted assigns.

21. Notices

21.1 Any notice, demand, request, consent, approval, or other communication which a Party is required or permitted to give to the other Party under this Agreement shall be delivered personally or by courier, by registered mail, or by e-mail to the following addresses:

For B.C. Wood, to:

Suite 200, 9292 – 200th Street
Langley, BC, V1M 3A6
bhawrysh@bcwood.com

For the Service Provider, to:

[add mailing/delivery address for notices]
[add email address for notices]

Either Party may change the address for delivering notices to it by requesting in writing that the other Party deliver future notices to a different address, provided that request itself complies with this section.

22. Time

22.1 Time is of the essence of this Agreement.

23. Counterparts and Electronic Delivery

23.1 This Agreement may be executed and delivered by the Parties in one or more counterparts, each of which is an original, and each of which may be delivered by e-mail or other functionally equivalent electronic means of transmission, and those counterparts together constitute one and the same instrument.

24. Schedules

24.1 The following schedules are incorporated into and form an integral part of this Agreement:

Schedule "A" – Lesson Plans
Schedule "B" – Program Schedule
Schedule "C" – Financial Arrangements

IN WITNESS WHEREOF, the Parties hereto have executed this Educational Program Service Agreement as of the Effective Date.

B.C. WOOD SPECIALTIES GROUP ASSOCIATION

Per: _____
Name: Brian Hawrysh
Title: Chief Executive Officer
Date: _____

[SERVICE PROVIDER]

Per: _____
Name: [Name]
Title: [Title]
Date: _____

Schedule "A"
Lesson Plans

[Lesson Plans appended]

Schedule "B"
Program Particulars

Program Instructor

Name: [name of instructor]
Contact: [email/phone]

Program Location

Location: [location(s)].

Program Class Size

Class Size: [# of participants]

Program Schedule

The schedule for the Program is as follows:

(a) Year/Term [year/term]
(b) Start date: [date]
(c) End date: [date]
(d) Course Schedule: [times of day and days per week]

Schedule "C"
Financial Arrangements

B.C. Wood agrees to pay a maximum of $[amount] to the Service Provider for the provision of the Program. This cost covers the following costs:

[insert table outlining budget]

B.C. Wood shall process payment upon receipt of invoices and any relevant documentation received.

Unless otherwise specified in this Agreement, all references to money are to Canadian dollars.

VAW Strategy Implementation Project Final Report - Vancouver Island University

March 2023 – September 2024

Progress reports due:

- Interim Report #1 June 15, 2023 - Completed and submitted by Nancy Hamilton
- Interim Report #2 November 15, 2023 – Delayed/foregone as directed by BC Wood
- Interim Report #3 March 15, 2024 - Delayed/foregone as directed by BC Wood
- Final Report September 16, 2024 - Completed and submitted by Niki Scarfo

Prepared by CT Resources and VIU

This report includes information related to the VAW Strategy One Implementation Project.

1. Status report against project deliverables

PROJECT DELIVERABLE & PROJECT ACTIVITY/ DUE DATE	DRAFT / TASK DUE TO BC WOOD	Notes
PROJECT MANAGEMENT WORKPLAN February 15, 2023.	Friday, February 10, 2023	Complete Early 2023
ENVIRONMENTAL SCAN March 31, 2023	Wednesday, March 15, 2023	Draft unfinished document was submitted early at BCWood's request. Updated final document was submitted May 26, 2023. S. Goldie accepted updated report May 29, 2023. E-scan step completed.
OCCUPATIONAL COMPETENCY PROFILES FOR ENTRY-LEVEL PRODUCTION WORKER June 30, 2023	Thursday, June 15, 2023	Draft occupational profiles ELW and methodology completed and submitted to S Goldie June 14, 2023
INTERIM REPORT #1 June 30, 2023.	Thursday, June 15, 2023	N. Hamilton spoke with Jessi Zelke on May 31 and date for this interim report is due to her for July 15, 2023. Interim Report #1 submitted by NH to JZ on July 14, 2023
DRAFT CURRICULUM FOR ENTRY LEVEL TRAINING October 15, 2023	August 15, 2023 & September 30, 2023	Final drafts sent to BC Wood/S Goldie on Nov 1 & 14. Sean sent on to Governance Committee members for feedback. Final feedback came in December 1. Sean was sent all Master copies in Dropbox on December 7, 2023 by NS

INTERIM REPORT #2 November 25, 2023.	November 15, 2023	S Goldie infirmed Interim Report #2 is not required to be submitted until BC Wood hires a replacement for Jessi Zelke.
INTERIM REPORT #3 March 30, 2024.	Friday, March 15, 2024	No Interim Report #3 required until a replacement for Jessie Zelke is hired.
Pause while Pilot Projects take place	Spring 2024 - August 2024	Pilot feedback and summary provided to VIU/CT Resources from BC Wood on July 30, 2024
FINAL CURRICULUM FOR ENTRY LEVEL TRAINING June 30, 2024	June 15, 2024 September 30, 2024	Amended to September 30, 2024 Final edits and Summary document completed during August & September

2. Reflection on what worked or not and suggestions for improvement.

What worked	Pre-planning meetings with Training Provider - Administrators helped to facilitate possible pilot delivery pre-planning. Good feedback and direction from Governance Committee regarding program scope and emphasis. Availability to meet between VIU staff, CT Resources and BC Wood – everyone tried to make themselves available when needed. Following a chain of command from CT Resources to VIU to BC Wood to Governance Committee and then back down again for each component was the best pathway when prescribed to.
What didn't	Delay in contract signing and the resulting delay in our internal VIU processing/ review of contract. Lead time for Training Provider – Administrators meetings were compressed and delayed finalization of training lesson plans. Broad scope of curriculum based on extensive Work-Ready Occupational Profile extended longer than planned in terms of Lesson Plans and training resources. Each delay at any end caused a chain reaction. Funds for Curriculum Developer were spent through quickly. Less development hours or additional funding in future. The Ministry funding that was left over from other line items/variable was returned to the Ministry before the project was complete Conversations and decisions did not always follow the prescribed pathway BC Wood ➡ VIU ➡ Developer, which led to confusion.
Suggestions for improvement	Revisit proposed deliverables timelines curriculum finalization and pilot delivery. Adjust timing and scheduling of project activities to accommodate / account for peaks in stakeholders' seasonal business cycles. Allow sufficient time for the development of the complex multi-year / multi-stakeholder agreement.

3. The effectiveness of collaboration between VIU and BC Wood

Collaboration comments	Although there were changes in scope and in timelines over the course of the project, everyone was able to work towards the same end goals. There were a few financial challenges, but through discussion and collaboration we were able to find a path to the completed project. Sean, Brian, Jesse Z and the Governance members were always respectful and accommodating to VIU and CT Resources

CT Resources Inc. and Vancouver Island University for BC Wood

Direct to Work Training Program – Occupational Profile

Use the 3 factors below to determine the importance of respective Job Tasks (e.g. A.1, etc.) to your business:
Criticality – H, M, L (score 3, 2, 1) Frequency – 3, 2, 1 (Often, Occasionally, Seldom) Difficulty – h, m, l (score 3, 2, 1)
Total the 3 factors to establish the relative importance for competency in each Job Task and identify training gaps.

Occupational Profile: Value-Added Wood (VAW) Manufacturing Entry-Level Production Worker

Version Date: 2023-12-01

Sub-Sectors: Millwork Kitchen Cabinets and Counters Furniture Prebuilt Housing
Engineered Wood Products Log Home and Timber Frame Remanufactured Wood Products

A. Carry Out Environmental, Health and Safety Procedures	A.1 Search / Refer to Workers Compensation Act, and OHS Regulation	A.2 Discuss Orientation and Training Requirements for New Workers and Young Workers	A.3 Identify Hazards and Assess Risks in the Workplace	A.4 Explain the Right to Refuse Unsafe Work Until a Possible Hazard is Investigated	A.5 Describe the Process for Reporting and Investigating Incidents	A.6 Explain How to Prevent Workplace Bullying and Harassment	A.7 Select, Wear, and Maintain Personal Protective Equipment	A.8 Describe Response to Emergencies and Alarms

A. Carry Out Environmental, Health and Safety Procedures (cont'd)	A.9 Carry Out Fire Safety Procedures; Use a Fire Extinguisher	A.10 Explain the Importance of Proper Nutrition and Hydration	A.11 Perform Tasks Using Safe Bending, Lifting, and Physical Movements	A.12 Explain and Demonstrate How to Eliminate Slip, Trip, Fall Hazards	A.13 Apply Procedures to Prevent MSI (Musculoskeletal Strain Injuries)	A.14 Describe and Follow Spill Response Procedures	A.15 Apply Equipment Lock Out – Tag Out Procedures	A.16 Discuss Importance of Machine and Equipment Guarding

A. Carry Out Environmental, Health and Safety Procedures (cont'd)	A.17 Work Safely at Heights on Ladders and Scaffolds	A.18 Discuss Fall Protection Systems and Equipment	A.19 Follow and Apply Procedures to Enter Confined Spaces	A.20 Work Safely around Mobile Equipment - Forklifts, Walkie Lifts, Skid Steer…	A.21 Describe Scope of WHMIS – Symbols, Labels, Safety Data Sheets	A.22 Apply First Aid Procedures- 1-day OFA1 or St. John Ambulance or Red Cross	A.23 Apply Safety Procedures in Rigging and Overhead Crane Operations	

CT Resources Inc. and Vancouver Island University for BC Wood

Direct to Work Training Program – Occupational Profile

Use the 3 factors below to determine the importance of respective Job Tasks (e.g. A.1, etc.) to your business:

Criticality – H, M, L (score 3, 2, 1) Frequency – 3, 2, 1 (Often, Occasionally, Seldom) Difficulty – h, m, l (score 3, 2, 1)

Total the 3 factors to establish the relative importance for competency in each Job Task and identify training gaps.

B. Use Communication Skills	B.1 Describe and Take Account of Factors that Impact the Commun-ications	B.2 Apply Verbal and Non-Verbal Communica-tion Skills	B.3 Give and Receive Feedback	B.4 Work Collabora-tively in a Team	B.5 Effectively Manage Problems, Conflict and Differences in the Workplace	B.6 Recognize and Respect Diversity in the Workplace	B.7 Maintain Timely Communica-tions with your Employer	

C. Organize Work and Manage Information	C.1 Manage Stress, Time, and Workload	C.2 Utilize Critical Thinking to Make Effective Decisions	C.3 Plan and Organize Work Area, Equipment, and Supplies	C.4 Follow Safe Work Procedures, Safety Data Sheets, and Other Safety, Operations Documents and Manuals	C.5 Interpret Job and Production Specifications and Material Lists	C.6 Interpret and Describe Prints and Technical Job / Shop Drawings	C.7 Interpret and Create Production, Inventory, and Other Reports (print, digital)	C.8 Utilize Workplace Email, Timekeepers, Team Tools (Video Chat, Group Chats)

D. Describe the VAW Manufacturing Industries	D.1 Describe the VAW Manufacturing Sub-Sectors in BC - Products, Operations, and Processes	D.2 Discuss Employment Trends, Opportunities, and Career Pathways	D.3 Describe Qualities, Defects, and Properties of Common BC Wood Species	D.4 Explain Importance of and Emphasis on Sustainability in Operations and Material Sourcing	D.5 Describe Upstream Operations (Harvesting, Log Sort, Mills, etc.)	D.6 Describe Downstream Operations (Retail Sales, Building Centres, Contractors, Developers, Architects, Specifiers)	D.7 Describe Types of VAW By-Products and Their Value in Respective Industries	D.8 Tour Manufacturing Operations, Upstream and Downstream Operations, and Businesses

Use the 3 factors below to determine the importance of respective Job Tasks (e.g. A.1, etc.) to your business:
Criticality – H, M, L (score 3, 2, 1) Frequency – 3, 2, 1 (Often, Occasionally, Seldom) Difficulty – h, m, l (score 3, 2, 1)
Total the 3 factors to establish the relative importance for competency in each Job Task and identify training gaps.

E. Describe Types of Fasteners, Adhesives, Joinery, Hardware, and Finishes Used in VAW Industries	E.1 Describe Types and Safe Uses of Mechanical Fasteners and Hardware	E.2 Describe Types and Safe Uses of Adhesives	E.3 Describe Types of Joinery Used	E.4 (Shop) Describe and Make Wood Joints – Mortice and Tenon, Dovetail, Others	E.5 Describe Types and Safe Uses of Finishes	E.6 Explain Importance of Climate Control, Moisture Protection, and Preservation for VAW Products		
F. Safely, Correctly, and Accurately Use Hand Tools	F.1 Setup Job Site / Workspace for Safety and Efficiency	F.2 Use Math and Tape Measures, Rulers to Obtain Imperial and Metric Measure-ments	F.3 Apply Carpentry Math Functions to Calculate Area, Dimensions, Perimeter, Volume, etc.	F.4 Safely Handle and Use Blades and Knives	F.5 Operate and Maintain Hammers, Bars, Nail Pullers, Punches, Wrecking Bars	F.6 Operate and Maintain Vises and Clamps	F.7 Operate and Maintain Squaring Tools, Layout and Marking Tools (Carpenter's Pencil, Chalk Line)	F.8 Operate, Maintain, and Sharpen Hand Saws – Rip Saw, Crosscut Saw, Coping Saw
F. Safely, Correctly, and Accurately Use Hand Tools (cont'd)	F.9 Operate and Maintain Screwdrivers	F.10 Operate, Maintain, and Sharpen Chisels	F.11 Operate, Maintain, and Sharpen Hand Planes	F.12 Hand Sand Using Correct Sandpaper Grits	F.13 Operate and Maintain Wrenches and Pliers	F.14 Operate and Maintain Levelling Tools	F.15 Check Calibration and Operate Moisture Meters	F.16 Operate and Maintain Specialty Tools

CT Resources Inc. and Vancouver Island University for BC Wood

Direct to Work Training Program – Occupational Profile

Use the 3 factors below to determine the importance of respective Job Tasks (e.g. A.1, etc.) to your business:
Criticality – H, M, L (score 3, 2, 1) Frequency – 3, 2, 1 (Often, Occasionally, Seldom) Difficulty – h, m, l (score 3, 2, 1)
Total the 3 factors to establish the relative importance for competency in each Job Task and identify training gaps.

G. Safely, Correctly, and Accurately Use Power Tools	G.1 Setup Job Site / Workspace for Safety and Efficiency	G.2 Operate and Maintain Circular and Beam Saws	G.3 Operate and Maintain Jig Saw	G.4 Operate and Maintain Table - Band Radial Saws	G.5 Operate and Maintain Jointer, Planer	G.6 Operate and Maintain Power Hand Drill	G.7 Operate and Maintain Drill Press	G.8 Operate and Maintain Routers, Grinders, Sanders (Orbital, Belt)
G. Safely, Correctly, and Accurately Use Power Tools (cont'd)	G.9 Operate, Maintain, and Sharpen Chainsaws	G.10 Setup, Operate, Adjust, Maintain, and Store Portable Air Power Tools	G.11 Maintain and Operate Dust Control Systems	G.12 Use Hand Tools and/or Power Tools to Build a Wood Project				
H. Transition to Employment in VAW Manufacturing Industries	H.1 Prepare / Update Personal Résumé	H.2 Access Job Search Resources and Supports	H.3 Research Employers and Job Openings	H.4 Prepare Employment Letter for Specific Job(s)	H.5 Practise and Prepare for Job Interview(s)	H.6 Describe Provisions of Employment Standards Act of BC	H.7 Develop and Agree to a Learning Contract for Training / New Job	H.8 Describe Qualities Employers Want - Work Ethic, Attitude
H. Transition to Employment in VAW Manufacturing Industries (cont'd)	H.9 Start Work on Time, Prepared for the Day with Equipment, Tools, PPE	H.10 Be Fit and Ready for Work	H.11 Keep a Personal Journal and Learning Plan -- Pursue Continuous Learning, Skills Development					

Appendix B — HR Toolkit

date	February 3, 2025
doc type	HR Toolkit & Coaching – Coaching Summary Addendum
company	BC Wood
project title	BC VAW Training & Retention Project

01_ Project Overview

The BC Wood HR Toolkit has been developed by Exportspark Services Inc. to assist VAW employers by creating tools and supports to assist with their day-to-day HR needs. Human Resource Management refers to a range of functions needed to run a business: workforce planning, recruitment, onboarding, performance management, health & safety, internal communications, compliance, DEI and employee engagement. The information and best practices included in the HR toolkit were designed around the main pillars of an HRM – HR Strategy, Recruitment, Employee Experience and Compliance. Employers will be able to use the information and tools to implement new initiatives that will attract and retain qualified workers, as well as identify opportunities that could improve the performance of employees and lead to increased productivity and profitability.

The Coaching Initiative was designed to assist VAW employers (targeted for those with under 75 employees) who don't have internal HR support or staff, or access to dependable outsourced HR support. Exportspark worked with each participant, in 1 or 2 sessions, on a small impactful project such as an HR Audit or a review of their Onboarding process.

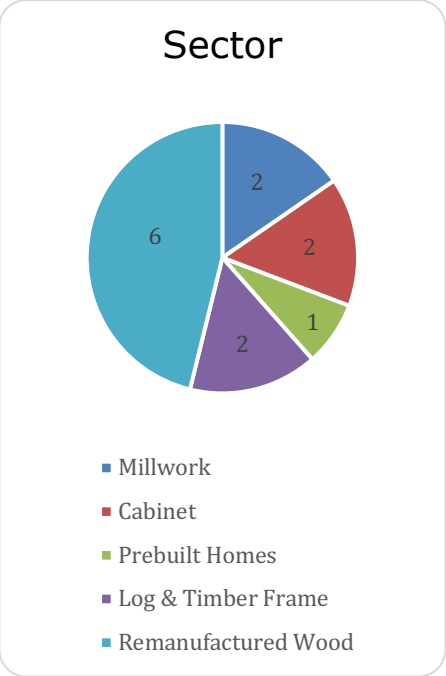
The following is data that describes the VAW employers who participated in the Coaching Initiative for this project.

Exportspark was tasked with working with up to 10 employers and exceeded that requirement with a total of 13 participants. Over 50% of the participants were small businesses (under 50 employees) and 70% do not have internal HR support or staff.

We worked with businesses located in all regions of the province of BC and one business in Alberta.

- 3 businesses from Vancouver Island
- 3 businesses from the Kootenays
- 4 businesses from the South Coast
- 1 from the Thompson/Okanagan
- 1 business from the Northern BC
- 1 business from Alberta

The participants came from 5 different sectors of the Value-Add Wood community – Remanufactured Wood, Millwork, Cabinet, Log & Timber Frame and Prebuilt Homes.



Although initially designed to work with participants on either an HR Audit or a review of their Onboarding process, we expanded the services to include topics that were chosen by the participants during the screening call. Due to the limited time allotted for each participant for both the work and sessions, the topics were curated to meet the needs of the business as well as the Coaching Initiative. Below is the expanded list of topics that were covered.

HR Strategy	Building an HR Plan
Recruitment	Interview Questions Selection Criteria Compensation & Benefits Job Description
Employee Experience	Onboarding Process Internal Communication

	Rewards & Recognition Program Performance Management Coaching a Supervisor in Communication Techniques
Compliance	HR Audit Employee Handbook Review Employee Contracts Review Records Retention


BC WOOD
HR Toolkit Webinar
July 9, 2024
ExportSPARK
Canada
BRITISH COLUMBIA
This program is funded by the Government of Canada
and the Province of British Columbia.

HR TOOLKIT WEBINAR
Agenda

1. Workforce Development Project
2. HR Toolkit Design & Goals
3. Strategy & Recruitment Topics
4. Employee Experience Topics
5. HR Coaching Opportunity
6. Questions or Comments

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WORKFORCE DEVELOPMENT PROJECT
3 Components

Training

Work-Ready Training for Entry-Level Workers – 4-week program

Competencies

Skilled Worker Training and Competency Framework

HR Toolkit

Online HR Toolkit & Coaching Initiative

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HR TOOLKIT
Survey Results

- ✓ HR Planning
- ✓ Recruitment
- ✓ Health & Safety
- ✓ Compensations & Benefits
- ✓ Compliance
- ✓ Employee Well-Being

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HR TOOLKIT
Components

Online Toolkit

Online HR Information and support materials for VAW employers

Resource List

Listing of resources, links and supplier information for VAW employers

Coaching

One on one support opportunities to address specific HR challenges

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HR TOOLKIT
Goals

- HR Program Basics
- Clear & Concise Information
- Accessible
- VAW focused
- Expertise

HR TOOLKIT
HR Strategy & Recruitment Topics

HR Planning

- Workforce Plan
- Job Analysis
- People Analytics
- Workforce Plan Outline & Best Practices

Recruitment

- Job Postings
- Job Descriptions
- Selection Criteria
- Interviewing Best Practices
- Letter of Offer
- Compensation & Benefits

Technology

- HRIS
- Internal Communication
- AI & HR (coming soon)

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HR TOOLKIT
Employee Experience Topics

HR Program

- Onboarding Program
- Performance Management
- Compliance
- Employee Handbook
- Employment Standards Act
- PIPA & Records Management

Health & Safety

- Safety Committee
- Supervision
- Injury Prevention
- Claims Management
- Investigation
- Resources from WorkSafeBC

Engagement

- Employee Surveys
- Conflict Resolution Training
- Rewards & Recognition
- DEI
- Well-Being Initiatives

HR TOOLKIT
Resource List

- ✓ HR Consultants
- ✓ Associations & Business Services
- ✓ HR Websites
- ✓ Recruiting and Staffing Partners
- ✓ Job Boards
- ✓ HR Coaching Services

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HR TOOLKIT

One-on-One Coaching

- 2 x one-hour coaching sessions (or more if needed)
- Pre-Assessment checklist where applicable
- Post session summary with additional information, recommendations or services outlined

HR TOOLKIT
Coaching Topics

HR Compliance

- HR Policies
  - Checklist Assessment
- Health & Safety Policies
  - Checklist Assessment
- Employee Handbook
  - Coaching and/or Development Assistance

Onboarding Coaching

- Community
  - Bringing them into the team
- Compliance
  - HR & H&S requirements
- Competence
  - Job Description/Performance
- Communication
  - Plans & Schedules

HR TOOLKIT
Continuous Development

- Expanded workplace content
- HR Communications Calendar
- AI and HR
- Topics based on Feedback

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HR TOOLKIT

workforce@bcvalueaddedwood.com

Find out more about the Coaching opportunities

Suggestions for content in the HR Toolkit

Feedback, questions or comments

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page 013

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Appendix C — Skilled Production Worker

Value Added Wood Manufacturing

SKILLED PRODUCTION WORKER

NEEDS ASSESSMENT VALIDATION REPORT

February 2025

Developed by
North Pacific Metrics Inc.
Burnaby, B.C.

Table of Contents

INTRODUCTION

In British Columbia, the Value-Added Wood (VAW) manufacturing industry faces an increasing need for skilled production workers equipped with competencies that align with the demands of modern manufacturing. To address this need, a comprehensive 18-month initiative was undertaken to develop a Skilled Production Worker (SPW) competency framework, credentialing pathways, and potential delivery models for training. This initiative focused on enhancing performance on the job through creating short, targeted training; exploring multi-modal delivery methods; and adopting best practices from other jurisdictions.

The *SPW Program Outline* and the *SPW Curriculum Framework and Training Outline* (both BC Wood - 2024) were developed through a collaborative process that included research to identify existing competency frameworks and refinement via facilitated dialogue with a Technical Working Group (TWG). The TWG was comprised of industry subject matter experts and business owners from across various VAW sub-sectors, ensuring that the outputs were both practical and reflective of the industry's diverse SPW competency needs. By grounding the framework in real-world application and leveraging insights from industry leaders, the initiative sought to produce a robust and actionable strategy for workforce development.

The SPW Needs Assessment Interview is an integral component of the SPW training initiative. The SPW Needs Assessment process involves a structured interview with the employer / supervisor and the SPW to discuss and establish specific learning needs. The process provides an opportunity for the designated Assessor / Trainer to directly engage with potential participants and their employers to gain insights into specific learning needs, competency gaps, and resource requirements. The information gathered directly impacts the finalization of training module content to target agreed needs and desired outcomes, as well as providing an opportunity for relationship development that will reduce barriers to effective participation.

SPW NEEDS ASSESSMENT VALIDATION PROCESS

To validate the process and content of the SPW Needs Assessment, North Pacific conducted a series of interviews with VAW Employers / Supervisors and SPWs from different VAW organizations and sub-sectors to test the useability of the SPW Occupation Analysis Chart and the SPW Competency descriptions to surface and align interviewees' perceptions of competencies and training needs within VAW manufacturing operations.

Participants in the validation interviews were provided with three documents for review in advance of our conversations:

- **SPW Occupation Analysis Chart** outlining the competencies critical to the SPW role in a chart format (Appendix 'A'),
- **SPW Competencies Outline** providing a more detailed description of each competency area (Appendix 'B'), and
- the drafted designs for three **SPW Micro-Credential Pathways** illustrating potential credentials for SPWs to achieve industry recognition for accumulated competencies (Appendix 'C').

These documents provided a working example of materials to be distributed by an Assessor / Trainer in advance of an actual SPW Needs Assessment interview, to facilitate an informed discussion during each interview.

We used this review process to pilot and validate both the SPW Competencies Framework and the SPW Needs Assessment tools and processes with VAW Employers / Supervisors and SPWs representing key industry subsectors and regions in B.C.

VALIDATION PARTICIPANTS:

Organization	Subsector	Region	Participants
AcuTruss Industries (1966) Ltd.	Engineered Wood Products Manufacturing	Okanagan	Nancy O'Neill - HR Manager Richard Sellars – Supervisor Chad D'Oralio – Millwright Callum Strachan – Apprentice
Cowichan Woodwork Ltd.	Cabinet Manufacturing	Vancouver Island	Tyler Craig, Employer Judsen Gardase. Journeyperson Joiner Amoray Aloisi, Joiner Apprentice – Level 1
Canadian Bavarian Millwork and Lumber Ltd.	Remanufactured Wood Products	Vancouver Island	Alexander Daether, Manager Mark McCarter, Production Lead
Creative Woodcraft Ltd.	Cabinet Manufacturing	Vancouver Island	Will Duggan, Employer, Part-owner T.J. Decaria, Operations Manager Cordelle Olson, Production Manager
D3 Custom Cabinets Ltd.	Cabinet Manufacturing	Lower Mainland	Sam Jackson – Employer Vasili Radach – Cabinet maker and Finisher Ted Wong – Cabinetmaker Apprentice Level 1 - Assembly
Nexus Global Building Systems Inc.	Pre-built Homes Manufacturing	Vancouver Island	Noah Topp, Business Development Manager Gary Kamikawji, Production Manager Jason Severny, CNC Fabrication Lead

Organization	Subsector	Region	Participants
Kalesnikoff Lumber Company Ltd.	Millwork Manufacturing	Kootenays	DeEtte Mackenzie, Resource Team Leader Nolan Percival – Quality Control Technician Colton Shkuratoff – Sawmill Operator (Edger and Trimmer Machines)
Procupine Wood Products Ltd.	Remanufactured Wood Products	Kootenays	Dustin Barthel, Employer
Winton Homes Ltd.	Pre-built Homes Manufacturing	North	Kevin Gunderson, Operations and Continuous Improvement Manager Kirsty Potter, Truss Plant Supervisor Celest Tait, Truss Assembler Advanced Dion Kovras, Wall Plant Supervisor Johnathan Gelit, Wall Sawyer Advanced

INTERVIEW METHOD

Validation interviews were conducted with VAW Employers / Supervisors and Skilled Production Workers, based on availability and willingness, between January 24th and February 7th, all via video conference. Employers were contacted and enrolled in the validation process by various means:

- respondents to our VAW Employer Survey,
- network contacts established through participation in the Technical Working Group and the Project Advisory Committee, and
- self-referral in response to a BC Wood email invitation sent to an established mailing list.

Each Employer respondent was contacted by email and subsequently by phone to confirm participation, to respond to their initial questions, and to establish mutual expectations for the Needs Assessment Validation interview. Employers were encouraged to include themselves, production supervisors, team leaders and SPWs from within their workforce in the interview process. Due to various circumstances (including weather and production priorities), not all willing and interested VAW Employers and SPWs were able to participate in the validation interview previous to February 7th.

INTERVIEW RESULTS

For ease of analysis and presentation, feedback, suggestions and comments from interviewees are organized into key topics that were explored during the interviews:

SPW Competencies and the Competency Framework

As a part of the SPW Needs Assessment Validation process, we introduced and asked respondents to provide feedback on the clarity and completeness of the SPW Competency Profile and the specific Competency descriptions.

In general, SPW Employers and Supervisors found the Competency Profile very valuable for identifying both learning needs and the existing competencies of individual SPWs. Likewise, SPWs observed that the breakdown of competencies was useful for identifying what they know and what they wanted to learn next.

Below are some of their specific comments:

- *"We really like the potential to fine tune our approach and focus on training using the competency outline that has been developed. It really presents a menu of options for us to drill deeper into with the team."* – **VAW Employer**
- *"Although some of the competencies may not seem relevant to my current job, exposure to the different topics outlined in the competency framework would be beneficial to my career. I think knowing all the different steps the raw material goes through and how value is added at each step would help my performance on the job."* – **Skilled Production Worker**
- *"A lot of these competencies feed into each other. I can see how grouping them together could be some very good learning outcomes from a training program."* – **Skilled Program Worker**
- *"I don't think any of us wouldn't benefit from an increased knowledge of wood as a manufacturing material (what you have outlined in Competency Group A). Customers are also getting more and more picky so we are needing to review what our suppliers send us before using it."* – **VAW Production Manager**
- *"The priority learning areas that have been identified through the survey would definitely be of use to us. Where can we access training and resources that would address these?"* – **Skilled Production Worker**

SPW Training Delivery Options

During the SPW Needs Assessment Validation interviews, we discussed various training delivery / structure options and encouraged participants to identify their learning experiences and preferences

VAW Employers / Supervisors and SPWs agree that shorter, focused, hands-on modules for smaller groups are preferred. Ideally, these would be available within easy distance of home and possibly based within a VAW manufacturing facility.

Below are examples of what they told us:

- *"I'd much rather go to an hour of relevant training than sit through four hours of training where half of it is not applicable. More customized training may require more investment upfront but would be much higher value-add."* – **VAW Production Supervisor**
- *"When it comes to training, we are not all in competition. I'm a firm believer in 'a rising tide raises all boats'. I think it's important for us to learn together."* - ***VAW Employer***
- *"We'd be open to hosting workshops or training opportunities at our facility during off-hours. We'd also be highly supportive of our staff going to other facilities to learn from peers. There is nothing more practical than learning from other's experiences."* – ***VAW Employer***
- *"Although there are substantial differences between operations including equipment used, shop layout and production processes, I think there would be value in sharing best practices and learning from each other."* – ***Skilled Production Worker***
- *"There is a lack of relevant training in our region. We have to send staff to Vancouver which makes it a substantial investment both for the employee and the company. We would prefer shorter in-person training with online resources or the ability to have a Facebook group that allowed staff to share and ask questions."* – **VAW Employer**
- *"The apprenticeship model is great, but it's limited to us geographically. There also aren't that many people that are willing to invest the lengthy time and commitment away from paid work."* - **Skilled Production Worker**

- *"To date, most of our learning has been on-the-job with higher performers passing on knowledge to newer ones. However, the breakdown is that many high performers don't know how to teach."* – **Skilled Production Worker**
- *"We can't afford having staff off the job for six or seven weeks at a time. I've had to reschedule training multiple times because of operations."* – **VAW Manager**
- *"There are manuals for different equipment, but they tend to be a bit daunting. It would be really useful to have a decent framework for troubleshooting equipment and someone to talk to who's worked on the equipment. Unfortunately, there's a lack of that kind of hands-on training."* – **Skilled Production Worker**
- *"There really isn't a lot of training for us other than rotations on the job."* – **Skilled Production Worker**

Micro-credentials and Recognition Pathways

We took the opportunity, during the interviews, to discuss and solicit feedback on the drafted BC Wood Micro-credential designs. Generally, SPW Employers and Supervisors were unfamiliar with the concept of Micro-credentials but recognized their potential value within the industry, especially related to hiring workers with existing competencies. SPWs liked the idea of gaining recognition for their competencies and progression via the Micro-credential structure.

Here are some sample comments shared:

- *"It would be a real benefit for me if there was a way to earn credit or some sort of recognition from my investments in learning like the micro-credentials that have been outlined in this work."* – ***Skilled Production Worker***
- *"Training and development opportunities keep people on the job. If I was bored and didn't have access to development opportunities, I would probably look for another job."* – **VAW Production Supervisor**
- *"We would be very interested in hiring someone who could demonstrate that they've been through the learning outlined in your micro-credential pathways. It would demonstrate the worker's commitment and gives us assurance that they came with skills and relevant experience."* – **VAW Employer**
- *"It's really difficult to find staff with well-rounded training. Increasingly even if we have staff that come with two to three years experience on paper, they will require a lot of on the job training which takes upwards of six months before they are effective on the job."* – **VAW Supervisor**

VALIDATION OUTCOMES

Based on our interviews with VAW Employers / Supervisors and SPWs representing various industry sub-sectors from across B.C., we highlight several **key conclusions and observations** that reflect consensus among participants, outlined below:

- There is a strong consensus that the SPW Competency Profile is complete and comprehensive. It is viewed as a valuable tool for identifying existing competencies and individual learning needs.
- VAW Employer / Supervisors and SPWs largely agree with the learning priorities identified by different industry sub-sectors in the VAW Employer Survey conducted in 2024.
- Shorter, focused, regional training opportunities are considered more valuable and less costly than longer courses offered at a further distance.
- Safety must be incorporated as a priority in all training modules.
- In planning for any future SPW training, it will be vitally important to retain / incorporate the needs assessment function in order to ensure competency-based training experiences are relevant – especially in light of the varying production challenges and realities of VAW industry contexts (i.e.: the variations among operations and equipment).
- It is difficult and costly for individual employers to coordinate targeted skilled production worker training. There is an opportunity for regional and sub-sector level coordination to develop training mapped to the SPW Competency Framework. This could be best facilitated by BC Wood or possibly a third party.
- There is an opportunity within the industry to create 'communities of practice' through social media or via regional meet-ups, to enable SPWs to share learning resources and experiences with each other.
- There is a need / opportunity to compile and centralize learning materials and other resources for SPWs to supplement future training initiatives.
- The SPW Micro-credentialing Pathways are viewed as an effective means by which SPWs are able to structure their learning and broaden recognition of their competencies by employers.

Appendix A: SPW Occupational Analysis Chart

VAW SKILLED PRODUCTION WORKER

Occupation Description: A VAW Skilled Production Worker uses specialized production machinery and tools to design, cut, shape, assemble and install products made principally from wood materials in a manufacturing work environment.

ADVANCED MATERIALS A	Identify different types of wood A1	Identify different quality grades of wood A2	Describe various wood machining centres and processes A3	Describe composites and other engineered materials A4	Describe machining processes for composites and other engineered materials A5
	2	2	2	2	2
PRODUCTION SYSTEMS B	Describe production processes B1	Describe quality control systems B2	Identify production best practices B3	Apply LEAN manufacturing principles B4	
	2	2	2	2	

WORK CENTRE OPERATIONS C	Operate planing machine for component fabrication C1	Operate moulding machine for component fabrication C2	Operate edgebanding machine for component fabrication C3	Operate sanding machine for component fabrication C4	Operate CNC routing machine for component fabrication C5	Operate cutting machine for component fabrication C6
	2	2	2	2	2	2

Operate boring machine for component fabrication C7
2

SPECIALIZED FINISHING D	Identify specialized surface finishing requirements D1	Select appropriate coating product D2	Apply coating product D3	Apply other surface treatments D4
	2	2	2	2

METAL WORK E	Cut metal components E1	Shape metal components E2	Apply heat to treat metal components E3	Weld metal components E4
	2	2	2	2

INSTALLATION F	Install interior products and components F1	Install exterior products and components F2			
	2	2			
MANUFACTURING MACHINE MAINTENANCE G	Clean manufacturing machine G1	Lubricate manufacturing machine G2	Grind and sharpen manufacturing machine tools G3	Adjust machining centre for optimum production G4	Identify and apply relevant information from OEM documents G5
	2	2	2	2	2
DESIGN TOOLS AND SYSTEMS H	Prepare shop sketches and component designs H1	Use CAD / CAM system to design components H2	Design component fabrication and assembly processes H3		
	2	2	2		
PROCESS OPTIMIZATION I	Program CNC work centre for component fabrication I1	Design production processes I2	Optimize processes that incorporate automation I3	Plan and implement quality control systems I4	
	2	2	2	2	

Appendix B: SPW Competency Outline

This outline includes the Competencies and Learning Tasks for a Skilled Production Worker in the Value-Added Wood manufacturing industry in British Columbia and is excerpted from the *BC Wood Skilled Production Worker Program Outline (2024)*.

Need	A	Advanced Materials
☐	**A1**	**Identify different types of wood** - Visual characteristics of wood - Common North American and exotic woods - Common applications of different types of wood - Qualities and characteristics of different woods
☐	**A2**	**Identify different quality grades of wood** - Wood grades - Variations within wood grades - Moisture content
☐	**A3**	**Describe various wood machining centres and processes** - Machining processes for wood sawing - Machining processes for planning - Machining processes for drilling and boring - Machining processes for shaping - Machining processes for sanding
☐	**A4**	**Describe composites and other engineered materials** - Structure and composition of engineered materials - Describe different panel products - Adhesives used in composites - Describe laminating methods and products - Veneer products
☐	**A5**	**Describe machining processes for composites and engineered materials** - Considerations for machining composites and engineered materials - Methods of cutting or slicing composites and engineered materials - Joinery considerations for composites and engineered materials - Dust removal

Need	B	Production Systems
☐	**B1**	**Describe production processes** - Production materials - Precision measurement - Fabrication processes - Assembly processes - Continuous flow
☐	**B2**	**Describe quality control systems** - Quality control management - Variance analysis techniques - Control charting - Continuous improvement
☐	**B3**	Identify production best practices - Plant layout and design considerations - Inventory management - Methods to optimize equipment usage and capacity - Strategies to minimize waste
☐	**B4**	**Apply LEAN manufacturing principles** - Principles of LEAN manufacturing - Identify opportunities for process improvement in operations - Describe continuous improvement

Need	C	Work Centre Operations
☐	**C1**	**Operate planing machine for component fabrication** - Perform basic planning operations - Adjust planer to perform planing tasks - Perform basic preventative maintenance
☐	**C2**	**Operate moulding machine for component fabrication** - Operate moulder to perform jointing and planning tasks - Operate moulder to perform advanced tasks - Perform basic preventative maintenance

☐ **C3 Operate edgebanding machine for component fabrication**
- Describe common materials sued with edgebanding machine
- Operate edgebanding machine
- Select and apply appropriate edgebanding material
- Perform basic preventative3 maintenance

☐ **C4 Operate sanding machine for component fabrication**
- Operate edge sander
- Operate wide belt sander
- Operate profile sander
- Operate rotary table edge sander
- Operate two-head drum sander

☐ **C5 Operate CNC routing machine for component fabrication**
- Operate CNC 3-axis vacuum pod
- Operate CNC nested machine
- Operate CNC beam saw
- Operate CNC aggregate head machine
- Operate double end tenoner machine

☐ **C6 Operate cutting machine for component fabrication**
- Operate rip saw
- Operate resaw
- Operate chop saw
- Operate panel saw

☐ **C7 Operate boring machine for component fabrication**
- Operate drill press
- Operate boring machine
- Operate mortiser

Need	D	Specialized Finishing

☐ **D1 Identify specialized surface finishing requirements**
- Describe wood finishing
- Describe colour theory and wood colour
- Describe surface preparation

☐ **D2 Select appropriate coating product**
- Select different coating products
- Describe coating parameters
- Handle coating products appropriately

☐ **D3 Apply coating product**
- Spray coating products
- Describe conditions impacting application of coating product
- Control drying and curing processes

☐ **D4 Apply other surface treatments**
- Select specialty wood finishes
- Apply post-treatments
- Implement quality control and finish testing

Need	E	Metal Work

☐ **E1 Cut metal components**
- Describe considerations for selection of cutting method
- Develop and layout templates for cutting
- Demonstrate common methods of cutting

☐ **E2 Shape metal components**
- Bend metal components suing common tools
- Shape basic components to specifications

☐ **E3 Apply heat to treat metal components**
- Describe annealing process
- Describe hardening and tempering
- Describe normalizing process
- Describe induction hardening

☐ **E4 Weld metal components**
- Demonstrate basics of shielded metal arc welding (SMAW)
- Demonstrate basics of gas metal arc welding (GMAW)

Need	F	Installation

☐ **F1 Install interior products and components**
- Read blueprints and technical drawings
- Describe relevant building codes and regulations
- Identify connection points with other systems before installation
- Plan and install according to specifications

☐ **F2 Install exterior products and components**
- Read blueprints and technical drawings
- Describe relevant building codes and regulations
- Practice project site safety
- Determine site readiness for install
- Inspect product upon arrival at site
- Describe building structure components

Need	G	Manufacturing Machine Maintenance

☐ **G1 Clean manufacturing machine**
- Describe manufacturer's recommended cleaning procedures for specific manufacturing machines
- Choose appropriate cleaning methods
- Disassemble parts to clean, as required
- Develop regular cleaning plan

☐ **G2 Lubricate manufacturing machine**
- Describe manufacturer's recommended lubrication protocols
- Choose appropriate lubricant for the specific manufacturing machine
- Identify appropriate lubrication frequency
- Employ lubrication best practices

☐ **G3 Grind and sharpen manufacturing machine tools**
- Disassemble cutting tools
- Describe sharpening requirements for cutting edges and cutting angles
- Grind and sharpen tools using a bench grinder
- Grind and sharpen tools using a profile grinder
- Grind and sharpen tools using a slow speed water wheel

☐ **G4 Adjust machining centre for optimum production**
- Describe testing and Quality Assurance procedures
- Calibrate machine for optimal performance
- Describe relationships between production output and quality control systems

☐ **G5 Identify and apply relevant information from OEM documents**
- Access specific information in OEM documents
- Identify critical spare parts to maintain in inventory
- Identify specifics of manufacturer's warranty coverage

Need	H	Design Tools and Systems
☐	H1	**Prepare shop sketches and component designs** - Describe considerations for component design and sketches - Enter drafting sketches into CAD program - View and revise sketches and designs
☐	H2	**Use CAD / CAM system to design components** - Create CAD drawings - Program CAM for component fabrication based on CAD drawings
☐	H3	**Design component fabrication and assembly processes** - Translate component designs into fabrication and assembly processes - Gather customer requirements and maintain customer engagement throughout - Perform 3D modeling - Perform assembly modeling

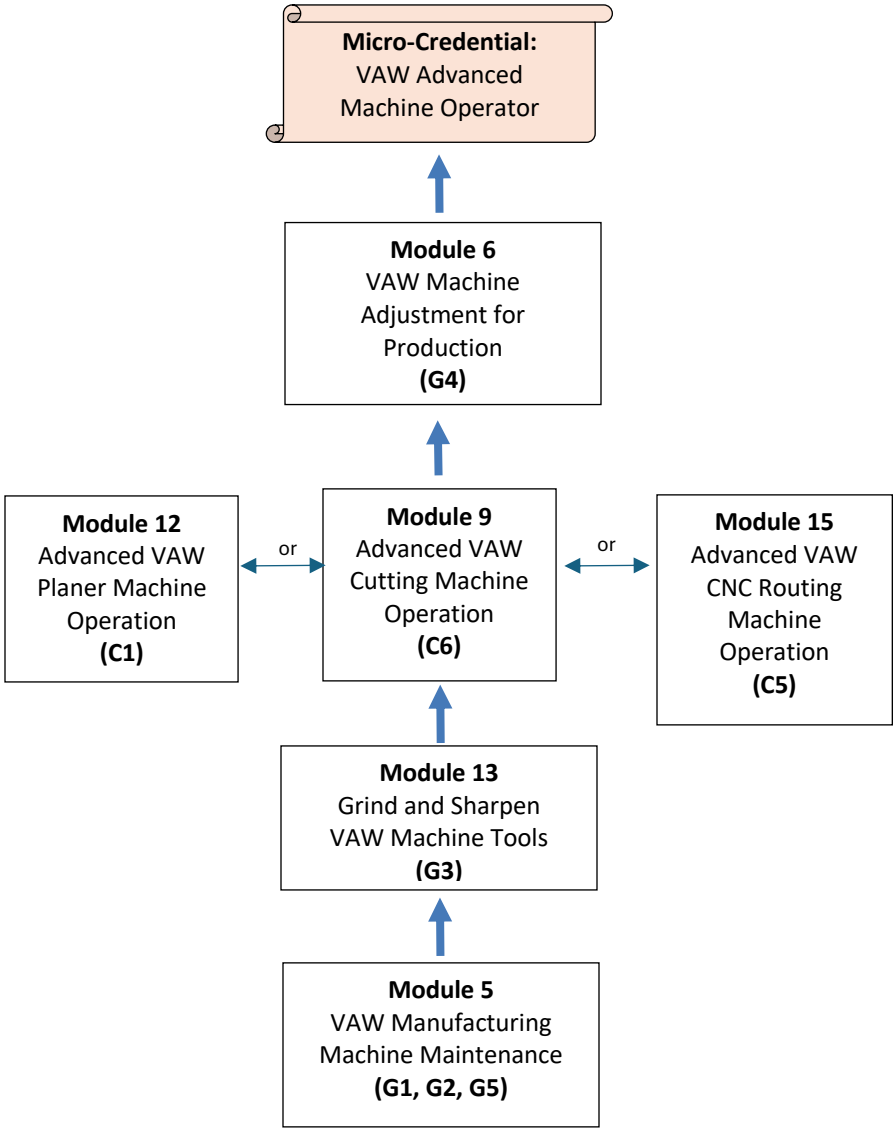
Need	I	Process Optimization
☐	I1	**Program CNC work centre for component fabrication** - Generate CNC control file - Edit and revise CNC Program files - Adjust and calibrate CNC machining processes
☐	I2	**Design production processes** - Design plant layout and production flow - Develop inventory management system - Optimize equipment usage and capacity - Develop strategies to minimize waste
☐	I3	**Optimize processes that incorporate automation** - Describe automation technologies - Identify opportunities for automation in production processes - Perform cost / benefit analysis
☐	I4	**Plan and implement quality control systems** - Design and implement quality control system - Control charting - Implement continuous improvement processes - Apply variance techniques

Appendix C: SPW Credentialing Pathways

The following graphics provide an overview of three potential Micro-credentialing Pathways for the Skilled Production Worker (SPW) occupation in the Value Added Wood (VAW) manufacturing industry in British Columbia.

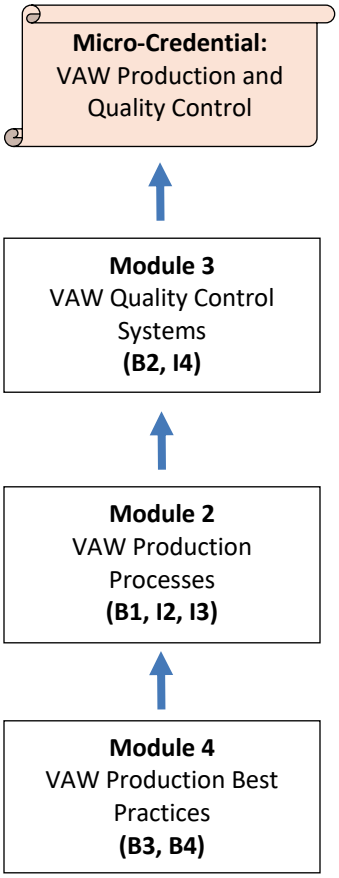
Credentialing Pathway #1:

Advanced VAW Machine Operator



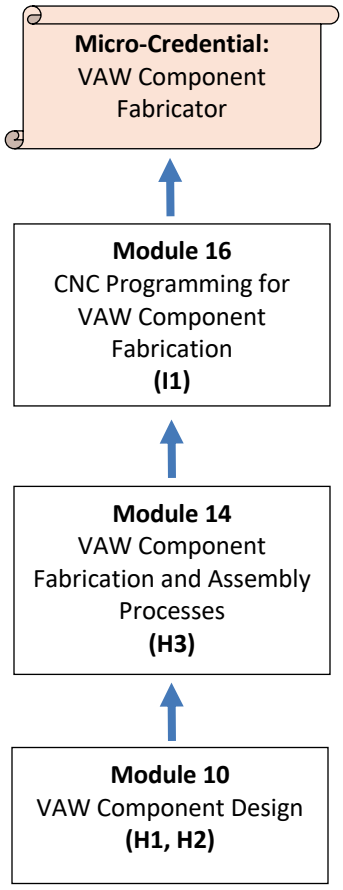
Credentialing Pathway #2:

VAW Production and Quality Control



Credentialing Pathway #3:

VAW Component Fabricator



Occupational Analysis Chart (OAC)

Value-Added Wood Manufacturing - **SKILLED PRODUCTION WORKER**

Occupation Description: A VAW Skilled Production Worker uses specialized production machinery and tools to design, cut, shape, assemble and install products made principally from wood materials in a manufacturing work environment.

ADVANCED MATERIALS A	Identify different types of wood A1	Identify different quality grades of wood A2	Describe various wood machining centres and processes A3	Describe composites and other engineered materials A4	Describe machining processes for composites and other engineered materials A5
PRODUCTION SYSTEMS B	Describe production processes B1	Describe quality control systems B2	Identify production best practices B3	Apply LEAN manufacturing principles B4	

WORK CENTRE OPERATIONS C	Operate planing machine for component fabrication C1	Operate moulding machine for component fabrication C2	Operate edgebanding machine for component fabrication C3	Operate sanding machine for component fabrication C4	Operate CNC routing machine for component fabrication C5	Operate cutting machine for component fabrication C6
	2	2	2	2	2	2

Operate boring machine for component fabrication C7
2

SPECIALIZED FINISHING D	Identify specialized surface finishing requirements D1	Select appropriate coating product D2	Apply coating product D3	Apply other surface treatments D4
	2	2	2	2

METAL WORK E	Cut metal components E1	Shape metal components E2	Apply heat to treat metal components E3	Weld metal components E4
	2	2	2	2

INSTALLATION F	Install interior products and components F1		Install exterior products and components F2			
	2				2	
MANUFACTURING MACHINE MAINTENANCE G	Clean manufacturing machine G1	Lubricate manufacturing machine G2	Grind and sharpen manufacturing machine tools G3	Adjust machining centre for optimum production G4	Identify and apply relevant information from OEM documents G5	
	2	2	2	2	2	
DESIGN TOOLS AND SYSTEMS H	Prepare shop sketches and component designs H1	Use CAD / CAM system to design components H2	Design component fabrication and assembly processes H3			
	2	2	2			
PROCESS OPTIMIZATION I	Program CNC work centre for component fabrication I1	Design production processes I2	Optimize processes that incorporate automation I3	Plan and implement quality control systems I4		
	2	2	2	2		

VAW Skilled Production Worker

PROJECT STEERING COMMITTEE MEETING

NOVEMBER 5, 2024

Project Status Update

√ Conduct international Environmental Scan to identify strategies / approaches / resources developed for VAW manufacturing in other jurisdictions

√ Identify and define SPW competencies for VAW manufacturing job roles
- *SPW Competency Profile*
- *SPW Program Outline*

√ Conduct employer survey to identify needs
- Identify priorities and need clusters

√ Design SPW curriculum and delivery modes, based on survey results
- *SPW Curriculum Framework and Training Plan*

Identify training resources and materials to fit Training Plan

Develop recommendations for sustainable implementation

Project Activities

Analyze results from the Employer Survey to identify priority training needs and clusters of need.

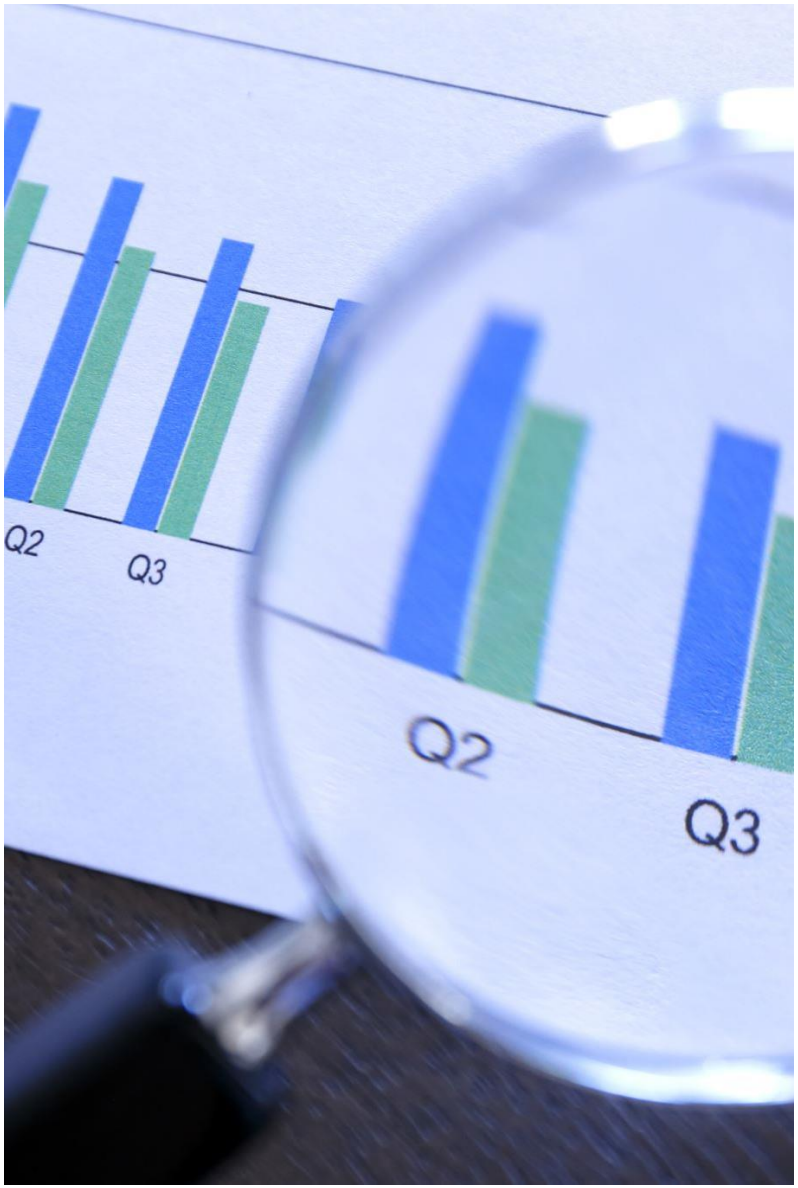
Meetings with SPW Technical Working Group (Mar, July) to review Employer Survey results and plan Program.

Develop Curriculum Framework and program implementation model.

Identify potential learning resources and training materials.

SPW Up-skilling Challenges

Widely dispersed workforce	
Small scale operations	‘Lack of slack’
Non-standard production worker occupations	No specific NOC or qualifications framework
No formal training or educational resources	Mostly on-the-job training



SPW Employer Survey Highlights

Survey Distributed to VAW Employers across BC

- 300+ Employers – BC Wood mailing list
- 37 Responses received
- 104 SPW job roles profiled

Identified and Prioritized SPW Learning Needs

- Linked to SPW Competency Profile
- Mapped to individual job role(s) and employer(s)
- Identified by sub-sector and region

VAW EMPLOYER SURVEY RESULTS
- Occupational Profiles

	Regions:							
Sub-Sectors:	Island	L. Main	Okan	Koot	North	Other	Total	
Cabinetry	6	6	3				15	14.42%
Eng Wood	3	3		3		3	12	11.54%
Log & Timber		7	9	9	10	2	37	35.58%
Millwork	3		3	3			9	8.65%
Pre-built			3				3	2.88%
Reman	6	10	6	6			28	26.92%
Total	18	26	24	21	10	5	**104**	
	17.31%	25.00%	23.08%	20.19%	9.62%	4.81%		

Demand Topics by REGION (Ranked – Top 10)

	All	Island	Kootenays	Okanagan	L. Mainland	North
Wood as a manufacturing material	1					
VAW production processes	2					
VAW quality control systems	3					
VAW production best practices	4					
Manufacturing machine maintenance	4					
Machine adjustment for optimum production	6					
Specialized surface finishing	7					
Installing products and components	7					
Advanced cutting machine operation	9					
Component design	10					

Demand Topics by SUB-SECTOR (Ranked - Top 10)

	All	Cabinets	Engineered Wood	Log & Timber	Millwork	Pre-Built	Remanuf'ed
Wood as a manufacturing material	1		■	■	■		■
VAW production processes	2	■			■	■	■
VAW quality control systems	3	■	■	■			
VAW production best practices	4			■		■	
Manufacturing machine maintenance	4	■	■		■		
Machine adjustment for optimum production	6	■	■		■		■
Specialized surface finishing	7	■	■	■	■		
Installing products and components	7	■		■			
Advanced cutting machine operation	9	■				■	■
Component design	10			■	■		

Top SPW Learning Needs

Wood as a manufacturing material - 64.4%

- Characteristics, grades, variations, moisture content, etc.

VAW production processes – 56.7%

- Fabrication, assembly, flow, inventory, automation, etc.

Quality control systems – 54.8%

- Quality management, variance analysis, control charting, etc.

Production best practices – 48.8%

- Design, inventory management, waste management, LEAN principles, etc.

Manufacturing machine maintenance – 48.8%

- Cleaning plan, lubrication types, spart parts inventory, maintenance schedules, etc.

Machine adjustment for optimum production – 46.2%

- Calibration, testing, quality considerations, etc.

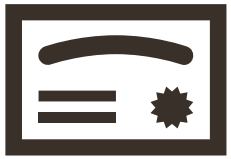
Program Delivery Considerations

- Limited budgets – focus on priorities for marketing / funding
- Assessor / Trainer engages program participants and employers in advance to customize Module content to meet specific learning needs
- Leverage Cluster Strategy for distribution of Modules across sub-sectors and regions
- Use a variety of learning formats (on-line; hands-on; self-study, etc)
- Assess initial results and revise, based on experience, for a sustainable SPW learning program

Curriculum Framework and Training Plan

16 Learning Modules

Mapped to SPW Competency Profile
Regional and Sub-sector Segmentation
Learning Objectives
Training Design
Resource Materials



SPW Credentialing Model – 3 Micro-Credentials

Advanced VAW Machine Operator (5 Modules)
VAW Production and Quality Control (3 Modules
VAW Component Fabricator (3 Modules)

SPW CURRICULUM FRAMEWORK

Module 2: VAW PRODUCTION PROCESSES

Competency Area(s): PRODUCTION SYSTEMS (GAC – B)

PROCESS OPTIMIZATION (GAC – I)

Competencies: B1. Describe production processes

I2. Design production processes

I3. Optimize processes that incorporate automation

Relative Priority: 56.73% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island	☒ Cabinetry	☒ Remanufactured Wood Products
☒ Kootenays	☐ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☒ Pre-Built Housing	☐ Engineered Wood Products
☐ Lower Mainland	☒ Millwork	
☒ North		

Key Learning Objectives:

- Describe production inputs and outputs – B1(1)
- Describe precision measurement – B1(2)
- Describe fabrication and assembly processes – B1(3-4)
- Describe continuous process flow – B1(5)
- Design plant layout and production flow – I2(1)
- Develop inventory management system – I2(2)
- Optimize equipment usage and capacity – I2(3)
- Develop strategies to minimize waste – I2(4)
- Describe automation technologies – I3(1)
- Identify opportunities for automation in production processes – I3(2)
- Perform automation cost / benefit analysis – I3(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify particular production and automation processes to aid in focusing the Module on specific learning needs.

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
   (a) Could be recorded for additional cohorts
3) Independent research / planning exercise – variable
4) Individual coaching session – 1 hour
5) Self-study / reading / preparation – 2 - 3 hours
6) Online synchronous webinar – 3.5 hours
7) Community of practice – on-going

Suggested Pre-Requisite(s):

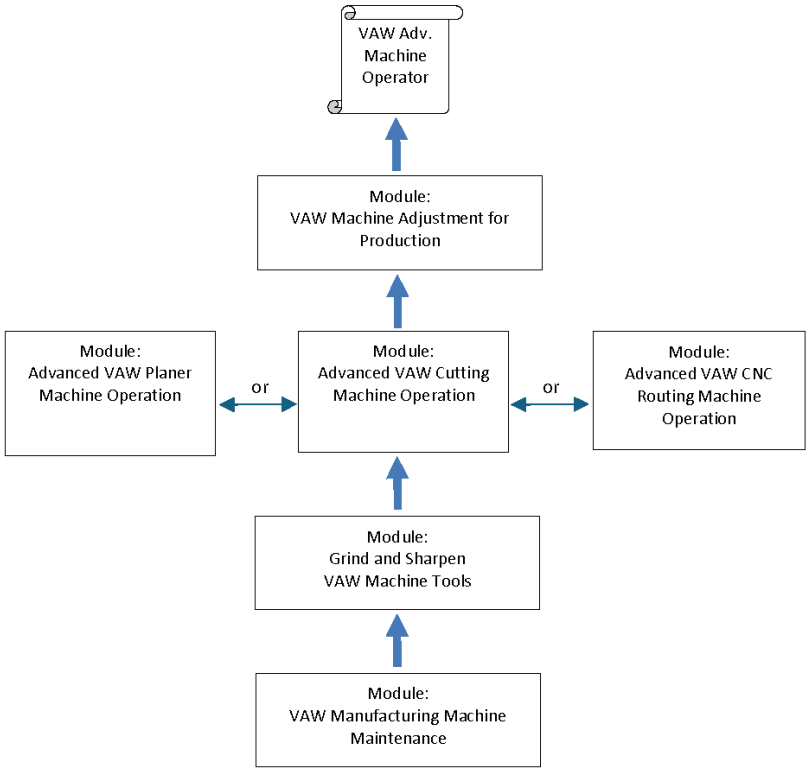
- VAW Production Best Practices

Resources:

- National Occupational Standard for Supervisor – Wood Manufacturing Council
- Wood Manufacturing Process: A Complete Guide (deskera.com)

SPW Credentialing Pathway #1:

Advanced VAW Machine Operator



Trainer and Partner Engagement

Potential Partner Institution	Resource	Potential Topics	Additional Considerations
UBC Centre for Advanced Wood Processing (CAWP)	• Training Site • Network of Trainers • Existing online courses in partnership with WMC (requires tutor)	• Production Planning • Quality Management and Control • Supply Chain Management	CAWP limited capacity to engage tutors to run online courses The WMC online courses are currently bundled into a Management program of 9 modules Min and max enrollment
Wood Manufacturing Council (WMC)	• National presence • Many print resources • Content ownership for online courses (WMC)		Change in leadership Training materials need to be digitized
FPInnovations	• Research on processing and advanced engineered products	Advanced Wood as manufacturing material	Focus is on research & primary processing Training is only partial focus for organization Would want funding for content development ($50K+)unless substantial marketing opportunity or have existing content
Cariboo Wood Innovation Centre	n/a	n/a	Still in nascent stages of development Possible introduction to trainers in interior region
Wood Career Alliance	• SoPs and some videos aligned to competency framework		Licensing for wider audience Focus for organization is certifying individuals in industry for specific competencies
Individual Trainers	• Training module delivery • Tutors		Ability to fly and adapt to company needs Requires content or will want development time

VAW Skilled Production Worker Training

GOVERNANCE COMMITTEE MEETING

MARCH 5, 2025

Up-skilling Challenges:

VAW Skilled Production Workers

Widely dispersed workforce	
Small scale operations	‘Lack of slack’
Non-standard production worker occupations	No specific NOC or qualifications framework
Few formal training or educational resources	Mostly on-the-job training

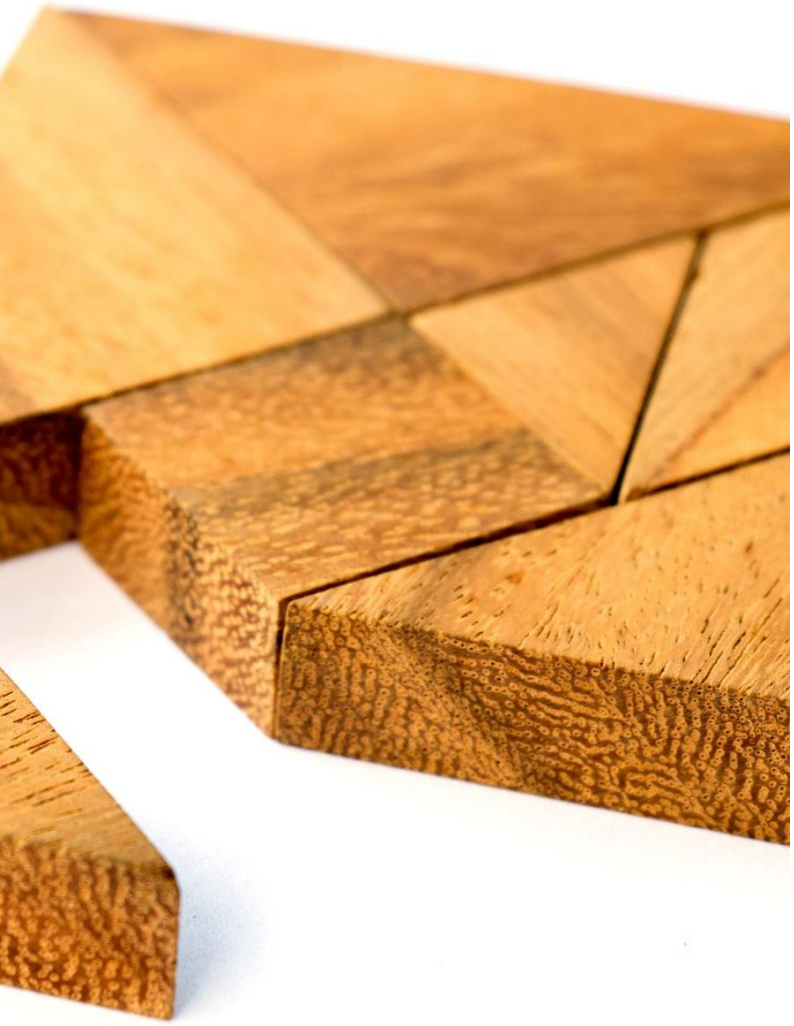
Project Activities 2023-25

1 **Environmental Scan:** identify comparable models and strategies

2 **SPW Program Outline:** identify and describe SPW competencies

3 **VAW Employer Survey:** identify priority learning needs

4 **SPW Training Design:** needs assessment, modules and micro-credentials



Top SPW Learning Needs Identified (based on 104 SPW profiles received)

Wood as a manufacturing material - 64.4%

- Characteristics, grades, variations, moisture content, etc.

VAW production processes – 56.7%

- Fabrication, assembly, flow, inventory, automation, etc.

Quality control systems – 54.8%

- Quality management, variance analysis, control charting, etc.

Production best practices – 48.8%

- Design, inventory management, waste management, LEAN principles, etc.

Manufacturing machine maintenance – 48.8%

- Cleaning plan, lubrication types, parts inventory, maintenance schedules, etc.

Machine adjustment for optimum production – 46.2%

- Calibration, testing, quality considerations, etc.

Learning Needs Ranking by Sub-Sector	All	Cabinets	Eng'd Wood	Log & Timber	Millwork	Pre-Built	Reman'd
Wood as a manufacturing material	1	7	1	1	1	4	1
VAW production processes	2	1	6	5	3	2	2
VAW quality control systems	3	3	1	3	5	4	4
VAW production best practices	4	5	9	3	10	1	5
Manufacturing machine maintenance	4	1	3	7	3	8	6
Machine adjustment for optimum production	6	3	3	16	1	8	3

Training Delivery Modes

Hands-on Workshop:

- delivered regionally by a master performer – in a manufacturing facility - with a focus on specific machines and processes

On-line Seminar:

- wide participation workshops on specialized knowledge areas

Community of Practice:

- SPWs meet regionally to demonstrate techniques, share learnings and 'swap' competencies

16 SPW Training Module Designs

Workshops / Seminars led by Master Performer / Experts

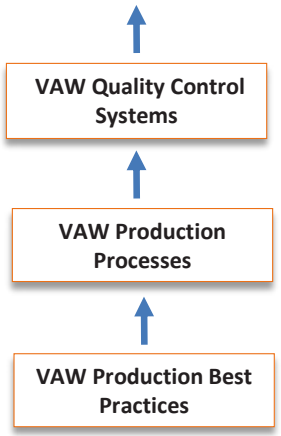
- Topics based on SPW Competency Priorities identified by VAW Employers
- Assessment interview (employer, SPW, trainer) in advance to introduce, establish learning needs and ensure relevance
- ‘Planning’ modules include **workplace projects** – with individual coaching and group feedback
- ‘Knowledge seminars’ recorded and available on a variety of topics
- ‘Hands-on workshops’ delivered at worksites to focus on specific tools, machines and production processes

3 VAW Micro-Credentials

Advanced VAW Machine Operator

VAW Component Fabricator

VAW Production and Quality Control



- BC Wood industry-based qualifications
- Recognition of an individual SPW's demonstrated competencies
- Successful completion of a progression of related learning modules

Validation Interviews

Interviews with 9 Employers and 18 SPWs to simulate the Needs Assessment process.

KEY OUTCOMES:

- SPW Competency Profile viewed as complete and comprehensive
- SPW Competency Profile is a valuable tool for identifying SPW Competencies and learning needs
- The training priorities identified in the VAW Employer Survey were validated
- Short, focused, hands-on, regional learning opportunities are most highly valued
- The SPW Micro-credentials are viewed as a valuable and relevant structure for competency recognition within the industry

Value Added Wood Manufacturing

SKILLED PRODUCTION WORKER
CURRICULUM FRAMEWORK
and TRAINING OUTLINE

Approved by Industry

Developed by
North Pacific Metrics Inc.
Burnaby, B.C.

Table of Contents

Contents

How to Use this Document

This Curriculum Framework and Training Outline has been developed for the use of individuals from several different audiences. The table below describes how each section can be used by each intended audience.

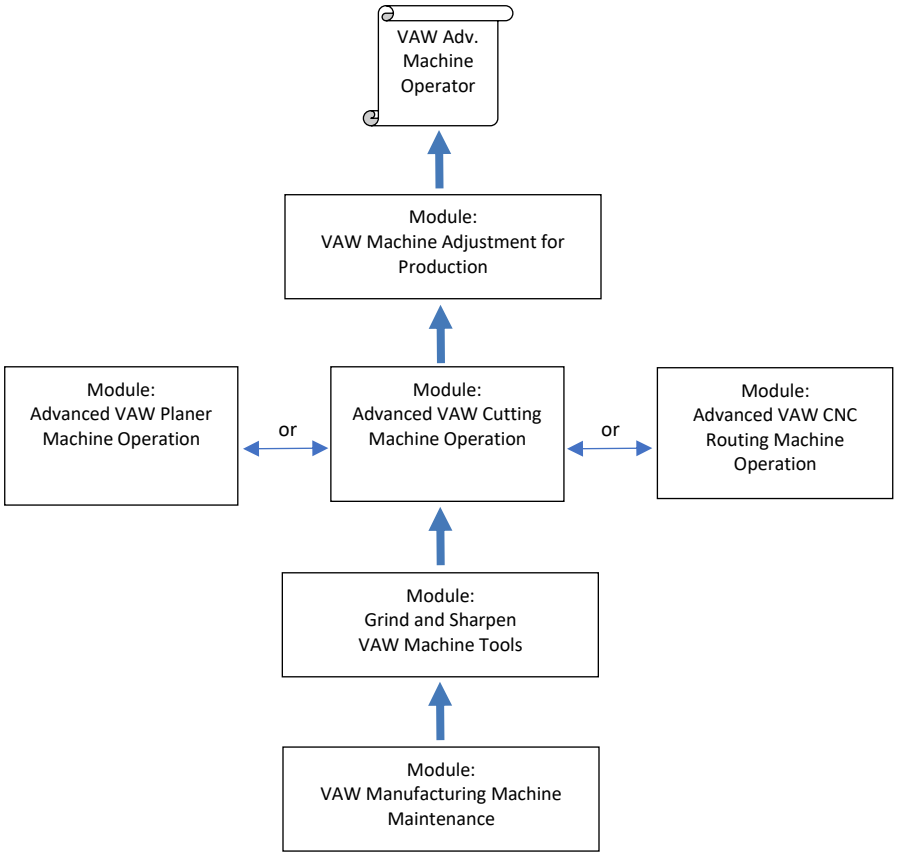
Section	Employers	Assessors / Trainers	VAW Workers
Program Credentialing Model	Understand the structure of the SPW Program. Understand the SPW competencies that may be expected for each VAW Credential.	Understand the structure of the SPW Program. Understand the Competency Standards that underlie the SPW Program and the various pathways to credential recognition.	Understand the Competency Standards that underlie the SPW Program and the various pathways to credential recognition.
Module Content	Identifies the structure and content of the SPW Modules that are available to improve and recognize the competency of individual SPWs.	Identifies the SPW Competencies that are central to the content of each SPW Module. Defines the learning objectives and generic instructional design for each SPW Module. Identifies suggested learning resources related to the SPW Module content.	Provides detailed information on the content and expectations for each SPW Module. Identifies the learning outcomes that an SPW can expect to accomplish through participation in the Module.

Skilled Production Worker Credentialing Model

The following graphics provide an overview of the Micro-credentialing Pathways for the Skilled Production Worker (SPW) occupation in British Columbia.

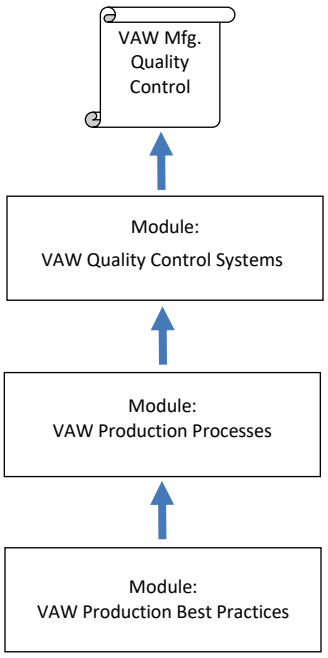
Credentialing Pathway #1:

Advanced VAW Machine Operator



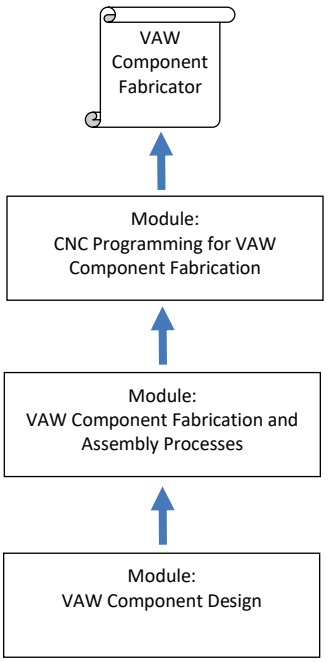
Credentialing Pathway #2:

VAW Production and Quality Control



Credentialing Pathway #3:

VAW Component Fabricator



Skilled Production Worker Curriculum Modules

Module 1: WOOD AS A MANUFACTURING MATERIAL – Solid Wood

Competency Area(s): ADVANCED MATERIALS (GAC – A)

Competencies:
A1. Describe different types of wood
A2. Identify different quality grades of wood
A3. Describe various machining centres and processes

Relative Priority: 64.42% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island	☐ Cabinetry	☒ Remanufactured Wood Products
☒ Kootenays	☒ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☐ Pre-Built Housing	☒ Engineered Wood Products
☐ Lower Mainland	☒ Millwork	
☐ North		

Key Learning Objectives:

- Identify different types of wood based on visual characteristics – A1(1-2)
- Describe qualities, characteristics and common applications of different woods – A1(3-4)
- Describe different grades of wood – A2(1)
- Identify variations of wood within grades - A2(2)
- Describe the importance of moisture content - A2(3)
- Describe various wood machining centres and processes – A3(1-5)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific materials and machining processes employed to aid in focusing the Module on specific learning needs.

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 4 hours
   (a) Could be recorded for additional cohorts

Suggested Pre-Requisite(s):

- None

Resources:

- Canadian Wood Council
- National Lumber Grades Authority - Lumber Grading Standards
- The Wood Manufacturing Process: From Forest To Finish (duffieldtimber.com)
- Wood Defects - Forestrypedia
- Common Wood Defects: Types of Lumber Issues | Decks.com
- Wood Defects and How To Prevent Them - Bessemeter

Module 2: VAW PRODUCTION PROCESSES

Competency Area(s): PRODUCTION SYSTEMS (GAC – B)

PROCESS OPTIMIZATION (GAC – I)

Competencies: B1. Describe production processes

I2. Design production processes

I3. Optimize processes that incorporate automation

Relative Priority: 56.73% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island	☒ Cabinetry	☒ Remanufactured Wood Products
☒ Kootenays	☐ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☒ Pre-Built Housing	☐ Engineered Wood Products
☐ Lower Mainland	☒ Millwork	
☒ North		

Key Learning Objectives:

- Describe production inputs and outputs – B1(1)
- Describe precision measurement – B1(2)
- Describe fabrication and assembly processes – B1(3-4)
- Describe continuous process flow – B1(5)
- Design plant layout and production flow – I2(1)
- Develop inventory management system – I2(2)
- Optimize equipment usage and capacity – I2(3)
- Develop strategies to minimize waste – I2(4)
- Describe automation technologies – I3(1)
- Identify opportunities for automation in production processes – I3(2)
- Perform automation cost / benefit analysis – I3(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify particular production and automation processes to aid in focusing the Module on specific learning needs.

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
   (a) Could be recorded for additional cohorts
3) Independent research / planning exercise – variable
4) Individual coaching session – 1 hour
5) Self-study / reading / preparation – 2 - 3 hours
6) Online synchronous webinar – 3.5 hours
7) Community of practice – on-going

Suggested Pre-Requisite(s):

- VAW Production Best Practices

Resources:

- National Occupational Standard for Supervisor – Wood Manufacturing Council
- Wood Manufacturing Process: A Complete Guide (deskera.com)

Module 3: VAW QUALITY CONTROL SYSTEMS

Competency Area(s): PRODUCTION SYSTEMS (GAC – B)

PROCESS OPTIMIZATION (GAC – I)

Competencies: B2. Describe quality control systems

I4. Plan and implement quality control systems

Relative Priority: 54.81% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island	☒ Cabinetry	☐ Remanufactured Wood Products
☒ Kootenays	☒ Log & Timber	☐ Furniture Manufacturing
☐ Okanagan	☐ Pre-Built Housing	☒ Engineered Wood Products
☐ Lower Mainland	☐ Millwork	
☒ North		

Key Learning Objectives:

- Describe quality control management – B2(1)
- Describe variance analysis techniques – B2(2)
- Describe control charting – B2(3)
- Describe continuous improvement – B2(4)
- Design and implement quality control systems – I4(1)
- Implement control charting – I4(2)
- Implement continuous improvement processes – I4(3)
- Apply variance analysis techniques – I4(4)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify and prioritize specific quality problems and challenges to aid in focusing the Module on specific learning needs.

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
   (a) Could be recorded for additional cohorts
3) Independent research / planning exercise – variable
4) Individual coaching session – 1 hour
5) Self-study / reading / preparation – 2 - 3 hours
6) Online synchronous webinar – 3.5 hours
7) Community of practice – on-going

Suggested Pre-Requisite(s):

- VAW Production Processes, and
- VAW Production Best Practices

Resources:

- National Occupational Standard for Supervisor – Wood Manufacturing Council
- 7 Basic Quality Tools: Quality Management Tools | ASQ
- Quality Control in Manufacturing | Basics and Best Practices (machinemetrics.com)
- Best Practices for Wood Manufacturing Quality Control (deskera.com)

Module 4: VAW PRODUCTION BEST PRACTICES

Competency Area(s): PRODUCTION SYSTEMS (GAC – B)

Competencies: B3. Identify production best practices

B4. Apply LEAN manufacturing principles

Relative Priority: 48.08% of Employer Survey respondents)

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☐ Vancouver Island	☐ Cabinetry	☐ Remanufactured Wood Products
☐ Kootenays	☒ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☒ Pre-Built Housing	☐ Engineered Wood Products
☐ Lower Mainland	☐ Millwork	
☒ North		

Key Learning Objectives:

- Describe plant layout and design considerations – B3(1)
- Describe inventory management – B3(2)
- Describe methods to optimize equipment usage and capacity – B3(3)
- Describe strategies to minimize waste – B3(4)
- Describe principles of LEAN manufacturing – B4(1)
- Identify opportunities for process improvement in operations – B4(2)
- Describe continuous improvement processes – B4(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific production processes for emphasis to aid in focusing the Module on specific learning needs.

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
   (a) Could be recorded for additional cohorts
3) Independent research / planning exercise – variable
4) Individual coaching session – 1 hour
5) Online synchronous webinar – 3.5 hours
6) Community of practice – on-going - based on shared challenges

Suggested Pre-Requisite(s):

- None

Resources:

- National Occupational Standard for Supervisor – Wood Manufacturing Council
- Quality Management Practices Guide (cdc.gov)
- What is TIMWOODS? 8 Waste of Lean and How to Reduce Them - SixSigma.us (6sigma.us)
- Lean in the Wood Furniture Industry — ISSSP for Lean Six Sigma

Module 5: VAW MANUFACTURING MACHINE MAINTENANCE

Competency Area(s): MANUFACTURING MACHINE MAINTENANCE (GAC – G)

Competencies:
G1. Clean manufacturing machine
G2. Lubricate manufacturing machine
G5. Identify and apply relevant information from OEM documents

Relative Priority: 48.08% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island	☒ Cabinetry	☐ Remanufactured Wood Products
☒ Kootenays	☐ Log & Timber	☐ Furniture Manufacturing
☐ Okanagan	☐ Pre-Built Housing	☒ Engineered Wood Products
☒ Lower Mainland	☒ Millwork	
☐ North		

Key Learning Objectives:

- Describe manufacturer's recommended cleaning procedures of specific manufacturing machines – G1(1)
- Choose appropriate cleaning methods – G1(2)
- Disassemble parts to clean, as required – G1(3)
- Develop a regular cleaning plan – G1(4)
- Describe manufacturer's recommended lubrication protocols for specific manufacturing machines – G2(1)
- Choose appropriate lubricants for specific manufacturing machines – G2(2)
- Identify appropriate lubrication frequency for specific manufacturing machines – G2(3)
- Employ lubrication best practices – G2(4)
- Access information in OEM documentation – G5(1)
- Identify critical spare parts to maintain on inventory – G5(2)
- Identify specifics of manufacturer's warranty coverage – G5(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific production machines for inclusion to aid in focusing the Module on specific learning needs.

- Self-study / reading / preparation – 2 - 3 hours
- Hands-on workshop in production / training facility with focus machine(s) – 7 hours
- Community of practice – on-going – based on focus machine(s)

Suggested Pre-Requisite(s):

- None

Resources:

- National Occupational Standard for Machine Operator – Wood Manufacturing Council
- Machine manufacturer(s) operator manual(s) and recommended maintenance procedures
- Preventative Maintenance Tips for Woodworking Machines | Woodworking Network
- What Are The Care And Maintenance Of Woodwork Machines? - The Habit of Woodworking

Module 6: VAW MACHINE ADJUSTMENT FOR PRODUCTION

Competency Area(s): MANUFACTURING MACHINE MAINTENANCE (GAC – G)

Competencies: G4. Adjust machining centre for optimum production

Relative Priority: 46.15% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island	☒ Cabinetry	☒ Remanufactured Wood Products
☒ Kootenays	☐ Log & Timber	☐ Furniture Manufacturing
☐ Okanagan	☐ Pre-Built Housing	☒ Engineered Wood Products
☒ Lower Mainland	☒ Millwork	
☐ North		

Key Learning Objectives:

- Describe testing and QA procedures – G4(1)
- Calibrate machine for optimal performance – G4(2)
- Describe relationships between production output and quality control systems – G4(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific manufacturing machine(s) to aid in focusing the Module on specific learning needs.

- Self-study / reading / preparation – 2 - 3 hours
- Hands-on workshop in production / training facility with focus machine(s) – 7 hours
- Community of practice – on-going – based on focus machine(s)

Suggested Pre-Requisite(s):

- Grind and Sharpen VAW Machine Tools, and
- VAW Manufacturing Machine Maintenance.
- Advanced VAW Planer Machine Operation, or
- Advanced VAW Cutting Machine Operation, or
- Advanced VAW CNC Routing Machine Operation.

Resources:

- National Occupational Standard for Machine Operator – Wood Manufacturing Council
- Machine manufacturer(s) operator manual(s)
- The Wood Innovation Group (TWIG) Meetup | Centre for Advanced Wood Processing (ubc.ca)

Module 7: VAW SPECIALIZED SURFACE FINISHING

Competency Area(s): SPECIALIZED FINISHING (GAC – D)

Competencies:

D1. Identify specialized surface finishing requirements

D2. Select appropriate coating product

D3. Apply coating product

D4. Apply other surface treatments

Relative Priority: 41.35% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☐ Vancouver Island	☐ Cabinetry	☐ Remanufactured Wood Products
☐ Kootenays	☒ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☐ Pre-Built Housing	☒ Engineered Wood Products
☒ Lower Mainland	☒ Millwork	
☒ North		

Key Learning Objectives:

- Describe wood finishing - D1(1)
- Describe colour theory and wood colour – D1(2)
- Describe surface preparation – D1(3)
- Select coating parameters and different coating products – D2(1&2)
- Handle coating products appropriately – D2(3)
- Spray coating products - D3(1)
- Describe conditions impacting application of coating product - D3(2)
- Control drying and curing processes - D3(3)
- Select and apply specialty wood finishes – D4(1&2)
- Implement quality control and finish testing – D4(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific materials and surface finishing challenges to aid in focusing the Module on specific learning needs.

- Self-study / reading / preparation – 2 - 3 hours
- Hands-on workshop in production / training facility – 7 hours
- Community of practice – on-going – based on shared challenges

Suggested Pre-Requisite(s):

- Wood as a Manufacturing Material – Solid Wood, and / or
- VAW Composites and Engineered Products.

Resources:

- Centre for Advanced Wood Processing (UBC) Refinishing Program
- National Occupational Standard for Finisher – Wood Manufacturing Council

Module 8: INSTALL VAW PRODUCTS AND COMPONENTS

Competency Area(s): INSTALLATION (GAC – F)

Competencies: F1. Install interior products and components

F2. Install exterior products and components

Relative Priority: 41.35% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☐ Vancouver Island	☒ Cabinetry	☐ Remanufactured Wood Products
☐ Kootenays	☒ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☒ Pre-Built Housing	☐ Engineered Wood Products
☒ Lower Mainland	☐ Millwork	
☒ North		

Key Learning Objectives:

- Read blueprints and technical drawings - F1(1) & F2(1)
- Describe relevant building codes and enactments – F1(2) & F2(2)
- Plan and install according to specifications – F1(4)
- Practice project site safety – F2(3)
- Determine site readiness for installation – F2(4)
- Inspect product upon arrival at site – F2(5)
- Describe building structure components – F2(6)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify and prioritize specific installation problems and challenges to aid in focusing the Module on specific learning needs.

1) Self-study / reading / preparation – 3 - 4 hours
2) Online synchronous webinar – 3 - 4 hours
   (a) Could be recorded for additional cohorts
3) Hands-on workshop at installation site or in training facility – 4 - 6 hours
4) Community of practice – on-going – based on shared challenges

Suggested Pre-Requisite(s):

- None

Resources:

- None identified

Module 9: ADVANCED VAW CUTTING MACHINE OPERATION

Competency Area(s): WORK CENTRE OPERATIONS (GAC – C)

Competencies: C6. Operate cutting machine for component fabrication

Relative Priority: 40.38% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☐ Vancouver Island	☐ Cabinetry	☒ Remanufactured Wood Products
☐ Kootenays	☐ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☒ Pre-Built Housing	☐ Engineered Wood Products
☒ Lower Mainland	☐ Millwork	
☐ North		

Key Learning Objectives:

- Operate rip saws – C6(1)
- Operate resaws – C6(2)
- Operate chop saws – C6(3)
- Operate panel saws – C6(4)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific cutting machine / materials challenges to aid in focusing the Module on specific learning needs.

1. Self-study / reading / preparation – 2 - 3 hours
2. Hands-on workshop in a production or training facility – 7 hours
3. Community of practice – on-going based on shared challenges

Suggested Pre-Requisite(s):

- Wood as a Manufacturing Material – Solid Wood, and / or
- Composites and Engineered Materials
- VAW Manufacturing Machine Maintenance
- Grind and Sharpen VAW Machine Tools

Resources:

- None identified

Module 10: VAW COMPONENT DESIGN

Competency Area(s): DESIGN TOOLS AND SYTEMS (GAC – H)

Competencies: H1. Prepare shop sketches and component designs

H2. Use CAD/CAM system to design components

Relative Priority: 35.58% of Employer Survey respondents

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☐ Vancouver Island	☐ Cabinetry	☐ Remanufactured Wood Products
☐ Kootenays	☒ Log & Timber	☐ Furniture Manufacturing
☐ Okanagan	☒ Pre-Built Housing	☐ Engineered Wood Products
☒ Lower Mainland	☒ Millwork	
☒ North		

Key Learning Objectives:

- Describe considerations for component design and sketches – H1(1)
- Enter drafting sketches into CAD program – H1(2)
- View and revise sketches and designs – H1(3)
- Create CAD drawings – H2(1)
- Program CAM for component fabrication based on CAD drawings – H2(2)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify and prioritize specific component types and CAD/CAM systems to aid in focusing the Module on specific learning needs.

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
   (a) Could be recorded for additional cohorts
3) Independent design / planning exercise – variable
4) Online synchronous webinar – 3.5 hours
5) Community of practice – on-going

Suggested Pre-Requisite(s):

- None

Resources:

- None identified

Module 11: VAW COMPOSITES AND ENGINEERED MATERIALS

Competency Area: ADVANCED MATERIALS (GAC – A)

Competencies: A4. Describe composites and other engineered materials

A5. Describe machining processes for composites and other engineered materials

Relative Priority: 34.62% of Employer Survey respondents

SPW Learning Need Segmentation:

Regional Priority	Sub-Sector Priority	
☐ North	☒ Cabinetry	☐ Remanufactured Wood Products
☒ Kootenays	☐ Log & Timber	☐ Furniture Manufacturing
☐ Okanagan	☒ Pre-Built Housing	☒ Engineered Wood Products
☐ Lower Mainland	☐ Millwork	
☒ Vancouver Island		

Key Learning Objectives:

- Describe structure and composition of engineered materials – A4(1)
- Identify different panel products – A4(2)
- Describe adhesives used in composites – A4(3)
- Describe laminating methods and products – A4(4)
- Describe veneer products – A4(5)
- Describe considerations in machining composites and engineered products – A5(1-4)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific materials and machining processes to aid in focusing the Module on specific learning needs..

1) Self study / reading / preparation – 3 - 4 hours
2) Online synchronous webinar – 2 x 4 hours
   (a) Could be recorded for additional cohorts

Suggested Pre-Requisite(s):

- None

Resources:

- WMC – Wood Manufacturing Council
- UBC – Centre for Advanced Wood Processing

Module 12: ADVANCED VAW PLANER MACHINE OPERATION

Competency Area: WORK CENTRE OPERATION (GAC – C)

Competency Topics: C1. Operate planning machine for component fabrication

Relative Priority: 34.62% of Employer Survey respondents

SPW Learning Need Segmentation:

Regional Priority	Sub-Sector Priority	
☒ North	☐ Cabinetry	☒ Remanufactured Wood Products
☐ Kootenays	☒ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☒ Pre-Built Housing	☒ Engineered Wood Products
☐ Lower Mainland	☐ Millwork	
☐ Vancouver Island		

Key Learning Objectives:

- Perform basic planing operations – C1(1)
- Adjust planer to perform planing tasks – C1(2)
- Perform basic preventive maintenance – C1(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific planer machine / materials challenges to aid in focusing the Module on specific learning needs.

1. Self-study / reading / preparation – 2 - 3 hours
2. Hands-on workshop in a production or training facility – 7 hours
3. Community of practice – on-going based on shared challenges

Suggested Pre-Requisite(s):

- Wood as a Manufacturing Material – Solid Wood, and / or
- Composites and Engineered Materials.
- Grind and Sharpen VAW Machine Tools, and
- VAW Manufacturing Machine Maintenance.

Resources:

- None identified

Module 13: GRIND AND SHARPEN VAW MACHINE TOOLS

Competency Area: MANUFACTURING MACHINE MAINTENANCE (GAC – G)

Competency Topics: G3. Grind and sharpen machine tools

Relative Priority: 28.85% of Employer Survey respondents

SPW Learning Need Segmentation:

Regional Priority	Sub-Sector Priority	
☐ North	☒ Cabinetry	☐ Remanufactured Wood Products
☒ Kootenays	☐ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☒ Pre-Built Housing	☐ Engineered Wood Products
☐ Lower Mainland	☒ Millwork	
☒ Vancouver Island		

Key Learning Objectives:

- Disassemble cutting tools – G3(1)
- Describe sharpening requirements for cutting edges and cutting angles – G3(2)
- Grind and sharpen tools using a bench grinder – G3(3)
- Grind and sharpen tools using a profile grinder – G3(4)
- Grind and sharpen tools using a slow speed water wheel – G3(5)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific planer machine / materials challenges to aid in focusing the Module on specific learning needs.

1. Self-study / reading / preparation – 2 - 3 hours
2. Hands-on workshop in a production or training facility – 7 hours
3. Community of practice – on-going based on shared challenges

Suggested Pre-Requisite(s):

- VAW Manufacturing Machine Maintenance

Resources:

- None identified

Module 14: VAW COMPONENT FABRICATION AND ASSEMBLY PROCESSES

Competency Area: **DESIGN TOOLS AND SYSTEMS** (GAC – H)

Competency Topics: H3. Design component fabrication and assembly processes

Relative Priority: 27.88% of Employer Survey respondents

SPW Learning Need Segmentation:

Regional Priority	Sub-Sector Priority	
☒ North	☐ Cabinetry	☐ Remanufactured Wood Products
☐ Kootenays	☒ Log & Timber	☐ Furniture Manufacturing
☒ Okanagan	☒ Pre-Built Housing	☐ Engineered Wood Products
☐ Lower Mainland	☒ Millwork	
☐ Vancouver Island		

Key Learning Objectives:

- Translate component designs into fabrication and assembly processes – H3(1)
- Gather customer requirements and maintain engagement throughout process – H3(2)
- Perform 3D modeling – H3(3)
- Perform assembly modeling – H3(4)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify and prioritize specific component types and assembly challenges to aid in focusing the Module on specific learning needs.

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
   (a) Could be recorded for additional cohorts
3) Independent design / planning exercise – variable
4) Individual coaching session – 1 hour
5) Online synchronous webinar – 3.5 hours
6) Community of practice – on-going

Suggested Pre-Requisite(s):

- VAW Component Design

Resources:

- None identified

Module 15: ADVANCED VAW CNC ROUTING MACHINE OPERATION

Competency Area: WORK CENTRE OPERATION (GAC – C)

Competency Topics: C5. Operate CNC routing machine for component fabrication

Relative Priority: 26.92% of Employer Survey respondents

SPW Learning Need Segmentation:

Regional Priority	Sub-Sector Priority	
☐ North	☐ Cabinetry	☐ Remanufactured Wood Products
☒ Kootenays	☐ Log & Timber	☐ Furniture Manufacturing
☐ Okanagan	☒ Pre-Built Housing	☒ Engineered Wood Products
☐ Lower Mainland	☒ Millwork	
☒ Vancouver Island		

Key Learning Objectives:

- Operate CNC 3-axis vacuum pod – C5(1)
- Operate CNC nested machine – C5(2)
- Operate CNC beam saw – C5(3)
- Operate CNC aggregate head machine – C5(4)
- Operate double end tenoner machine – C5(5)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific CNC routing machine(s) to aid in focusing the Module on specific learning needs.

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
   (a) Could be recorded for additional cohorts
3) Hands-on workshop in a production or training facility – 7 hours
4) Community of practice – on-going based on shared challenges

Suggested Pre-Requisite(s):

- Wood as a Manufacturing Material – Solid Wood, and / or
- Composites and Engineered Materials.
- VAW Manufacturing Machine Maintenance, and
- Grind and Sharpen VAW Machine Tools.

Resources:

- None identified

Module 16: CNC PROGRAMMING FOR VAW COMPONENT FABRICATION

Competency Area: PROCESS OPTIMIZATION (GAC – I)

Competency Topics: I1. Program CNC work centre for component fabrication

Overall Priority: 25.96% of Employer Survey respondents

SPW Learning Need Segmentation:

Regional Priority	Sub-Sector Priority	
☒ North	☐ Cabinetry	☐ Remanufactured Wood Products
☒ Kootenays	☐ Log & Timber	☐ Furniture Manufacturing
☐ Okanagan	☒ Pre-Built Housing	☐ Engineered Wood Products
☐ Lower Mainland	☒ Millwork	
☒ Vancouver Island		

Key Learning Objectives:

- Generate CNC control file – I1(1)
- Edit and revise CNC program files – I1(2)
- Adjust and calibrate CNC machining processes – I1(3)

Key Learning Objectives:

- Generate CNC control file – I1(1)
- Edit and revise CNC program files – I1(2)
- Adjust and calibrate CNC machining processes – I1(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers in advance to identify specific CNC work centre(s) to aid in focusing the Module on specific learning needs.

1) Self study / reading / preparation – 2 hours
2) Online synchronous webinar – 4 hours
    (a) Could be recorded for additional cohorts
3) Community of practice – on-going based on shared challenges

Suggested Pre-Requisite(s):

- VAW Component Design, and
- VAW Component Fabrication and Assembly Processes

Resources:

- None identified

INTRODUCTION

This Proposal seeks funding for a Pilot Implementation of selected learning modules for Skilled Production Workers (SPWs), developed by BC Wood as a part of an overall Value-Added Wood (VAW) Products Workforce Development Plan (2021).

Brief Project History

Work on the design and development of the Skilled Production Worker (SPW) Training initiative began with the selection and engagement of North Pacific Metrics Inc. (NPM) as consultants for this component of the project in January 2023.

NPM began their work with an international environmental scan of programs and resources for similar occupations and workers in the VAW industry. Several successful strategies were identified, discussed and evaluated with input from the Project Governance Committee and the SPW Technical Working Group (TWG) to identify promising approaches for the context of the British Columbia VAW industry.

Working closely with the TWG, consultants from NPM developed a SPW Competency Profile detailing the knowledge and skills most commonly required for up-skilling incumbent SPW workers in British Columbia.

Using the framework of SPW competencies, NPM designed and distributed a survey to approximately 200 employers of SPWs in British Columbia. Survey responses provided learning needs information for 104 different SPW worker roles in VAW manufacturing operations (many responses represented the same or very similar occupations). Based on both the SPW Competency Profile and the results of the learning needs survey, NPM developed a Curriculum Framework of 16 SPW learning units or Modules, representing the most frequently identified and required occupational up-skilling needs. The curriculum design aligns specific groupings of the 16 Modules into three integrated SPW Micro-credentials:

- Advanced VAW Machine Operator
- VAW Production and Quality Control
- VAW Component Fabricator

The SPW Curriculum Framework and the pilot strategy were presented to and approved by the SPW Technical Working Group in August 2024.

The SPW Curriculum Framework and the pilot strategy were presented to and approved by the SPW Technical Working Group in August 2024.

Pilot Implementation Goals

The goals of the implementation pilot are:

Pilot Planning Considerations

- Limited budget – propose priorities for funding
- Engage program participants and employers in customizing Modules to meet SPW learning needs
- Distribution of Modules to all regions and sub-sectors (leverage cluster strategy)
- Pilot a variety of learning formats (on-line; hands-on; self-study, etc)
- Assess results and develop recommendations for a sustainable SPW learning program

Pilot Implementation Plan

For the purpose of the Pilot Implementation, BC Wood plans to offer VAW employers / SPW workers a selection of seven of the highest demand SPW Modules from the Curriculum Framework, as outlined below:

Pilot - Priority Topics (top 7)

1. Wood as a material
2. VAW production processes
3. VAW quality control systems
4. VAW production best practices
5. Machine maintenance
6. Machine adjustment for optimal production
7. Specialized surface finishing

The Pilot Implementation plan maximizes the engagement of VAW employers / SPW workers across all regions of the Province and in each of the VAW industry sub-sectors, as illustrated in the matrix below:

SPW PILOT WORKSHOPS PLAN

	Island	L. Main	Okan	Koot	North
Cabinetry	VAW Production Processes	VAW Production Best Practices			
Eng Wood		Mfg Machine Maintenance			
Log & Timber			Specialized Surface Finishing		Wood as a Mfg Material
Millwork				Machine Adjustment for Optimum Prod'n	
Pre-built			VAW Quality Control Systems		
Reman'd		VAW Production Best Practices		Machine Adjustment for Optimum Prod'n	

BC Wood is seeking funding for the Assessor / Trainer fees, plus facilities and resources (as required), for the pilot delivery of each of the seven SPW Modules.

Pilot Budget Estimates

The budget estimates for the Pilot Implementation are based on the following assumptions:

- Approximately 55 to 60 SPWs will participate in the Pilot (approximately 8 SPWs to be trained per Module).
- The Assessor / Trainer assigned for the Module will conduct a needs assessment interview with each SPW and their Employer – approximately 45 minutes to arrange and conduct each interview.
- When included in the Module design, the Assessor / Trainer will conduct an individual coaching session with each SPW – approx. 1.25 hours per participant to arrange and complete.
- When required, the Assessor / Trainer will travel to the hands-on workshop location from the Lower Mainland. Expenses will include airfare, accommodations, meals, and auto rental.
- The fees rate for Assessor / Trainers will be $100 / hour.
- When included in the Module design, the Assessor / Trainer will organize and facilitate the initial meeting(s) for a continuing Community of Practice.

MODULE 1: **WOOD AS A MANUFACTURING MATERIAL – Solid Wood**

Competency Area(s): ADVANCED MATERIALS (GAC – A)

Competencies:
A1. Describe different types of wood
A2. Identify different quality grades of wood
A3. Describe various machining centres and processes

Employer Priority: 64.42%

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island ☒ Kootenays ☒ Okanagan ☐ Lower Mainland ☐ North	☐ Cabinetry ☒ Log & Timber ☐ Pre-Built Housing ☒ Millwork	☒ Remanufactured Wood Products ☐ Furniture Manufacturing ☒ Engineered Wood Products

Key Learning Objectives:

- Identify different types of wood based on visual characteristics – A1(1-2)
- Describe qualities, characteristics and common applications of different woods – A1(3-4)
- Describe different grades of wood – A2(1)
- Identify variations of wood within grades - A2(2)
- Describe the importance of moisture content - A2(3)
- Describe various wood machining centres and processes – A3(1-5)

Recommended Design (with estimated timing):

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 4 hours
    (a) Could be recorded for additional cohorts

Resources:

- Canadian Wood Council
- National Lumber Grades Authority - Lumber Grading Standards
- The Wood Manufacturing Process: From Forest To Finish (duffieldtimber.com)
- Wood Defects - Forestrypedia
- Common Wood Defects: Types of Lumber Issues | Decks.com
- Wood Defects and How To Prevent Them - Bessemeter

MODULE 2: **VAW PRODUCTION PROCESSES**

Competency Area(s): PRODUCTION SYSTEMS (GAC – B)

PROCESS OPTIMIZATION (GAC – I)

Competencies: B1. Describe production processes

I2. Design production processes

I3. Optimize processes that incorporate automation

Employer Priority: 56.73%

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island ☒ Kootenays ☒ Okanagan ☐ Lower Mainland ☒ North	☒ Cabinetry ☐ Log & Timber ☒ Pre-Built Housing ☒ Millwork	☒ Remanufactured Wood Products ☐ Furniture Manufacturing ☐ Engineered Wood Products

Key Learning Objectives:

- Describe production inputs and outputs – B1(1)
- Describe precision measurement – B1(2)
- Describe fabrication and assembly processes – B1(3-4)
- Describe continuous process flow – B1(5)
- Design plant layout and production flow – I2(1)
- Develop inventory management system – I2(2)
- Optimize equipment usage and capacity – I2(3)
- Develop strategies to minimize waste – I2(4)
- Describe automation technologies – I3(1)
- Identify opportunities for automation in production processes – I3(2)
- Perform automation cost / benefit analysis – I3(3)

Recommended Design (with estimated timing):

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
3) Independent research / planning exercise – variable
4) Individual coaching session – 1 hour
5) Self-study / reading / preparation – 2 - 3 hours
6) Online synchronous webinar – 3.5 hours
7) Community of practice – on-going

Suggested Pre-Requisite(s):

- VAW Production Best Practices

Resources:

- National Occupational Standard for Supervisor – Wood Manufacturing Council
- Wood Manufacturing Process: A Complete Guide (deskera.com)

MODULE 3: **VAW QUALITY CONTROL SYSTEMS**

Competency Area(s): PRODUCTION SYSTEMS (GAC – B)

PROCESS OPTIMIZATION (GAC – I)

Competencies: B2. Describe quality control systems

I4. Plan and implement quality control systems

Employer Priority: 54.81%

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island ☒ Kootenays ☐ Okanagan ☐ Lower Mainland ☒ North	☒ Cabinetry ☒ Log & Timber ☐ Pre-Built Housing ☐ Millwork	☐ Remanufactured Wood Products ☐ Furniture Manufacturing ☒ Engineered Wood Products

Key Learning Objectives:

- Describe quality control management – B2(1)
- Describe variance analysis techniques – B2(2)
- Describe control charting – B2(3)
- Describe continuous improvement – B2(4)
- Design and implement quality control systems – I4(1)
- Implement control charting – I4(2)
- Implement continuous improvement processes – I4(3)
- Apply variance analysis techniques – I4(4)

Recommended Design (with estimated timing):

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
3) Independent research / planning exercise – variable
4) Individual coaching session – 1 hour
5) Self-study / reading / preparation – 2 - 3 hours
6) Online synchronous webinar – 3.5 hours
7) Community of practice – on-going

Suggested Pre-Requisite(s):

- VAW Production Best Practices

Resources:

- National Occupational Standard for Supervisor – Wood Manufacturing Council
- 7 Basic Quality Tools: Quality Management Tools | ASQ
- Quality Control in Manufacturing | Basics and Best Practices (machinemetrics.com)
- Best Practices for Wood Manufacturing Quality Control (deskera.com)

MODULE 4: **VAW PRODUCTION BEST PRACTICES**

Competency Area(s): PRODUCTION SYSTEMS (GAC – B)

Competencies: B3. Identify production best practices

B4. Apply LEAN manufacturing principles

Employer Priority: 48.08%

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☐ Vancouver Island ☐ Kootenays ☒ Okanagan ☐ Lower Mainland ☒ North	☐ Cabinetry ☒ Log & Timber ☒ Pre-Built Housing ☐ Millwork	☐ Remanufactured Wood Products ☐ Furniture Manufacturing ☐ Engineered Wood Products

Key Learning Objectives:

- Describe plant layout and design considerations – B3(1)
- Describe inventory management – B3(2)
- Describe methods to optimize equipment usage and capacity – B3(3)
- Describe strategies to minimize waste – B3(4)
- Describe principles of LEAN manufacturing – B4(1)
- Identify opportunities for process improvement in operations – B4(2)
- Describe continuous improvement processes – B4(3)

Recommended Design (with estimated timing):

1) Self-study / reading / preparation – 2 - 3 hours
2) Online synchronous webinar – 3.5 hours
3) Independent research / planning exercise – variable
4) Online synchronous webinar – 3.5 hours
5) Community of practice – on-going

Resources:

- National Occupational Standard for Supervisor – Wood Manufacturing Council
- Quality Management Practices Guide (cdc.gov)
- What is TIMWOODS? 8 Waste of Lean and How to Reduce Them - SixSigma.us (6sigma.us)
- Lean in the Wood Furniture Industry — ISSSP for Lean Six Sigma

MODULE 5: **VAW MANUFACTURING MACHINE MAINTENANCE**

Competency Area(s): MANUFACTURING MACHINE MAINTENANCE (GAC – G)

Competencies:
G1. Clean manufacturing machine
G2. Lubricate manufacturing machine
G5. Identify and apply relevant information from OEM documents

Employer Priority: 48.08%

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island ☒ Kootenays ☐ Okanagan ☒ Lower Mainland ☐ North	☒ Cabinetry ☐ Log & Timber ☐ Pre-Built Housing ☒ Millwork	☐ Remanufactured Wood Products ☐ Furniture Manufacturing ☒ Engineered Wood Products

Key Learning Objectives:

- Describe manufacturer's recommended cleaning procedures of specific manufacturing machines – G1(1)
- Choose appropriate cleaning methods – G1(2)
- Disassemble parts to clean, as required – G1(3)
- Develop a regular cleaning plan – G1(4)
- Describe manufacturer's recommended lubrication protocols for specific manufacturing machines – G2(1)
- Choose appropriate lubricants for specific manufacturing machines – G2(2)
- Identify appropriate lubrication frequency for specific manufacturing machines – G2(3)
- Employ lubrication best practices – G2(4)
- Access information in OEM documentation – G5(1)
- Identify critical spare parts to maintain on inventory – G5(2)
- Identify specifics of manufacturer's warranty coverage – G5(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers to identify specific manufacturing machine(s) focus for the module.

- Self-study / reading / preparation – 2 - 3 hours
- Hands-on workshop in production / training facility with focus machine(s) – 7 hours
- Community of practice – on-going – based on focus machine(s)

Resources:

- National Occupational Standard for Machine Operator – Wood Manufacturing Council
- Machine manufacturer(s) operator manual(s) and recommended maintenance procedures
- Preventative Maintenance Tips for Woodworking Machines | Woodworking Network
- What Are The Care And Maintenance Of Woodwork Machines? - The Habit of Woodworking

MODULE 6: **VAW MACHINE ADJUSTMENT FOR PRODUCTION**

Competency Area(s): MANUFACTURING MACHINE MAINTENANCE (GAC – G)

Competencies: G4. Adjust machining centre for optimum production

Employer Priority: 46.15%

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☒ Vancouver Island ☒ Kootenays ☐ Okanagan ☒ Lower Mainland ☐ North	☒ Cabinetry ☐ Log & Timber ☐ Pre-Built Housing ☒ Millwork	☒ Remanufactured Wood Products ☐ Furniture Manufacturing ☒ Engineered Wood Products

Key Learning Objectives:

- Describe testing and QA procedures – G4(1)
- Calibrate machine for optimal performance – G4(2)
- Describe relationships between production output and quality control systems – G4(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers to identify specific manufacturing machine(s) focus for the module.

- Self-study / reading / preparation – 2 - 3 hours
- Hands-on workshop in production / training facility with focus machine(s) – 7 hours
- Community of practice – on-going – based on focus machine(s)

Suggested Pre-Requisite(s):

- VAW Manufacturing Machine Maintenance

Resources:

- National Occupational Standard for Machine Operator – Wood Manufacturing Council
- Machine manufacturer(s) operator manual(s)
- The Wood Innovation Group (TWIG) Meetup | Centre for Advanced Wood Processing (ubc.ca)

MODULE 7: **VAW SPECIALIZED SURFACE FINISHING**

Competency Area(s): SPECIALIZED FINISHING (GAC – D)

Competencies:
D1. Identify specialized surface finishing requirements
D2. Select appropriate coating product
D3. Apply coating product
D4. Apply other surface treatments

Employer Priority: 41.35%

SPW Learning Need Segmentation:

B.C. Regions	Value-Added Wood Sub-Sectors	
☐ Vancouver Island ☐ Kootenays ☒ Okanagan ☒ Lower Mainland ☒ North	☐ Cabinetry ☒ Log & Timber ☐ Pre-Built Housing ☒ Millwork	☐ Remanufactured Wood Products ☐ Furniture Manufacturing ☒ Engineered Wood Products

Key Learning Objectives:

- Describe wood finishing - D1(1)
- Describe colour theory and wood colour – D1(2)
- Describe surface preparation – D1(3)
- Select coating parameters and different coating products – D2(1&2)
- Handle coating products appropriately – D2(3)
- Spray coating products - D3(1)
- Describe conditions impacting application of coating product - D3(2)
- Control drying and curing processes - D3(3)
- Select and apply specialty wood finishes – D4(1&2)
- Implement quality control and finish testing – D4(3)

Recommended Design (with estimated timing):

Assessor / Trainer consults with learners and employers to identify specific materials and surface finishing challenges for the module.

- Self-study / reading / preparation – 2 - 3 hours
- Hands-on workshop in production / training facility – 4 - 5 hours
- Community of practice – on-going – based on focus shared challenges

Suggested Pre-Requisite(s): Wood as a Manufacturing Material – Solid Wood

Resources:

- Centre for Advanced Wood Processing (UBC) Refinishing Program
- National Occupational Standard for Finisher – Wood Manufacturing Council

BC Wood is surveying employers in the **Value-added Wood (VAW)** manufacturing industry in BC in order to identify the highest priority training needs within the sector.

The information you provide will support the development of training resources for **Skilled Production Workers (SPWs)** in VAW manufacturing in BC.

Your responses will be kept in confidence and reported only when blended with input from other respondents.

Please provide the following contact information:

Your name: _____

Your company / organization: _____

Phone number: _____ Email: _____

Location Address: _____

_____

Please name (up to) three different Skilled Production Worker job roles in your operation today that you think would benefit from training to improve productivity.

Job A: _____

Job B: _____

Job C: _____

Please check the box below to indicate the learning needs for each named job role in your operation.

Job A	Job B	Job C	Learning Needs
			Wood as a manufacturing material (A123) • common North American and Exotic woods • common applications of different types of wood • qualities and characteristics of different woods • different wood grades • variation of wood within grades • importance of moisture content • machining processes for wood manufacturing
			Composites and other engineered materials (A45) • structure and composition of engineered materials • different panel products • adhesives used in composites • laminating methods and products • veneer products • machining composites and engineered materials
			VAW production processes (B1, I23) • production materials • precision measurement • fabrication processes • assembly processes • continuous flow • plant layout and production flow • inventory management systems • equipment optimization, usage and capacity • automation technologies in VAW production • cost benefit analysis • strategies to minimize waste
			VAW quality control systems (B2, I4) • quality control management • variance analysis techniques • control charting • continuous quality improvement • variance techniques

Job A	Job B	Job C	Learning Needs
			VAW production best practices (B34) • plant layout and design considerations • inventory management • methods to optimize equipment usage and capacity • strategies to minimize waste • principles of LEAN manufacturing • opportunities for process improvement in operations
			Advanced planer machine operation (C1) • planer operations • planer machine adjustments • preventative maintenance
			Advanced moulding machine operation (C2) • moulder operation to perform jointer and planer tasks • advanced moulder operations • preventative maintenance
			Advanced edgebanding machine operation (C3) • advanced edgebanding machine operations • edgebanding materials • preventative maintenance
			Advanced sanding machine operation (C4) • edge sander • wide belt sander • profile sander • rotary table edge sander • two head drum sander
			Advanced CNC routing machine operation (C5) • CNC 3-axis vacuum pod • CNC nested machining • CNC beam saw • CNC aggregate head • double end tenoner
			Advanced cutting machine operation (C6) • rip saw • resaw • chop saw • panel saw

Job A	Job B	Job C	Learning Needs
			Advanced boring machine operation (C7) • drill press • bore • mortiser
			Specialized surface finishing (D) • specialty wood finishing • colour theory and wood colour • surface preparation • coating products • coating parameters • recycling, safety and environmental considerations • conditions impacting application of coating products • drying and curing processes • post treatments • quality control and finish testing
			Shaping metal components (E123) • cutting methods • templates for cutting • bending metal components • shaping metal components to specifications • annealing processes • hardening & tempering • normalizing process • induction hardening
			Welding metal components (E4) • shielded metal arc welding (SMAW) • gas metal arc welding (GMAW)
			Installing products and components (F12) • blueprint and technical drawings • project site safety • site readiness • product inspection on site • relevant building codes and regulations • connection points with other systems • building structure components • installation specifications

Job A	Job B	Job C	Learning Needs
			Manufacturing machine maintenance (G125) • manufacturer's recommended cleaning and lubrication procedures • cleaning methods • disassembly to clean • regular cleaning plan • lubrication types • lubrication frequency • lubrication best practices • OEM documents • critical spare parts inventory • manufacturers' warranty coverage
			Grind and sharpen manufacturing machine tools (G3) • disassemble cutting tools • cutting edges and cutting angles • bench grinders • profile grinders • slow speed water wheels
			Machine adjustment for optimum production (G4) • testing and QA procedures • machine calibration and adjustment • optimizing production output and quality control
			Component design (H12) • component design and shop sketches • editing sketches and designs • CAD drawings • CAD programs • CAM for based on CAD drawings
			Component fabrication and assembly processes (H3) • gather requirements (customer engagement) • translate component designs into fabrication and assembly processes • 3D modeling • assembly modeling
			CNC programming for component fabrication (I1) • generate CNC control file • perform edits to CNC program files • adjust and calibrate CNC machining processes

Appendix D — Evaluators Report

Evaluation of the BC Workforce Development Implementation

March 5th, 2025

Overview

- Purpose and Methodology
- Selected Findings
  - Relevance
  - Design and Implementation
  - Effectiveness of the Components
- Discussion Questions

Methodology

Component	Methodology
Direct to Work	• Review of program and participant data • Review of reports (e.g. Environmental Scan) • Post-completion participant surveys • 4 month follow-up • Interview with college lead
HR Tool and Coaching	• Review of project materials, resources and website • Survey of participating employers • Interview with program lead • Survey of the Technical Working Group
Skilled Worker Training	• Review of Reports
Overall Project	• Review of project outputs, reports, website, and other materials • Interviews/survey with Governance Committee • Group session

Relevance

- Value-added Wood Industry was (and is) facing significant labour market challenges (e.g., low awareness of career opportunities, difficulties in attracting new entrants, staff retention, shortage of qualified workers, access to effective and accessible training, productivity, industry HR capabilities, etc.)

- 2021 Workforce Development Strategy recommend a Four Pronged Approach
  - Awareness and Communication
  - Work-ready Training (build, deliver and evaluation)
  - Skilled Worker Training – model and network of trainers
  - Workforce Development Supports

- Three Were Funded

Design and Implementation

- Tight timelines were a challenge
- Nevertheless, impressive outputs were produced
- Effective Technical Working Groups
- Overall, deliverables produced largely as planned
  - Reduction in DTW courses (5 to 4) and fewer than expected participants
  - Pilot project for the SPW
- A few of the intended outcomes, particularly for employers, have not been at least in this time frame
- Key factor going forward is sustainability
- Communication/marketing was an issue
- Components operated independently

Effectiveness of the Components

Direct-to-Work

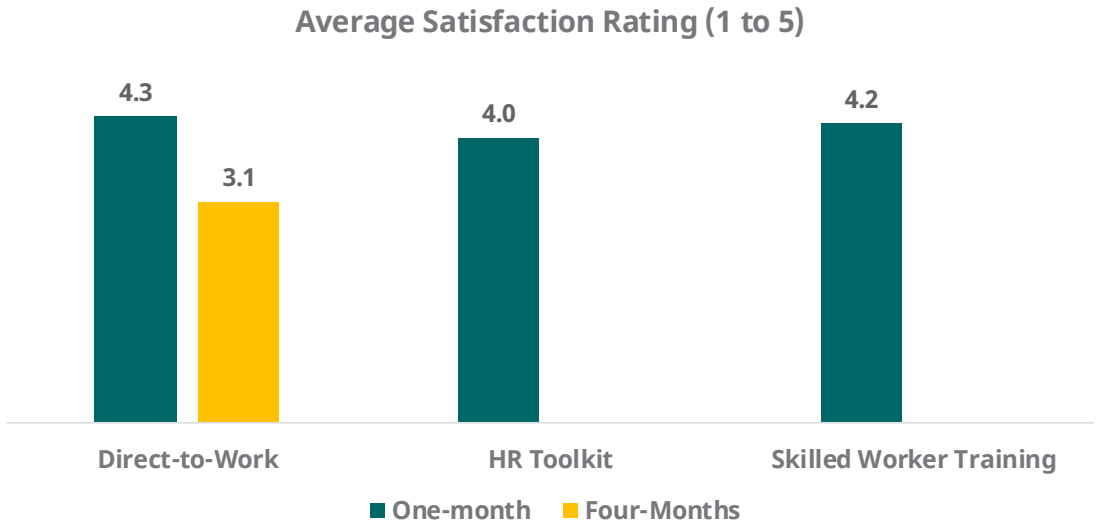
- Scan, OP development, design and delivery was effective
- Students were satisfied
- Developed new skills and knowledge
- Content heavy / asking for more practical
- Lower attendance (lead times) and employment
- Still interested in employment

HR Toolkit

- Suite of online resources on day-to-day HR needs posted online
- Late developing interest in coaching
- Employers are satisfied with their experience
- Expect to act on what they learned or received
- Would recommend to others
- Potential for broader application

Skilled Worker Training

- Diversity in the industry is a major challenge for training
- Prioritized competencies
- Outlined Credentialling Model and Curriculum Modules
- Complex development process but worked well
- Proposed content delivery model (use regional facility and an industry expert)



A decline in satisfaction among Direct-to-Work Participants is driven by difficulties in obtaining employment in the sector

Statements	To what extent has the Direct-to-Work Training Program:	
	Average Rating (one-month)	Average Rating (four-month)
Increased your interest in working in the Value-added Wood Industry?	4.4	3.7
Increased your awareness of opportunities in the industry?	4.2	3.7
Helped you to further develop your skills?	4.3	3.5
Helped you to obtain employment?	3.3	2.5

Of the respondents who completed the four-month follow-up survey:

- 38% were not employed and looking for a job
- 25% were employed and looking for a different job
- 25% were employed and not looking for a different job
- 13% were *"at school for woodworking"*

Discussion Questions

1. **The ultimate effectiveness of the project will be determined by the extent to which the materials that have been produced will be utilized in the future? How likely is that? What can be done to make it more likely?**

2. **What lessons have we learned as a result of the project? What would you do differently? What recommendations would you provide to other similar projects in the future?**

Thank you!

Funding provided through the Canada-British Columbia Labour Market Development Agreement.

Evaluation of the BC Wood Value-Added Strategy Implementation

Draft Report, March 18. 2025

CONTENTS

List of Tables and Figures

List of Acronyms

DTW	Direct to Work
SPW	Skilled Production Worker
VAW	Value-Added Wood
OP	Occupational Profile
CNC	College of New Caledonia
OC	Okanagan College
NIC	North Island College
HR	Human Resources
HRM	Human Resource Management
DEI	Diversity, Equity, and Inclusion

EXECUTIVE SUMMARY

VALUE-ADDED WOOD IMPLEMENTATION PROJECT

BC Wood received funding under the Canada-British Columbia Labour Market Development Agreement's Sector Labour Market Partnerships Program (SLMP) to implement a multi-phase initiative aimed at improving access and accelerating the development of workers for employers in the value-added wood sector in BC. Beginning in 2017, the SLMP project encompassed four phases. In Phase 1, BC Wood led a project to engage industry stakeholders in discussing labour market issues facing the value-added wood sector in BC. Phase 2 involved the development of the *Labour Market Information Report,* which highlighted the challenges employers in the sector were facing including a shortage of qualified workers, difficulties in attracting new entrants, a lack of effective and accessible training, and the need for innovation that drives ongoing labour productivity improvement. In Phase 3, a multi-year strategy was developed with the objective improving labour market conditions.

Key components of the multi-year strategy were then implemented in Phase 4. These components included:

- Development and pilot delivery of the **Direct to Work Training** Program. The training is expected to provide prospective new, entry-level workers with the work-ready knowledge and skills required to work safely in the seven sub-sectors of the value-added wood sector in British Columbia.

- Design of a comprehensive **Skilled Production Worker (SPW)** training program, best suited for (but not exclusive to) workers with four to five years of industry experience. The project involved an Environmental Scan, development of a Program Outline and proposed training model, an employer survey and interview to prioritize and validate key elements, and preparation of a SPW Curriculum Framework and Training Outline.

- Development of an **HR Toolkit** which was validated through coaching sessions with a sample of thirteen sector employers. The content of the HR Toolkit focuses on four main pillars related to HR management: HR strategy, recruitment, employee experience, and compliance. By posting the resources posted online, they are available for use by employers in implementing new initiatives within their businesses.

EVALUATION OF PHASE 4

Qatalyst Research Group was engaged to evaluate the results of Phase 4 of the project. This included a review of the results achieved by the various components, opportunities for improvement, sustainability, alignment with the identified labour market challenges, and effectiveness of project design and delivery.

Multiple lines of evidence were used in the evaluation. In terms of secondary research, key elements included a detailed review of outputs from the previous phases, the project deliverables, related documents and data associated with each component, the project website and social media postings, interim and final reports for Phase 4, and information on the characteristics of the value-added wood sector. Primary data sources including interviews, surveys and meetings with the BC Wood CEO, Project Manager, members of the Governance Committee, consultants associated with the components, the Technical Working Groups, students participating the Direct to Work training, and employers receiving coaching as part of the HR Toolkit component.

The main report presents the findings by project component. The overall findings of the project are summarized below.

RESULTS OF THE COMPONENTS

1. **The Direct to Work component resulted in the development of an entry level training program that is ready for implementation by training partners.**

   The Direct to Work component met its intended outcomes in terms of producing information about existing training, an occupational profile, and a program profile, outline, learning materials, and training materials and making material available for public use. The number of training partners that delivered the program and courses (four versus five) was somewhat lower than anticipated, because of higher than budgeted costs per site.

   The number of students participating in Direct to Work training courses (26) was lower than what was contracted with the training institutions (47). This was attributed largely to having limited time to promote the courses as well as financial and other barriers faced by students who had registered but did not attend. Later than expected signing of the contract with the SLMP and the time require to complete and get approval of the curriculum and programs materials contributed to a 54 day delay in the deliverable of those materials which reduced the time available to promote the courses.

   The students expressed satisfaction with the Direct to Work course, including the facilities, instructors, hands-on shop time, field trips, subject matter and in-class presentations.

2. **The SPW focused primarily on providing access to a skilled production worker occupational profile, developing a skilled production curriculum framework relevant to the sector in BC, and proposing a training model consistent with the needs of employers.**

   The SPW training has been reviewed, refined and validated based on input obtained from industry through the contributions of the TWG, an employer survey, and interviews with employers and skilled production workers. The results of the validation confirm that the SPW Competency Profile is viewed as complete and comprehensive, providing a valuable tool for

identifying SPW Competencies and learning needs. It also validated the training priorities identified in the Employer Survey and confirmed that the proposed model is appropriate (i.e., the emphasis on short, focused, hands-on, regional learning opportunities and the use of micro-credentials as a means to recognize competencies in the industry).

The component was implemented largely as planned and has achieved its objectives and intended outcomes. The TWG and the broader industry played an important role in this component, helping to guide and refine the development of the materials.

3. **Materials for the HR Toolkit has been developed, validated through coaching sessions and posted on the project website.**

   One-on-one coaching sessions provided 13 employers with access to workforce coaching to help them meet their business development goals. Employers reported improvements in their HR processes, understanding of HR and onboarding practices, and look to improve their human resources procedures and documentation and act on strategies to improve communication, teamwork and staff utilization. While the sessions were well-received by the employers, it is too early to assess the eventual impact that the coaching will have in improving employee satisfaction, retention rates and workforce development efforts.

   The sessions also helped to validate the usefulness of the materials that were developed. The project also developed a list of workforce development specialists was compiled and published on the website to assist employers in accessing HR-related assistance in the future. One area of concern is that the level of traffic to the project website housing the HT Toolkit appears low.

Opportunities for Improvement

Direct to Work Courses

Future delivery of Direct to Work would benefit from:

- **Placing a higher priority on linking program graduates to employment opportunities in the sector**. Follow-up surveys of 16 participants found that three reported obtaining employment in the sector post-completion and three have gone on to other training related to the sector. While most participants in the follow-up survey remain interested in working in the value-added wood sector and feel they have developed important skills, they have not yet obtained employment.

- **Developing strong ongoing relationships with employers and others.** A key part of developing those linkages is strengthening employer connections. Employers can play an important part in referring potential applicants, presenting and hosting field trips, offering work placement, internships and coops to students, hiring graduates and advising on the program. Other groups such as industry associations, secondary schools and community

agencies and organizations that work with women, youth, Indigenous people, and newcomers can also be important connections. While some efforts were made to reach out to employers and others, a more formal communication and marketing strategy is needed.

- **Offering incentives and support to attract participants**. Barriers to participation, including for underrepresented groups, could be reduced by providing training allowances and other support (e.g. support for transportation and childcare) to participants.

- **Streamlining the content and allowing for more in-shop technical training** (which is considered crucial to the development of new skills). The volume of program content is too great for the course to be effectively delivered in a four week period.

Skilled Production Worker Trainer

- The important next step will be to **pilot and evaluate the training model and framework** in the real world environment. The results of the pilot should then be used to refine the system and approach, demonstrate the benefits to employers and others, and attract a champion or champions who can take a key role in rolling the system out on an ongoing basis. In retrospect, the SPW component would have benefited from having the time and budget to pilot test the model as part of the current project.

- **The decentralized model should be complemented with other strategies.** Some modules will be amenable to online training, which could be delivered through live sessions, video content, or interactive AI-based training. An online system could also facilitate the pre-training assessments, which enable the training to be tailored to the specific needs and desired outcomes of employees and employers. It also been proposed that learning could also be facilitated through the establishment of communities of practice. In addition, the model should be flexible in terms of enabling workers to pursue micro-credentials or simply access training on an 'a-la-carte' fashion.

- **Implementation of the training will need to be backed by strong promotion**. The initial sessions will likely require significant promotion and outreach to get initial buy-in. That task will become easier over time. Those efforts should be coordinated with efforts to promote the Direct to Work training and the HR Toolkit.

HR Toolkit and Coaching

- **Awareness of the HR resources was a challenge in recruiting companies to participate in the coaching services and likely continues to be a challenge in promoting use of the HR Toolkit.** The resources were promoted through some social media posts and personal communications. One challenge is that employers needing assistance may not be familiar with what assistance they need or is available, and may not normally associate such assistance with BC Wood (which primarily serves as a marketing organization).

- **Improving HR practices in the sector requires a three step process.**

    - First, employers need to appreciate the value of effective HR. This will require some form of ongoing promotion and education.
    - Second, employers need the ability to assess where their HR practices could be improved. The coaching was effective in providing this service, but only for a small number of companies. An option may be to develop an online self-assessment tool that would enable employers to assess and prioritize opportunities for improvement.
    - Third, the employers need to be linked to resources and sources of assistance that can help them make those improvements. Suggestions were received regarding additional elements that could be incorporated into the HR Toolkit

- **Most employers in the sector, regardless of size, could benefit from the assistance provided through the program.** Although initially designed for smaller businesses, the program scope was expanded to include medium to larger organizations, revealing a broader need for HR advisory services across the industry.

- **During the coaching sessions it became clear that employers require more nuanced and tailored support than originally planned.** The need for tailored support may have implications for how any future work may be structured. For example, it would likely be possible to incorporate formal assessments and elements of AI into the process to better enable the support to be tailored to their specific needs.

Sustainability

Each component has been successful in developing the intended outputs and validating those outputs with key target groups. These outputs can fill important gaps that were constraining recruitment, development and retention of workers in the value-added wood sector in BC. The key now is to ensure that the materials will be used on an ongoing basis. It should not just be assumed that those materials will just be taken up and applied. There will need to be continuing efforts to ensure that happens.

More specifically:

- **Sustainability of the Direct to Work Training Program is dependent on the extent to which training partners apply the materials to train the next generation of workers for the sector**. BC Wood has taken important steps toward achieving that by making materials (e.g. the Trainer Provider-Administrator Guide) available for public use. The Project Manager has also been active in reaching out to potential training partners to establish their interest to use the Direct to Work curriculum. To date, several colleges and a teacher association have downloaded the material and one college has expressed interest

in applying the Direct to Work curriculum. Continuing efforts will be needed to help facilitate that, with the goal of having the program delivered on a regular rotational basis by colleges and in the secondary school system. Institutions are having to deal with decreases in revenues resulting from restrictions on foreign students. Adding a course directed at developing local workers for industry could help offset a portion of those budget shortfalls.

- **While each component faces some challenges with respect to sustainability, those challenges appear to be most significant for the SPW component**. With the proposed training model, competency profiles, curriculum framework and training outline, the SPW component has developed an approach that can be very effective in addressing the barriers to skilled production worker training that have long plagued the value-added wood sector. Those materials are being made available to employers, employees and trainers. The eventual impact of the components will depend on the extent to which the curriculum and models are implemented. It is likely that some further investment and recruitment of a champion or series of champions will be required to drive that implementation.

- **Of the three components, the HR Toolkit is the simplest to maintain in that the resources are already posted online. However, efforts will be required to increase use of the materials.** That could include providing promotional and educational materials to increase industry awareness of the importance and value of effective HR; establishing a mechanism through which employers can assess their HR practices and prioritize opportunities for improvement; and maintaining, updating and expanding the materials. The HR Toolkit will need to be updated periodically to ensure that the information remains relevant and useful to employers, and reflects new developments in HR such as changes in legislation or the announcement of new programs. BC Wood in consultation with their Board of Directors is looking at making this section permanent under BC Wood core programming. However, it is not yet clear whether additional funding may be available to further develop the HR Toolkit and drive increased usage.

Project Design and Delivery

1. **The Value-added Wood Implementation Project exemplifies the effectiveness of the multi-phase systemic approach embedded into the SLMP.**

   The SLMP program is unique in its ability to bring industry and other representatives together, assess factors affecting the recruitment, development and retention of workers, develop strategies to address those factors, and provide support to implement elements of those strategies.

2. **The program components align well with key labour market challenges faced by the sector.**

The characteristics of the value-added wood sector impose some significant constraints on its ability to attract, develop and maintain the workforce it needs. First, the sector produces a wide variety of secondary manufactured wood products, requiring highly varied skills, processes, machinery, technology, products and services. Second, the sector is highly decentralized, with many of the operations located in communities with populations less than 10,000 residents. Third, the sector is also dominated by small companies (e.g. commonly with 15 to 40 employees) which tend to have limited HR capabilities and financial resources, The small size makes it more difficult to release staff to take training away from the business for more than a few days.

The combination of these characteristics has meant that:

- Awareness of employment and career opportunities in the sector has been low, making it more difficult to attract new workers.
- It has been very difficult to deliver training to existing employees through the traditional centralized, larger class models. The absence of skilled worker training has slowed career advancement and negatively impacted on employee retention.
- Employers have not been able to lever HR expertise to attract, development and retain workers or implement effective human resources management practices.

The Value-added Wood Implementation Project responds to those issues by establishing entry level training, designing a model through which SPW training can be provided to existing workers, and increasing employer access to needed HR tools and resources

3. **The project was well managed and delivered effectively, benefiting from the capabilities of BC Wood and the Project Manager as well as the enthusiastic support of industry.**

The project benefited from the connections and capabilities of BC Wood. The Governance Committee spoke to the importance of having an assigned Project Manager who could provide leadership and support. The project relied on enthusiastic and consistent participation from industry representatives who participated in the Governance Committee, met regularly (10 times to date) and provided valuable oversight as well as the support of Technical Working Groups which provided hands-on direction.

4. **The project would likely have benefitted from placing a greater focus on the sustainability in the design process.**

It would have been useful to put more of a focus on planning for sustainability early in the project, so it was clearer as to how the deliverables produced through the project can be leveraged to help address the labour market challenges going forward. Those considerations may have had an impact on the project design (e.g. incorporation of automated assessment tools into the SPW and HT Toolkit components) and helped in recruiting champions who will carry the work forward.

5. **There may also have been opportunities to further integrate and coordinate the activities across three components.**

   While there were some synergies (e.g. alignment between the DTW Occupational Profile and the SPW Competencies) and some referrals from the Exportspark to the SPW program), the three components operated largely as independent projects. The overall project may have benefited from finding additional ways to coordinate the design and implementation of the components in areas such as creating industry awareness, building ongoing connections with industry employers, recruiting people to participate in the Direct to Work, HR Toolkit and SPW components, and further aligning programming between the two training-related components.

1. INTRODUCTION

1.1 BC WOOD

Established in 1989 as a partnership between industry and government, BC Wood Specialities Group Association (BC Wood) provides marketing programs and other services to registered value-added wood manufacturers. It also provide its members with access to an extensive resource library, both on-line and in our office. The membership base of BC Wood includes 120 wood products manufacturers. BC Wood member companies produce hundreds of different value-added wood products grouped into the following seven sub-sectors:

- Millwork
- Cabinets
- Furniture
- Prebuilt Housing
- Engineered Wood Products
- Log Home and Timber Frame
- Remanufactured Wood Products

1.2 THE SLMP PROJECT

BC Wood has received funding under the Canada-British Columbia Labour Market Development Agreement's Sector Labour Market Partnerships Program (SLMP) to implement a multi-phase initiative aimed at improving access and accelerating the development of workers for employers n the value-added wood sector in BC. Beginning in 2017, the project has encompassed four phases:

- **Phase 1: Sector Engagement:** In Phase 1, BC Wood led a project to engage industry stakeholders in a conversation around the labour market issues facing the value-added wood sector in BC. The resulting report, *BC Value-added Wood Products: Sector Engagement Report,* was completed in July 2017 and identified initial workforce concerns facing the province's value-added sector over the next five years.

- **Phase 2: Labour Market Study**: BC Wood completed the *BC Value-added Wood Products: Labour Market Information Report* in 2018, presenting findings from labour market information (LMI) research. The report highlighted the challenges employers in the sector were facing including a shortage of qualified workers, difficulties in attracting new entrants, a lack of effective and accessible training, and the need for innovation that drives ongoing labour productivity improvement. The study identified four opportunities for action to address these challenges and opportunities: 1) raise awareness of the sector, 2) improve attraction of qualified labour, 3) improve retention of workers, and 4) strengthen training opportunities.

- **Phase 3 Strategic Development**: Building on the results of Phase 2, BC Wood led development of the *Value-added Wood Workforce Development Strategic Plan* in 2021. The Plan confirmed the findings from the 2018 LMI research and defined four key strategies that could make an important initial contribution to ensuring that the sector has the workforce it needs to continue to improve productivity and increase profitability. These strategies focused on increasing awareness and communications, entry level training, advanced training, and workforce development supports as outlined below:

    1) *Strategy 1: Awareness and Communication Strategies*. The objective was to raise awareness of the employment opportunities in the value-added wood sector and attract more workers into the sector. Although the intent was to raise awareness across a broad range of demographic groups, the strategy did identify underrepresented groups such as women, youth, individuals who self-identify as Indigenous, newcomers, and career transitioners as potential targets.

    2) *Strategy 2: Work-ready Training for Entry-Level workers* (Direct to Work Training). The objective was to develop a value-added wood work-ready training program capable of delivering the basic skills necessary to enter the sector.

    3) *Strategy 3: Skilled Worker Training for Skilled Production Workers* (Skilled Production Workers). The objective was to enhance training for skilled production workers and provide employers with access to just-in time training to increase productivity and growth,

    4) *Strategy 4: Workforce Development Supports* (HR Tool Kit). The objective was to improve workforce development outcomes by providing employers in the sector with access to workforce development supports and other materials, including access to coaching and mentorship services.

- **Phase 4 Implementation**: BC Wood subsequently received multi-year funding from the SLMP program to implement three components of the Value-added Wood Workforce Development Strategic Plan: the Direct to Work entry level training, the Training for Skilled Production Workers and the HR Toolkit. Some of the key elements associated with each of the three components are listed in the table below.

Table 1: Overview of the Three Components

Component	Elements
Direct to Work Training	• Environmental Scan • Development of the Occupational Profile • Design of the Curriculum • Recruitment of Delivery Institutions • Delivery of the Courses • Development of the Trainer Provider-Administrator Guide
Skilled Production Workers	• Environmental Scan • SPW Program Outline • Employer Survey • Validation • SPW Curriculum Framework and Training Outline
HR Tool Kit	• Development of the HR Toolkit • HR Toolkit Webinar • One-on-one Coaching Opportunities

1.3 Purpose of the Evaluation

Qatalyst Research Group was engaged to evaluate the results of Phase 4: Implementation. More specifically, the evaluation was designed to address:

- The results achieved by the various components including the progress made toward achievement of the intended deliverables and outcomes in the short-term and medium-term
- The sustainability of the project results
- Lessons learned and opportunities for improvement
- The relevance of the project (in terms of its alignment the needs and issues identified in previous phases)
- The effectiveness of program design and delivery

1.4 Method of Study

The methodology involved multiple lines of evidence for each of the three project components and the evaluation overall. More specifically, we:

- **Met multiple times with representatives of BC Wood** including Brian Hawrysh, the CEO of BC Wood Specialties and Sean Goldie, the Project Manager.

- **Participated in meetings of the Governance Committee.** We participated in three meetings as well as a webinar conducted as part of the HR Toolkit component.

- **Reviewed background documents, project deliverables and materials on the project website** such as outputs from the previous phases, the interim and final reports for Phase 4, and deliverables produced by each component of the project.

    - For the Direct to Work component, we reviewed the Environmental Scan and Occupational Profiles that were prepared, program data, funding data, curricula, delivery plans, and data on the participants as well as course reports prepared by the three colleges delivering the course. We also review the Trainer Provider-Administrator Guide and other materials are available for public use.

    - For Skilled Production Worker (SPW) Training component, we reviewed the reports produced by North Pacific Metrics Inc. including an environmental scan, the SPW Program Outline, SPW Curriculum Framework and Training Outline, and preliminary plans for a SPW training pilot.

    - For the HR Toolkit component, we reviewed the HR materials developed related to the employee experience, strategy and recruitment, and HR services that were developed by Exportspark Services Inc. (Exportspark) and posted online.[1]

  A list of the documents reviewed is provided in the appendix.

- **Conducted interviews with eight Governance Committee members.** The purpose was to find out more about their involvement in the project and obtain their perceptions of its implementation, effectiveness, challenges, and opportunities for improvement.

- **Conducted a focus group discussion with members of the Governance Committee.** The primary focus was to discuss project sustainability and actions that could be taken to build on the progress achieved to date.

- **Conducted a one-month and four-month follow-up survey of students that participated in the Direct to Work training.** Sixteen of the 26 students who participated in the program were surveyed as part of a one-month follow-up and eight participated in a four-month follow-up survey. The initial survey (referred to as the one-month survey) was completed one to two months after completion and provided feedback on the participant experience with the program, their motivation for attending the training, and their employment outcomes. The second survey (referred to as the four-month survey) was targeted at the students who completed the initial survey, four to five months after the training ended, to gain insight on how their perceptions of the program and employment outcomes may have changed in the preceding months.

- **Interviewed leads from the project components as well as representatives from the colleges where the Direct to Work training was delivered**. The purpose was to find out

[1] https://bcvalueaddedwood.com/index.php/hr-toolkit/

more about the project components and obtain their perceptions of the project implementation, results, challenges, and opportunities for improvement.

- **Conduct a survey with seven members of the Technical Working Group established to oversee the SPW Component**. The purpose was to understand their involvement in the project, whether project was implemented as planned, achievement of project objectives, usefulness of the outputs and recommended next steps.

- **Conducted a survey of employers who participated in coaching sessions with Exportspark as part of the HR Toolkit Component.** The coaching sessions were undertaken to validate materials developed as part of that component. The purpose of the survey was to obtained feedback from employers on the process, the assistance they received, any actions they may have taken based on the information they received, and recommendations regarding how the experience could be improved going forward.

1.5 Structure of the Report

The major findings of the evaluation regarding each component is provided in the following three chapters including Direct to Work (Chapter 2), Skilled Production Worker (Chapter 3), and HR Toolkit (Chapter 4). Chapter 5 review findings regarding the relevance and implementation of the project. The major findings and conclusions are presented in the Executive Summary. Appendix 1 provides a list of the documents reviewed while Appendix 2 provides a more detailed description of the major findings from the survey of one-month and four-month survey students in the Direct to Work component.

2. DIRECT TO WORK COMPONENT

2.1 Overview of the Work Completed

The Value-Added Wood Manufacturing Direct to Work Training Program was designed to provide prospective new, entry-level workers with the work-ready knowledge and skills required to work safely in the seven sub-sectors of the value-added wood sector in British Columbia. The component consisted of six major elements, including the development and delivery of the DTW course, as outlined below:

1. **Environmental Scan.** Submitted on March 31, 2023, the Environmental Scan researched existing wood-related orientation / entry-level wood-related training programs that could be adapted to meet the identified needs of the value-added wood industry in BC. To prepare the report, representatives from CT Resources and Vancouver Island University (VIU) reviewed occupational competency profiles, available assessment and training programs and services, curriculum and training resources that are in the public domain (or can be shared and/or licensed), and training standards and competency assessment tools and resources. The internet research identified 19 organizations or agencies that provide programming and services related to employment in the value-added wood manufacturing sector, which were then profiled in the report.

2. **Development of the Occupational Profile.** Development of the Profile was guided by a Technical Working Group (TWG) consisting of supervisors, business owners, and other industry leaders representing various organizations and sectors within the value-added wood industry. Working in association with CT Resources and VIU representatives, they contributed their knowledge of the skills required across the various sub-sectors. Developed through an iterative process, the Occupational Profile defined a series of knowledge areas including Environmental, Health and Safety Procedures, Communication Skills, Organizing Work and Managing Information, the Value-Added Wood Manufacturing Industries, Types of Fasteners, Adhesives, Joinery, Hardware, and Finishes, Use of Hand Tools, Use of Power Tools, and Transition to Employment in the Value-Added Wood Manufacturing Industries.

3. **Design of the Curriculum.** The Occupational Profile served as the foundation for curriculum development. Each knowledge area was systematically mapped to specific learning objectives. The drafted curriculum underwent a peer review process involving the Technical Working Group, Project Manager, VIU, and Governance Committee. Final approval was granted once all groups reached agreement.

   The finalized Direct to Work Program was designed as a comprehensive 140-hour training initiative, spanning four weeks. Participants attend training for 7 hours per day, 5 days a week. The program includes a balanced mix of classroom instruction, hands-on shop

training, and industry exposure through tours and presentations. This approach was structured to ensure that participants gain a well-rounded understanding of the value-added wood industry while developing the practical skills needed for entry-level positions. A Pre-Planning Standard outlined, at a high level, the instructor requirements, facilities requirements, and scheduling requirements to give the participants the sense of the program structure and institutional requirements that are anticipated. Some of the topics covered in the curriculum include:

- Overview of the Value-added Wood Industry
- Employment Trends and Career Pathways
- General Safety, Tools, & Equipment Orientation
- Communication Techniques and Skills
- Work Ethic
- First Aid and CPR
- Organization Information Management
- Qualities and Properties of Wood Species
- Resume Writing Workshops
- Competency Assessment/Coaching
- Hardware, Adhesives, Joinery, Finishes
- Carpentry Math and Measurements
- Fire Safety
- Pedestrian Safety
- Nutrition & wellness
- Bending, Lifting, and Trip and Fall Hazards
- Hazards and Risks in Wood Manufacturing Industries
- BC Employment Standards
- Tips to Secure Employment

4. **Recruitment of Delivery Institutions.** During the curriculum development phase, the Project Manager initiated outreach to potential delivery partners including Selkirk College, Okanagan College (OC), VIU, University of Fraser Valley (UFV), College of the Rockies (COTR), North Island College (NIC), College of New Caledonia (CNC), Seabird College, and British Columbia Institute of Technology (BCIT). The selection process focused on organizations that could provide geographical representation, suitable facilities, and prior experience with similar training programs. This proactive engagement ensured that the selected partners aligned with the program's goals and logistical requirements.

5. **Delivery of the Courses.** The Direct to Work Program was piloted at four sites across three institutions. The institutions selected for delivery included NIC (which delivered the course at two sites: Port Alberni and Courtney), OC (Salmon Arm), and CNC (Prince George). The programs were delivered at the four sites in May and June 2024. The timing of the courses enabled them to take advantage of the 'off-peak' season for courses at the institutions, when facilities are most available. The results of the program delivery are described in the next section.

6. **Development of the Trainer Provider-Administrator Guide.** The purpose of the guide is to inform administrators and trainers about how to plan and implement the course. It is being made available for use by range of institutions. The Guide provides an overview of the program; outlines the format, occupancy profile, competences, and training schedule; provides recommendations regarding program and course delivery administration, field sites, and required resources and program materials; and establishes standards regarding facilities, equipment and supplies, and trainers and instructors. Other documents are available to accompany the Guide including a Trainer's Program Guide, Lesson Plans and Lesson Plan Summaries for Weeks 1 to 4, a Trainer's Resource Manual and a Participants' Resource Manual.

2.2 Results

Key findings regarding the results of the Direct to Work component are as follows:[2]

- **The intended outcomes of the Direct to Work component focused on the development of materials, delivery of the training, and eventual employment of participants.**

  The intended outcomes included:

  - Stakeholders have access to information about existing training and to an entry-level worker occupational profile.
  - Lead agency has access to a training program development plan.
  - Lead agency/Advisory Group/approved training partners have access to program profile, outline and learning materials.
  - Training materials are ready for public use.
  - Five training partners have delivered the program.
  - Graduates of the training are employed in the sector.
  - Employers state that there is an increase in employees' productivity and less occurrence of employees quitting in the first few weeks on the job.

- **The Direct to Work component met the intended outcomes in terms of producing information about existing training, an occupational profile, and a program profile, outline, learning materials, and training materials and making material available for public use.**

  VIU and CT Resources produced the environmental scan which studied similar training programs that exist around the world. The Occupational Profile was developed with input from the TWG, and served as the foundation for the development of the training curriculum

[2] A more detailed summary of the results of the one-month and four-month follow-up surveys with participants in the Direct to Work courses is provided in Appendix 2.

which underwent peer review and was approved by the Governance Committee. The Occupational Profile and other materials are being made available to interested parties in BC, with some materials publicly available through the BC Value Added Wood Website. The Trainer Provider-Administrator Guide and accompanying materials are available for public use.

- **The number of training partners that delivered the program was somewhat lower than anticipated, because of higher than budgeted costs per site.**

  The budget for the delivery of the training courses was set at $250,000, with an expected allocation of $50,000 to each of five delivery partners. This funding was intended to support training for 12 to 14 participants per partner, with an aggregate goal of 60 to 70 participants. The budgeted cost per participant, therefore, varied from $3,571 to $4,166 per participant.

  However, the quotes received for course delivery were higher than expected as a result of factors such as post-pandemic inflation, new union contracts, and other economic factors. Each institution required more than the allocated $50,000 budget per site. The increase in budget per program meant that the number of delivery sites had to be decreased from the original five to four. As indicated in the table on the following page, the budget for the four sites totalled $223,288, ranging from a low of $53,176 per site delivered by the NIC to $59,863 for OC.

- **The number of students participating per site was lower than what was contracted with the training institutions, which was largely attributed to having limited time to promote the courses.**

  A total of 47 individuals were contracted by three institutions, which then offered seats to 46 individuals. However, only 26 completed the first cohort. A breakdown of the attendance for each of the four courses is provided in the table on the following page. Based on the project budget and the 47 contracted participants, the revised budgeted cost per participant was $4,751.

  The actual cost per participant was higher because the number of completions was lower than contractors (26 vs 47), although this was partially offset by a reduction in payments to the institutions because of the lower numbers. The actual cost per participant was $5,845, covering all delivery expenses. New programs tend to be more expensive to recruit for and deliver; as a result, it would be expected that the cost per student will be lower in the future.

Table 2: Overview of the Four Courses

Site	Budget per site	2024 Dates	Number of Students					Under-represented Groups				
			Contracted Participants	Appli-cations	Seats Offered	Attend-ing	Fully Subscribed	Women	Men	Indi-genous	New-comers	Youth
North Island College (2 sites)												
Port Alberni	$53,176	May 6 to June 6	12	8	8	4	No	2	2	0		
Courtenay	$53,176	May 9 to June 22	12	18	14	6	No	2	4	0		
Okanagan College												
Salmon Arm	$59,863	May 13 to June 14	10[3]	16	11	6	No	3	3	1	2	n/a
College of New Caledonia												
Prince George	$57,073	May 27 to June 21	13[4]	46	13	10	Yes	3	7	2	4	8
Total	**$223,288**		**47**	**88**	**46**	**26**		**10**	**16**	**3**	**6**	**8**

[3] There was a Contract Amendment requested by OC (March 12) increasing their participant level from 8 to 10.

[4] CNC (PG) was offered a Contract Amendment increasing their Contracted Seats from 12 to 14. Partially due to having strong interest within the region as well as to help offset other underperforming markets. Resulting from this they were able to add one additional participant bringing their number to 13.

The lower than expected number of students was attributable largely:

- **Having limited time to promote the course and recruitment, select and accept participants**. Later than expected signing of the contract with the SLMP, the extensive scope of the Occupation Profiles and the iterative process involved in developing and get approval of the curriculum and programs materials contributed to a 54 day delay in the deliverable of those materials. In turn, this delayed negotiation and signing of agreements with the institutions. Given the desire to deliver the programs in May and June, when facilities were available, this reduced the amount of time available to promote the program and recruit participants.

- **Barriers to attending the course faced by some of those who were accepted into the course**. The drop-off rate tends to be higher for courses which are offered for free (i.e. the student has not made an investment) and when institutions have fewer applicants and can be less selective. The number of people participating (26) was less than the number of seats available. According to the institutions, some of the barriers faced by potential participants who were not able to attend included financial (e.g. their need for paid employment), transportation, childcare and health-related challenges. Others may have obtained employment between acceptance and when the program started and, therefore, were not able to attend. Completion rates would likely have been higher if participants could have accessed training wages (e.g. based on attendance), training allowances, industry or employer sponsorships, and employer training grants. While two institutions indicated their students attended most or all of the sessions, one indicated that attendance issues impacted about 40% of their participants (lateness/absenteeism was typically related to illness or having to work).

- **The Direct to Work component program included a focus on attracting under-represented groups to join the value-added workforce.**

  Among others, the Value-added Wood Workforce Development Strategic Plan highlighted underrepresented groups such as women, youth, individuals who self-identify as Indigenous, and newcomers as potential targets for attraction into the sector. Table 2 on the previous page outlined the attendance by demographic group and shows that ten of the 26 participants are women, three are Indigenous, six are newcomers and eight are youth.[5]

  Of the 16 participants we surveyed, six are women, four had immigrated to Canada in the last five years, and three identified as First Nation or Metis (19%). Instructors noted that their participants were most commonly in their mid-20's and 30's and exploring possibilities

[5] Data on newcomers and youth was not reported by NIC.

for career change and opportunities in the industry sector, as opposed to recent high school grads or those in their early 20's.

- **Of the 16 participants who were surveyed, three reported obtaining employment in the sector post-completion and three have gone on to other training related to the sector.**

  At the time of the one-month follow-up, six of the 16 respondents were employed including three who were employed in positions related to what they studied in the training program (i.e., their roles involve skills or tasks related to their training, such as working with wood or in carpentry). In addition, four students went on to other training following completion of the Direct to Work course including three who enrolled in programs related to the sector. This included two participants who enrolled in a carpentry foundations program and one who enrolled in a joinery program.

  Of the eight participants who were surveyed four months after the training, four were employed and three were unemployed. However, only one of the four employed students were in a position related to the program. The other participant shared that they were enrolled in a woodworking course.

  It is quite possible that all three people who were employed in positions related to the course one month after completion are still employed in such positions. As noted early, in the one month survey, three students indicated that they had gone on to employment in the value-added wood sector. Only one of those three people responded to the second survey, despite repeated attempts to reach them. That one person who responded is still employed in a related position. It is quite possible that the other two who did not respond are also still employed in such a position.

- **Most participants were very satisfied with course itself.**

  Participants were asked about their satisfaction with different aspects of the program. All surveyed participants reported that they were satisfied or very satisfied with the facilities, and 94% were satisfied or very satisfied with the instructors. Most were also satisfied with the hands-on shop time (average rating of 4.6), field trips (4.1), subject matter (4.1) and in-class presentations (3.8).

Table 3: Student Satisfaction with Aspects of the Program

How satisfied were you with the following aspects of the program?
(on a scale of 1 to 5, where 1 is not at all satisfied, 3 is somewhat satisfied and 5 is very satisfied)

Aspects	1 – Not At All Satisfied	2	3 – Somewhat Satisfied	4	5 – Very Satisfied	Average Rating
The facilities	0%	0%	0%	25%	75%	4.8
The instructor	0%	6%	0%	6%	88%	4.8
The hands-on shop time	0%	6%	6%	13%	75%	4.6
The field trips	0%	0%	31%	25%	44%	4.1
The subject matter	0%	7%	20%	33%	40%	4.1
In-class presentations from industry representatives	0%	13%	13%	56%	19%	3.8

When asked about the best parts of the program, participants most commonly indicated that they appreciated the hands-on experience (67%), particularly the time spent in the workshop, and the knowledgeable, supportive instructors (33%). Other aspects appreciated by participants included the opportunities to meet local business owners, visit different value-added manufacturing facilities, and have access to the facilities and study materials.

Roughly half (43%) of respondents expressed a desire for more hands-on shop time and practical experience, with some also suggesting a reduction in video watching (with the safety video specifically highlighted). There were also calls to extend the course duration, provide more structured learning to enhance knowledge retention, and incorporate a greater focus on developing practical (hands-on) skills.

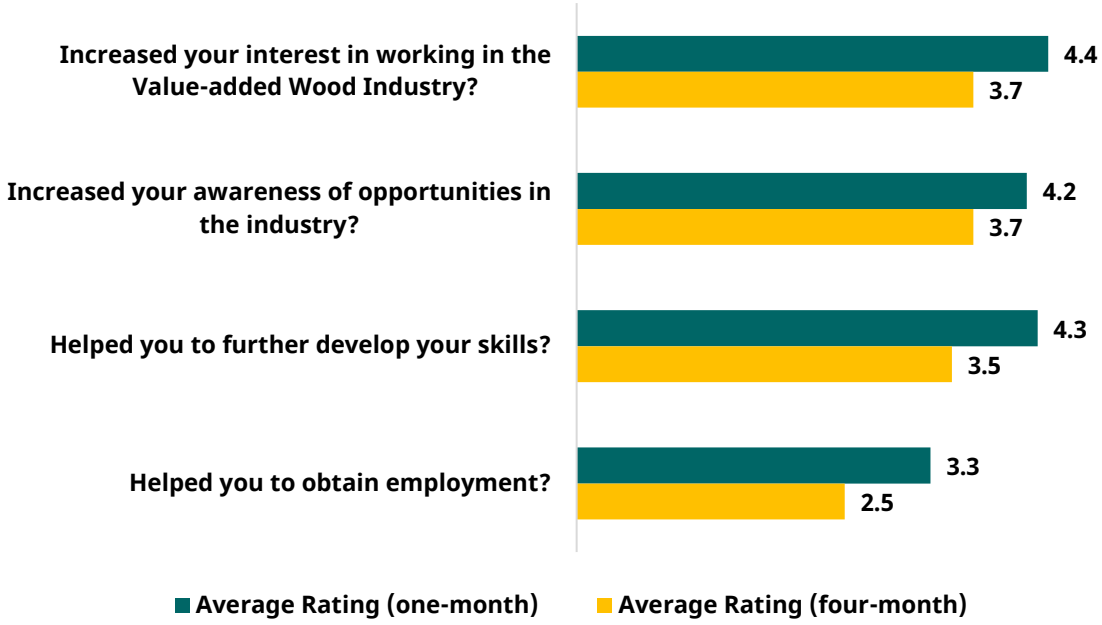
- **Overall, the impact of the program was rated higher by participants one-month after completion than four-months after. Participant ratings tended to decline over time, depending on their level of success in obtaining employment in the value-added wood sector.**

  When asked about their objectives for participating in the program, participants most commonly identified the opportunity to develop new skills (67%) and advance their career (60%). The participants were asked in both surveys to rate their success in achieving their stated objectives Average ratings regarding the extent to which they have succeeded in achieving their objectives declined from 4.3 in the one-month follow-up to 3.1 in the four

month follow-up (on a scale of 1 to 5, where 1 is not at all successful, 3 is somewhat, and 5 is very successful).

During both the one-month and four-month follow-up surveys, participants were also asked to rate various impacts the program may have had on them (on a scale of 1 to 5, where 1 is no impact at all and 5 is a major impact) As indicated, respondents to the four month survey provided a lower rating regarding the extent to which program increased their interest and awareness of the value-added wood industry or helped them further develop skills and gain employment.

Table 4: Changes in Rated Impacts of the Program Over Time



- **However, most participants in the follow-up survey still remain at least somewhat interested in working in the value-added wood sector. The challenge seems to be the ability of them to connect to employment opportunities in the value-added wood sector.**

  While the average level of interest in working in the sector has declined over time (from 4.4 to 3.7), all but one participant indicated they are still at least somewhat interested in doing so. These participants believe that they have been equipped with industry specific skills that would be relevant to an employer. However, they have not been able to secure employment. Each has received a Certificate of Completion to recognize their achievement. The certificates were standardized across all delivery partners, with the only differences being the inclusion of the respective delivery partner's logo and the registrar's signature. Some students also reported receiving other certificates from participating such as Occupational First Aid Level 1, WHMIS, and Forklift. Future courses may benefit from providing further support to graduates in linking with and applying to employers in the

value-added wood sector and for the institutions to develop closer connections with employers. This is discussed in the next section.

2.3 Challenges and Opportunities for Improvement

The institutions, instructors, participants and others identified various challenges with the Direct to Work component and suggested potential opportunities for improvement. These are highlighted below:

- The **ambitious scope of the component** simply required more time than was available. The project would have benefited from longer lead times for some of the deliverables (e.g. curriculum finalization and pilot delivery) and more slack time built into the contract. Contracting delays also contributed to delays in some aspects of the project.

- **Difficulties in attracting and selecting suitable participants**. This could be addressed by providing more lead time for recruitment and by provided training allowances and other support (e.g. support for transportation and childcare) for participants. Allowances or training wages would help to reduce financial barriers for participants and incentive attendance. Many participants see the value in the training but may be unable to afford the associated costs with attending (accommodations, travel to the institution, food, forgone wages from missing work, etc.). Offering additional financial support would make attending the training more feasible, and potentially also improve the participation of under-represented groups (Indigenous, women, youth, and newcomers).

  While a 4 to 6 week window for recruitment is common, new programs typically require longer lead times. The results of the participant surveys as well as feedback from the institutions indicate that social media (particularly Facebook) was a major source of awareness amongst the applicants. The participants who were surveyed as part of the evaluation indicated that they were most often referred to the program through social media (38%) and the college website (31%). Some other strategies used by the institutions including organizing local information sessions, posters, the college website and working with industry partners. BC Wood also established web page promoting the course (https://bcvalueaddedwood.com/index.php/direct-to-work-program/). The process used by the institutions in selecting who will be offered seats commonly involves an initial intake assessment followed by an in-person interview incorporating standard templates and questions relevant to the course.

  Recommendations to increase recruitment focused on strengthening connections with potential partners including industry associations, employers, and related community agencies and organizations. In terms of community agencies and organizations, efforts were made during the project to reach out to WorkBC offices, Immigrant Services, Community Futures, School Districts, Canadian Mental Health Association, and Post-Secondary Institutions.

- Direct to Work would benefit from strengthening **connections with employers**. Employers can play an important part in referring potential applicants, presenting and hosting field trips, offering internships and coops to students, hiring graduates and advising on the program (e.g. regarding contents, certifications, etc.). Building those connections is critical to establishing a successful ongoing program. One to two week work placements would be a very effective means to connect students with employers. Developing those relationships typically involves investing the time upfront and then continuing efforts over a number of years. Institutions noted that Project Manager was effective in reaching out to employers and compiling a list of potential field trip sites. One institution indicated that they had tried to do so but found that employers very busy and "either could not commit to the program or did not return calls or emails".

- Direct to Work would also benefit from **strengthening connections with the school system**. Other sectors have had success in getting elements of their programs into secondary schools, as a means to increase awareness of the sector and its occupations. Collaborating with high school woodshop programs could be an effective avenue for outreach.

- **Challenges associated with a new pilot programs**. Pilots tend to be more labour intensive, requiring greater instructor preparation time (sorting through the information provided) than more established programs. A key would be allowing more time for preparation as well as for recruitment.

- The general consensus is that the **volume of program content** was too great for the course to be effectively delivered in a four week period. We heard from both participants and instructors that, while the program is very valuable, thorough and effective for preparing students for entry level positions, it was simply too much to accomplish given the timeframe. Participants felt that they just did not have enough time to master the skills and be fully confident in themselves to go out and obtain work in the sector.

  Given the volume to be covered, a common suggestion was to either increase the length to five to six weeks or find ways to streamline the content. Expanding the course duration by even a couple weeks could also allow for more in-shop technical training, which is crucial to the development of these new skills. However, some suggested that 4-week is about the right length for an entry level course; a four week course should be able to give participants with some basic skill development while providing them with a good introduction to the value-added wood sector and occupations they might want to pursue in the sector (i.e. arguing that the program should be streamlined rather than extended in length).

Instructors also noted that too much information is provided in the student guide. The guide can be overwhelming for students and requires extensive printing. Suggestions were to streamline the content and provide it on a USB drive.

- Participants would benefit from more **opportunities to develop practical skills**. Two thirds of participants indicated that their favourite part of the training was the hands-on experience and shop-time, so it is no surprise that when asked for recommendations to improve the top recommendations were more shop-time and less time watching instructional videos or learning theoretical content. There was also interest in increasing the employer participation in the course (e.g. more presentations and field trips). Field trips help the participants develop a better understanding of various aspects of the industries.

- The **timing of course delivery** is very much dependent on access to needed facilities. Most facilities are busy with trades programs from September to April. Off-peak periods (e.g. May to August) work well in terms of facility access but can be more difficult periods in which to fill classes. When needed, an alternative might be scheduling sessions on evenings or during weekends.

- Because of recruitment difficulties and drop-off, the **number of participants per site** was lower than desired for most of the sites. The instructors generally recommended keeping the courses to 8 to a maximum of 12 students.

2.4 Sustainability

The Direct to Work Training Program fills a significant gap that existed in the value-added wood sector. Previously, there had not existed a training program specific to the sector to train entry-level workers. In consultation from industry experts, VIU and CT Resources has produced a comprehensive training program that businesses, program instructors, and program participants all agree teaches valuable and relevant technical skills. Some opportunities to improve the program have been identified. Over time, there is an opportunity to further cater the program to sector needs through further partnerships with industry.

The key now is to ensure that the materials that have been developed will continue to be used. Sustainability is dependent on the extent to which training partners pick up apply the materials to train the next generation of workers for the sector. BC Wood has taken important steps toward achieving that by:

- Making materials including the Trainer Provider-Administrator Guide and other materials are available for public use.

- Reaching out to potential training partners to establish their interest to acquire the Direct to Work curriculum once it becomes public domain. To date, several organizations have downloaded the materials and one college has expressed interest in applying the Direct to

Work curriculum. Some of the organizations that have downloaded materials to date include North Island College, Okanagan College, Selkirk College, and Northern Lights College. In addition, it was downloaded by the British Columbia Technology Education Association (BCTEA), which Technology Education teachers and those teachers promoting the development and growth of Applied Design Skills and Technologies (ADST), Makerspaces and Tech Ed in British Columbia schools at the Elementary and Secondary levels (K – 12).

Institutions are having to deal with decreases in revenues resulting from restrictions on foreign students. Adding a course directed at developing local workers for industry could help offset a portion of those budget shortfalls.

3. SKILLED PRODUCTION WORKER

3.1 OVERVIEW OF THE COMPONENT

In British Columbia, the value-added wood manufacturing industry faces an increasing need for skilled production workers equipped with competencies for value-added wood modern manufacturing. The wood industry's transition from exporting raw materials to producing higher value products has been hindered by skills gaps and the geographical dispersion of production sites. To address these issues, a comprehensive Skilled Production Worker (SPW) program was developed. The component aimed to establish competency standards and improve on-the-job performance and efficiency.

North Pacific Inc., a consulting firm with expertise in workforce development, developed the SPW framework with the guidance of a Technical Working Group (TWG) consisting of industry subject matter experts and business owners from across the seven value-added wood sub-sectors. The SPW component consisted of the following elements:

1. **Environmental Scan:** In March 2023, a report was completed outlining how other jurisdictions approach value-added wood SPW training. The Environmental Scan provided an overview of the training available for skilled production workers, identified resources for further research and incorporation into development of competency profile, and identified best practices for competency based training for discussion with industry. The Scan found that other regions have adopted cluster-based approaches and competency pathways through partnerships between industry and training providers to address these gaps. Jurisdictions like Australia and New Zealand utilize guild organizations to support skill development through short courses and master classes. Opportunities were identified for the value-added wood sector in BC to collaborate with institutions such as UBC's Centre for Advanced Wood Processing and innovation centers to develop specialized training programs, micro-credentials, and learning modules aligned with industry standards. The results were presented to the TWG. A key finding was the need for a diversified approach rather than providing training through a centralized facility.

2. **SPW Program Outline:** In September 2024, the SPW Training Program Outline was finalized using the lessons learned from the Environmental Scan with input from the TWG. The Program Outline relevant SPW competencies associated with the productivity of the incumbent workforce. It specified more than 30 competencies divided into nine lines (Advanced Material Knowledge, Design Tools and Systems, Installation, Process Optimization, Manufacturing Machine Maintenance, Production Systems, Specialized Finishing, Metal Work, and Advanced Manufacturing Techniques). It was then shared with the TWG for approval. For each competency, learning tasks and training content were identified. The competency descriptions were informed by other resources including WorldSkills (for Turning, Milling, Cabinetmaking, Joinery, and Carpentry), Wood Career

Alliance Skills Credentialing, SkilledTradesBC trade qualification standards (for Carpentry, Saw Filer, and Millwright), Australia New Zealand Standard Classification of Occupations (ANZSCO) advanced wood trade worker qualifications, and UBC Centre for Advanced Wood Processing (CAWP) industry training programs. The Program Outline was prepared with employers, assessors and trainers, and workers in mind.

3. **Employer Survey:** To inform refinements to the Program Outline, a survey of value-added wood employers was undertaken to identify learning priorities. Employers asked to provide input on draft competency profiles and identify the skills that are most important for specific roles within their organization. An initial survey, conducted by emailing members of BC Wood in December 2023, generated a low response. To improve accessibility and encourage greater participation, the survey was simplified and redistributed in January 2024. The survey was supported through the direct engagement of the TWG and Governance Committee members. Combined with responses gathered at the BCLTBIA Conference in April 2024, there were 37 usable responses. The 37 employers identified 104 unique job profiles. Based on those 104 profiles, the leading SPW learning needs were identified and aligned with the six sub-sectors. The leading learning needs, as identified by the employers, included:

    - Wood as a manufacturing material - 64.4%
        - Characteristics, grades, variations, moisture content, etc.
    - VAW production processes – 56.7%
        - Fabrication, assembly, flow, inventory, automation, etc.
    - Quality control systems – 54.8%
        - Quality management, variance analysis, control charting, etc.
    - Production best practices – 48.8%
        - Design, inventory management, waste management, LEAN principles, etc.
    - Manufacturing machine maintenance – 48.8%
        - Cleaning plan, lubrication types, parts inventory, maintenance schedules, etc.
    - Machine adjustment for optimum production – 46.2%
        - Calibration, testing, quality considerations, etc.

4. **Validation.** To validate the results, North-Pacific conducted a series of interviews with 9 value-added wood employers and 18 skilled production workers from different sub-sectors. Feedback was received on the useability of the SPW Occupation Analysis Chart and the SPW Competency descriptions. To facilitate the discussion, interviewees were given the SPW Occupation Analysis Chart outlining the competencies critical to the roles of SPWs, the SPW Competencies Outline which provides a more detailed description of each competency area, and preliminary designs for three SPW Micro-Credential Pathways.

5. **SPW Curriculum Framework and Training Outline**. Building on the results of the previous elements, this deliverable provides a structured curriculum framework for all 16 learning assessment modules. The Framework also outlines the three micro-credentials

(Advanced VAW Machine Operator, VAW Component Fabricator, and VAW Production and Quality Control), each with a defined credentialing pathway.

3.2 RESULTS

Key findings regarding the results of the SPW component are as follows:[6]

- **The intended outcomes of the SPW component focused on the development of materials, delivery of the training, and eventual employment of participants.**

  The intended outcomes included:

  - Stakeholders have access to a BC VAW skilled production worker occupational profile.
  - Industry and post-secondary institutions have access to BC VAW skilled production curriculum framework.
  - Employers have access to assessment and gap training support for just-in-time, on-site training.
  - Employers have access to a network of trainers and are experiencing an increase in productivity.
  - Employers state there is an increase in employees' productivity and retention.

- **The SPW component focused primarily on providing access to a skilled production worker occupational profile and a skilled production curriculum framework relevant to the sector in BC.**

  As noted in the first sub-section, the SPW component developed and published the program outline, curriculum framework and training outline as well as the results of an environmental scan.

  While the training model was outlined, the expectation was not that any training would have been delivered as part of this component. The work completed to date defined the model through which employers could access assessment and on-site (or near-site) training services that will contribute to increased productivity and employee retention. Some potential trainers who could become involved in delivering the training have been identified.

- **The TWG and the broader industry played an important role in this component, helping to guide and refine the development of the materials.**

[6] A more detailed summary of the results of the one-month and four-month follow-up surveys with participants in the Direct to Work courses is provided in Appendix 2.

As part of the evaluation, interviews and surveys were conducted with seven of the ten members of the TWG. Members reported that they have been actively involved with the Program Outline and the Curriculum Framework and Training Outline, while several were also involved in the Environmental Scan. They supported the component by providing advice and feedback on what was produced. In addition, several were involved in promoting the component at a conference and helping to recruit people to participate in the employer survey.

The SPW training designed through the project has been reviewed, refined and validated based on input obtained from industry through the contributions of the TWG, an employer survey, and interviews with employers and skilled production workers. The results of the validation confirm that the SPW Competency Profile is viewed as complete and comprehensive, providing a valuable tool for identifying SPW Competencies and learning needs. It also validated the training priorities identified in the Employer Survey and confirmed that the proposed model is appropriate (i.e., the emphasis on short, focused, hands-on, regional learning opportunities and the use of micro-credentials as a means to recognize competencies in the industry).

- **The lead consultant, TWG members and Project Manager generally agreed that the SPW component was implemented largely as planned and has achieved its objectives.**

  No major deviations were reported although it was noted that some consideration had been given to delivering training on a pilot basis to further refine and validate the model. However, the additional funding that would have been required to do that was not available.

  When TWG members were asked what they thought the objectives of the project were, all indicated that the objective was to promote further improvement in the skills of existing workers by developing a model, curriculum framework, and training outline through which training can be delivered to skilled production workers in the sector.

  When asked how successful the project has been in achieving these objectives, the average rating was 4.2 on a scale of 1 to 5, where 1 is not at all successful, 3 is somewhat successful and 5 is very successful. The successes of the SPW component were identified as:

  - Its ability to bring together expertise from each of the value-added wood subsectors. The same level of outcomes would not have been possible without the support of the subject matter experts.

  - The deliverables that were produced (particularly the Curriculum Framework and Training Outline).

- The usefulness of the research (e.g. the Environmental Scan) and the extent to which that research was applied in developing the Program Outline, training model and Framework.

- The movement to staging the TWG meetings online rather than in person, which made communication and scheduling much easier.

- The development processes, which were well organized and accelerated the progress made.

- The impact of the project in increasing employer and worker interest in training and skills development

The availability of the funding from the SLMP was also identified as a major strength for the project.

The major challenges facing the component including:

- The challenges associated with designing training that will be applicable to all six of the sub-sectors. The breath of the training (e.g., emphasizing different areas of manufacturing) led to slower development times (e.g., due to needing more education materials or reaching out to more experts).

- The amount of time involved in producing and obtaining approval of some of the deliverables. The component had a tight schedule given the amount of work to be completed.

- The subject matter experts tended to be very busy and restricted in the time they could contribute to the project, which could slow progress at times.

- **The TWG members view the content and model to be very useful for employees in the industry.**

  When asked how useful they thought the outputs would be in supporting the training of skilled production workers, the TWG members provided a rating of 4.5 on a scale of 1 to 5 where 1 is not at all useful, 3 is somewhat useful, and 5 is very useful. Members attributed the high rating to the proposed structure and content of the training, the broad range of topics available to be taught, and the focus on key skills that would be useful across many positions in the sub-sectors.

  According to the evaluation and validation interviews, employers and workers agree that the Competency Profile, Program Outline, Curriculum Framework and Training Outline represent a strong foundation on which to build a training system for the sector. Furthermore, there is agreement that short training opportunities that are delivered

regionally will be more accessible and likely more cost-effective than a centralized system. It was suggested that the training model could be augmented through the development of communities of practice that would meet online or through regional meetups to share resources and experience.

- **There was strong support for the proposed training model amongst those interviewed and surveyed.**

  The challenge was to design a training model that could be delivered in short segments (e.g. four hours to a full day), through a decentralized model and with content that can easily be tailored to the requirements of particular sub-sectors, employers and employees. The training model achieves this design by incorporating:

  - An upfront assessment of training needs. The proposed process begins with a structured interview with the employer/supervisor and the skilled workers to identify specific learning needs, competency gaps, and requirements. This enables the training to be tailored to their specific needs and desired outcomes (i.e. through selecting training that is relevant to those needs and gaps).

  - Delivering the training. It is envisioned the primary method will be hands-on workshops, delivered regionally by a master performer (a regional industry expert in that topic area), in a nearby manufacturing facility (ideally without cost to the program) which houses equipment, machines and processes relevant to the training.

  - Recognition of the training. By completing modules, skilled production workers will be able to progress towards receiving micro-credentials.

- **The eventual impact of the components will depend on the extent to which curriculum and models are implemented.**

  The lead consultant, TWG members and Project Manager are confident that the training, once implemented, will increase much needed access to training and help to accelerate skill development, improve job performance, reduce turnover, and improve productivity.

- **The SPW training will fill an important gap for the value-added wood sector.**

  According to the TWG members, it has been very challenging to provide advanced training to workers in the industry. Some of the barriers to advanced training include the diverse nature of the sub-sectors, differences in processes, workflows and production worker positions across employers even in the same sub-sector, the decentralized nature of the industry (which tends to be located closer to the raw material than the major urban centres), and the small size of most of the manufacturers. As a result, there have been few

formal training or educational resources, resulting in most of the training being delivered on-the-job.

3.3 Challenges and Opportunities for Improvement

The opportunities for improvement which were identified focus mostly on the how the training could be rolled out and the various forms that it could take. These include:

- **The important next step will be to pilot the training model and framework.** According to the consultant and TWG members, the model needs to be evaluated in the real world environment. The results of the pilot can be used to refine the system and approach, demonstrate the benefits to employers and others, and attract a champion or champions who can take a key role in rolling the system out in other locations. In retrospect, this SPW component would have benefited from having the time and budget to pilot test the model as part of the current project.

- **The decentralized model should be complemented with other strategies.** Some of the module content will be amenable to online training, which could be delivered through live sessions, video content, or interactive AI-based training. An online system could also facilitate the pre-training assessments, which will be useful in tailoring the training to the specific needs and desired outcomes of employees and employers. It also been proposed that learning could also be facilitated through the establishment of communities of practice in which workers meet locally or virtually to demonstrate techniques, share learnings and 'swap' competencies.

- **The model should be flexible in terms of enabling workers to pursue micro-credentials or simply access training on an 'a-la-carte' fashion** (i.e., module by module basis, rather than an 'micro-credit' approach). This may enable the program to better meet the specific needs of employers and employers, while requiring less investment of time by employed workers.

- **The model will need to continue to evolve over time:** Members of the TWG highlighted the importance of continually working to tailor the model, certifications, content, and approach to ensure that it will continue to meet the needs of employers and employees.

- **Promoting the program.** A challenge for the initial sessions will be the need to create awareness of the training model and the potential benefits for the employees and employers. The initial sessions will likely require significant promotion and outreach to get initial buy-in. That task will become easier over time.

3.4 SUSTAINABILITY

With the proposed training model, competency profiles, curriculum framework and training outline, the component has developed an approach that can be very effective in addressing the barriers to skilled production worker training that have long plagued the value-added wood sector. Those materials will be available to employers, employees and trainers.

Each component faces some challenges with respect to sustainability. However, those challenges appear to be most significant for the SPW component. In terms of training delivery, the challenge will be moving from design to implementation. That will require investment and a champion or series of champions to drive that implementation.

The recommended next step toward achieving sustainability will be to pilot the training model and framework. It would preferably be delivered in multiple locations and focus on the highest priority topics:

- Wood as a manufacturing material
- VAW production processes
- Quality control systems
- Production best practices
- Manufacturing machine maintenance
- Machine adjustment for optimum production

Staging each session will require:

- Securing the services of one or more trainers (some potential trainers have been identified)
- Securing a facility (preferring cost-free; the Governance Committee and TWG may help with that)
- Preparing the content
- Promoting the training to employers and employees
- Conducting the preliminary assessments (assessment interviews)
- Conducting the training
- Analyzing the results.

The results could be used in both assessing the training and developing a self-sustaining financial model that would be attractive to champions going forward. A preliminary budget for the pilot program could be $100,000.

4. HR TOOLKIT AND COACHING

4.1 OVERVIEW OF THE COMPONENT

The HR Toolkit is a free resource available online at https://bcvalueaddedwood.com/index.php/hr-toolkit/. Developed by Exportspark Services Inc. in collaboration with a Technical Working Group, the Toolkit was designed to support small to medium-sized employers (that is, businesses with less than 60 employees) in the value-added wood sector in British Columbia that do not have a dedicated human resources (HR) function. HR refers to a range of employee-related functions needed to run a business: workforce planning, recruitment, onboarding, performance management, health & safety, internal communications, compliance, DEI and employee engagement. Accompanying the online HR Toolkit was the opportunity for a sample of sector employers to take part in one-on-one coaching sessions with Exportspark to obtain guidance to address their company's HR challenges.

Key elements of this component included the HR Toolkit and employer coaching as well as a webinar intended to promote both.

1. **Development of the HR Toolkit.** The content developed for the HR Toolkit focuses on four main pillars related to HR management: HR strategy, recruitment, employee experience, and compliance. By posting the resources posted online, they were made available for use by employers in implementing new initiatives within their businesses, with the end goal of improving employee productivity and profitability.

2. **HR Toolkit Webinar.** Initially, it proved difficulty to recruit businesses to take part in the coaching opportunities offered by Exportspark. The HR Toolkit received some exposure through communications including a newsletter but identifying participants for the coaching opportunities remained a challenge. In May 2024, Governance Committee members decided to host a webinar to promote the HR Toolkit and coaching service. The one-hour webinar, promoted to both BC Wood members and non-members, was held on July 9th, 2024. Excluding team participants, 15 organizations registered for the webinar, with seven individuals representing six organizations attending. Exportspark introduced the resources incorporated into HR Toolkit and encouraged businesses to take part in the coaching opportunities.

3. **One-on-one Coaching Opportunities.** The coaching process with an employer started with an introductory questionnaire through which the specific HR issues facing their company were identified. The coaching consisted of two one-hour sessions through which issues could be explored and participants could be guided to applicable solutions or resource materials. When participants chose to have their employee handbook reviewed, extra time was allocated to complete the process.

After the final session, Exportspark provided the employer with a summary report. The report included a review of the goal selection process, the training and or/solutions delivered during the sessions, and guidance on future steps and/or advisory services. By the end of February 2025, Exportspark had completed coaching sessions with 13 participants. The original target was 10.

4.2 Results

Key findings regarding the results of the HR Toolkit and Coaching component are as follows:

- **The intended outcomes of the HR Toolkit and Coaching focused on the development of an online resources to assist help businesses improve their HR practices and one-on-one coaching sessions to help validate the newly developed resources.**

  The intended outcomes included:

  - Workforce development best practices materials are available to employers.
  - Employers have access to workforce development specialists.
  - Employers are aware of and have access to workforce coaching to help them meet their business development goals.
  - Better HR practices improve employee satisfaction and lead to better retention rates.
  - Employers are experiencing better outcomes from their workforce development efforts.

- **The HR Toolkit has been developed and the materials were posted on the project website.[7]**

  Guided by the TWG, Exportspark developed materials covering a series of different topics which were the formatted as pages or links to pdf files. The following list of webpages and pdf tools for establishing effective HR processes can be accessed through the website.

[7] https://bcvalueaddedwood.com/index.php/hr-toolkit/

Table 5: List of Webpages and Documents Developed

Webpages	PDFs
Employee Experience	
Onboarding	Onboarding Guide 2024
Performance Management	Performance Management Guide 2024
HR Compliance	HR Policy Checklist Employee Handbook Outline 2024 Employment Standards Act 2023 Personal Information Protection Act Guide
Health and Safety Program	---
Engagement	---
DEI	CWC Equity, Diversity and Inclusion Policy
Strategy and Recruitment	
Workforce Plan	Workforce Planning Guide
Recruitment	Recruitment Guide 2024
HR Technology	Human Resources Information System (HRIS)

- **Although the website does not monitor, a secondary source suggests that traffic to the project website is quite low.**

  The website (https://bcvalueaddedwood.com/), which houses distinct webpages dedicated to each of the three components (Direct to Work, SPW and HR Toolkit), was not set up with metrics to measure the traffic. An alternative source of data on traffic is SimilarWeb.com, which uses publicly available information and a range of methodologies and proprietary algorithms to estimate the traffic to websites. They estimate that the website has generated an average of 72 monthly visits over the past three months, involving 24 unique visitors.

- **The one-on-one coaching sessions provided 13 employers with access to workforce coaching to help them meet their business development goals.**

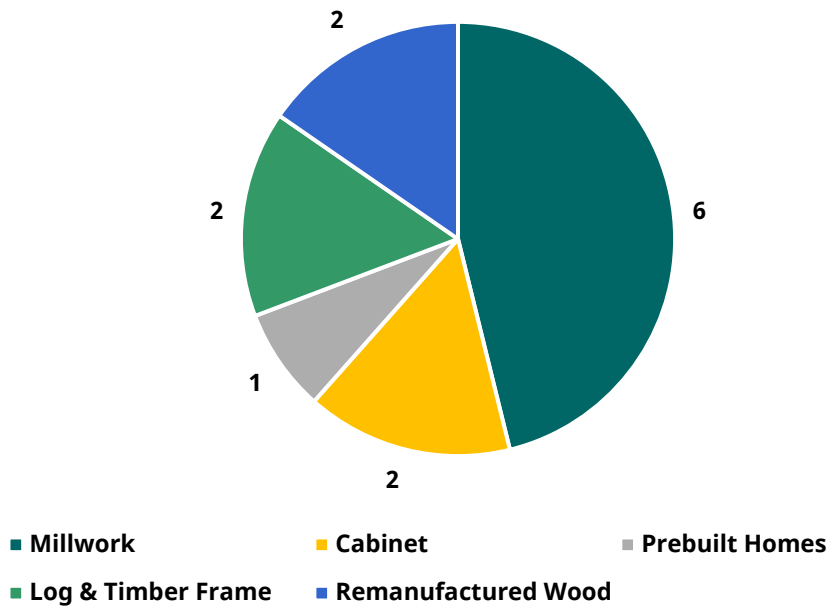
  It was initially difficult to create awareness of the service and attract employers to participate in the coaching until late in process, which means that most of coaching sessions occurred in the last few months of the project. The service was promoted through social media posts (i.e. Facebook and Instagram) in September and October, direct communications from BC Wood, TWG and committee members, and the webinar in July. Of the five employers with whom we were able to follow-up, one became familiar of the service through the webinar with the remainder becoming aware through the direct communication with BC Wood or a colleague.

  The 13 employers that participated in the coaching sessions included 12 from BC and one from Alberta. The 12 businesses in BC included four from the South Coast, three from

Vancouver Island, three from the Kootenays, one from the Thompson/Okanagan, and one from Northern BC.

The participants came from 5 different sub-sectors.

Table 6: Participating Businesses by Sector



Source: Exportspark HR Toolkit & Coaching Summary Addendum

Of the 13 employers, 4 had staff with formal HR responsibilities while 9 did not.

- **The coaching sessions were well-received by the employers. However, in most cases, it is premature to assess the eventual impact that the coaching will have in improving employee satisfaction, retention rates and workforce development efforts.**

  Of the employers with whom we were able to follow-up, all indicated that they were at least somewhat successful in achieving their objectives for participating in the coaching sessions. The average rating was 3.8 on a scale of 1 to 5, where 1 is not at all successful, 3 is somewhat successful, and 5 is very successful.

  For example, several employers noted real improvements in their HR processes and an improved understanding of what efficient onboarding practices could look like in their business. They also welcomed the recommendations they received as to how they could improve their current human resources procedures (e.g., introducing rewards and recognition programs), upgrading their documentation (e.g., employee handbook and employee contracts), and implement strategies to improve communication, teamwork and staff utilization.

Forty percent of the employers indicated that they have already implemented recommendations they received in the coaching sessions while the reminder plan to do so when they have the time to make the changes. The actions taken to date include updating the employee handbook, introducing new policies, alleviating employee concerns regarding layoffs or terminations, increasing access to information about their employee benefits plan, and introducing a rewards and retention incentive program.

When employers were asked how likely they were to recommend the coaching to others, all respondents indicated they were at least somewhat likely to recommend the service, with the average rating being 4.4 (on a scale of 1 to 5 where 1 is not at all likely, 3 is somewhat likely and 5 is very likely).

- **A list of workforce development specialists was compiled and published on the website to assist employers in accessing HR-related assistance in the future.**

  Exportspark produced a seven-page document outlining the sources of assistance available to support value-added wood employers manage their HR functions. The list is organized into six different types of resources including:

  - HR consultants
  - Associations and business services
  - HR websites
  - Recruiting and staffing partners
  - Job boards
  - HR coaching services

4.3 Challenges and Opportunities for Improvement

The major challenges and opportunities for improvement which were identified through the project and evaluation are discussed as follows:

- **Awareness of the HR resources was a challenge in recruiting companies to participate in the coaching services and likely continues to be a challenge in promoting use of the HR Toolkit.** The resources were promoted through some social media posts and personal communications. One challenge is that those employers needing assistance may not be familiar with what assistance they need or is available, and may not normally associate such assistance with BC Wood (which primarily serves as a marketing organization).

- **Improving HR practices in the sector requires a three step process.**

  - First, employers need to appreciate the value of effective HR. This can be challenging in a sector consisting largely of small companies with limited HR capabilities. It likely requires some form of ongoing promotion and education.

- Second, employers need the ability to assess where their HR practices could be improved. The coaching was effective in providing this service, but only for a small number of companies. An option may be to develop an online self-assessment tool that would enable employers to assess and prioritize opportunities for improvement.

- Third, the employers need to be linked to resources and sources of assistance that can help them make those improvements. The online resources can provide some of that assistance, but use of those resources is likely dependent on employer recognition of the importance of HR, their opportunities for improvement and the availability of those resources.

- **A key learning from the project is that is most employers in the sector, regardless of size, could benefit from the assistance provided through the program.** Although initially designed for smaller businesses, the program's scope expanded to include medium to larger organizations, revealing a broader need for HR advisory services across the industry.

- **The nature of the need varies somewhat depending on employer size.** Large organizations tend to have a more developed HR function and greater understanding of its importance, although they can still benefit from assistance in identifying opportunities for improvement and accessing supporting materials. Smaller businesses are not of a sufficient scale to support a standalone HR function are less likely to already recognize the benefits of improving their practices.

- **During the coaching sessions it became clear that employers require more nuanced and tailored support than originally planned.** Initially, it was expected that participants in the one-on-one coaching sessions would receive either an HR audit or a review of their onboarding process. However, Exportspark chose to expand services to include topics that participants discussed in their initial screening call to better meet their needs. Below is a full list of the HR strategy and subsequent topics covered:

    - **Recruitment**
        - Interview Questions
        - Selection Criteria
        - Compensation & Benefits
        - Job Description

    - **Employee Experience**
        - Onboarding Process
        - Internal Communication
        - Rewards & Recognition Program
        - Performance Management

    - Coaching a Supervisor in Communication
    - Techniques

- **Compliance**
    - HR Audit
    - Employee Handbook Review
    - Employee Contracts Review
    - Records Retention

The need for tailored support may have implications for how any future work may be structured. For example, it would likely be possible to incorporate formal assessments and elements of AI into the process to better enable the support to be tailored to their specific needs.

- **Various suggestions were provided by the consultant, Project Manager, Governance Committee and employers regarding additional elements that could be incorporated into the HR Toolkit.** These included:

    - **Training**. An educational program covering HR basics could be developed for the sector (Exportspark could design the course outline and content if requested). In addition, links on the website could be provided to sources of workforce development training including both HR training, management training, and training for production staff in the sector.

    - **Blog/ News Feature or Webinar.** A blog or webinar could inform and educate employers on HR trends, new employment or WorkSafe BC regulations, seasonal topics and other industry related topics that can impact HR initiatives. A snapshot of the HR Toolkit's content could be included in this feature to drive more employers to the Toolkit.

    - **Ask an Expert Feature.** Employers often have trouble setting aside the time to search for answers or seek out coaching opportunities. This feature would allow them to access the HR support they need at a time convenient for them, or at a critical moment driven by their business needs.

    - **Quarterly Zoom Meet-up.** Development of a Quarterly Zoom Meet-up for HR professionals (e.g. a Community of Practice) within the value-added wood community was a proposed. Each session could have a designated topic of discussion and an assigned "leader" of the session. BC Wood could promote these meetings.

- **HR summit.** A one or two day event bringing in HR experts and facilitators could inform, educate, and elevate HR as a function throughout the value-added wood community. Although this would require significant resources, time, and effort, it would provide BC Wood and/or other champions the opportunity to showcase their leadership in this area.

- **Job Boards.** It was suggested that a job board could be developed and appended to the website. However, its unlikely that such a service would have sufficient network effects (e.g. enough employers and prospective employees participating) to be effective. go2HR, which works with the BC tourism and hospitality industry that employs about 340,000 people in BC, is one of the few sector associations in Canada that still maintains a job board. According to the LMI study for the BC value-added wood sector, the sector employed about 16,660 people in 2016.

- **Community & Employer Programs.** A section could be added to the HR Toolkit Webpage focused on community and employer programs. However, given regularly changes to programs and difficulties associated with keeping such a page updated, incorporating this information into blogs or newsletters was suggested as a more effective approach to providing employers with content that remains current and relevant.

4.4 Sustainability

The results of the coaching sessions demonstrate that there is significant need to for HR-related guidance, information and resources. This type of information, when aligned to employers needs, can help to strengthen their HR practices which can improve staff recruitment, development and retention.

Of the three components, the HR Toolkit is the simplest to maintain in that the resources are already posted online and they can be promoted periodically through social media and tie-ins to industry events. As of now, BC Wood, in consultation with their Board of Directors, is looking at making this section permanent under BC Wood core programming. However, more concerted efforts would be required to expand and maintain use of the materials. That could include:

- Providing promotional and educational materials to increase industry awareness of the importance and value of effective HR.

- Establishing a mechanism through which employers can assess their HR practices and prioritize opportunities for improvement.

- Maintaining, updating and expanding the materials. The HR Toolkit will need to be updated periodically to ensure that the information remains relevant and of interest to employers,

and reflects new developments in HR such as changes in legislation or the announcement of new programs. As noted in the previous section, a wide variety of suggestions were received regarding how the HR Toolkit could be improved and expanded.

BC Wood in consultation with their Board of Directors is looking at making this section permanent under BC Wood core programming. However, it is not yet clear whether additional funding may be available to further develop the HR Toolkit and drive increased usage.

5. PROGRAM DESIGN AND DELIVERY

This chapter provides a brief overview of the findings of the evaluation related to the relevance of the project to key labour market challenges that were identified in the LMI Report and Three-Year Strategy as well as the design and delivery of the project itself.

5.1 RELEVANCE

1. **The value-added wood sector is an important economic sector for BC.**

   At the time of the LMI Report, the value-added wood sector employed nearly 17,000 people, involved more than 1,000 businesses, and accounted for more that 10% of the province's manufacturing sales. The demand for workers was increasing, as almost 70% of the businesses surveyed at that time expected their revenues to grow by 5% or more over the next five years.

2. **Growth and competitiveness of the sector has been constrained by challenges related to recruiting, developing and retaining staff.**

   Employers, TWG and Governance Committee members as well as the earlier phases of the SLMP project each highlighted barriers to recruitment, development and retention facing the industry. A common theme is the level of diversity in the sector:

   - The sector produces a wide variety of secondary manufactured wood products, requiring highly varied skills, processes, machinery, technology, products and services. The result is a varied set of occupations in the sector, which require a high degree of skill.

   - The sector is highly decentralized, with operations located throughout BC. A 2012 market survey found that there were close to 600 value-added businesses located across 85 communities with populations less than 10,000 residents.

   - The sector is dominated by small companies (e.g. commonly with 15 to 40 employees). The small size limits their ability to have sophisticated management or in-house HR capabilities, can impose financial constraints, and makes it more difficult to release staff to take training away from the business for more than a few days. The demand is for just-in-time training which can be access quickly and nearby.

   The combination of these characteristics has meant that:

- Awareness of employment and career opportunities in the sector has been low, making it more difficult to attract new workers.

- It has been very difficult to deliver training to existing employees through the traditional centralized, larger class models. The absence of skilled worker training has impacted on limited career advancement and employee retention.

- Employers have not been able to lever HR expertise to attract, development and retain workers or effectively implement human resources management practices.

3. **The program components align well with key challenges faced by the sector.**

   The Value-added Wood Implementation Project responds to those issues by establishing entry level training, designing a model through which SPW training can be provided to existing workers, and increasing employer access to needed HR tools and resources.

5.2 Program Design and Delivery

1. **The project was well managed and delivered effectively, benefiting from the capabilities of BC Wood and the Project Manager as well as the enthusiastic support of industry.**

   The project benefited from the connections and capabilities of BC Wood. The Governance Committee also spoke to the importance of having an assigned Project Manager who could provide leadership and support. The project relied on enthusiastic and consistent participation from industry representatives who participated in the Governance Committee, met regularly (10 times to date) and provided valuable oversight as well as the support Technical Working Groups which provided hands-on direction.

2. **The project would likely have benefitted from placing a greater focus on the sustainability in the design process.**

   It would have been useful to put more of a focus on planning for sustainability early in the project, so it was clearer as to how the deliverables produced through the project can be leveraged to help address the labour market challenges going forward. Those considerations may have had an impact on the project design (e.g. incorporation of automated assessment tools into the SPW and HT Toolkit components) and helped in recruiting champions who will carry the work forward.

3. **There may also have been opportunities to further integrate and coordinate the activities of the three components.**

The three components operated almost as independent projects. The overall project may have benefited from finding ways to coordinate the design and implementation of the components in areas such as creating industry awareness, building ongoing connections with industry employers, recruiting people to participate in the Direct to Work, HR Toolkit and SPW components, and aligning competencies between the two training-related components.

APPENDIX 1: LIST OF REPORTS REVIEWED

- BC Value-added Wood Products: Workforce Development Implementation Plan, 2025, BC Wood
- Educational Program Services Agreement – CNC, February 2024, BC Wood and College of New Caledonia
- Educational Program Services Agreement – NIC, December 2023, BC Wood and North Island College
- Educational Program Services Agreement – OC, March 2024, BC Wood and Okanagan College
- Pilot Program Review and Recommendations, September 2024, BC Wood, Vancouver Island University, CT Resources Inc, Government of Canada, Province of British Columbia
- VAW Strategy Implementation Project Final Report, September 2024, Vancouver Island University
- Occupational Profiles for Direct to Work Training Program, December 2023, BC Wood, CT Resources Inc and Vancouver Island University
- Training Provider Administrator Program Guide – Value-Added Wood Manufacturing Direct to Work Entry-Level Orientation and Training Program, September 2024, BC Wood, Vancouver Island University, CT Resources Inc, Government of Canada, Province of British Columbia
- Participant's Resource Manual – Value Added Wood Manufacturing Direct to Work Entry-Level Orientation and Training Program, September 2024, BC Wood, Vancouver Island University, CT Resources Inc, Government of Canada, Province of British Columbia
- Trainer's Resource Manual – Value Added Wood Manufacturing Direct to Work Entry-Level Orientation and Training Program, September 2024, BC Wood, Vancouver Island University, Resources Inc, Government of Canada, Province of British Columbia
- Educational Service Agreement Proposal, May 2024, BC Wood and College of New Caledonia
- Final Report for BC Wood – Value Added Manufacturing Direct to Work Orientation and Training Program, June 2024, Okanagan College
- Report for BC Wood from NIC, June 2024, North Island College
- Direct to Work Carpentry Program – CNC, 2024, College of New Caledonia
- Environmental Scan of Allied Training Programs and Resources, May 2023, Vancouver Island University, CT Resources Inc
- HR Toolkit & Coaching – Coaching Summary Report, October 2024, Exportspark
- HR Toolkit & Coaching – Coaching Summary Addendum, February 2025, Exportspark
- HR Toolkit Webinar, July 2024, Exportspark, BC Wood, Government of Canada, Province of British Columbia
- Occupational Analysis Chart for Skilled Production Workers, n.d., BC Wood
- VAW Skilled Production Worker – Strategy Implementation Project Progress Report, November 2023, North Pacific Metrics Inc
- Skilled Production Workers Learning Needs, April 2024, BC Wood, BC Log and Timber Building Industry Association

- Project Steering Committee Meeting – VAW Skilled Production Worker, November 2024, BC Wood
- VAW Employer Survey – Learning Needs – BC Wood Skilled Production Worker, April 2024, BC Wood
- Skilled Production Worker Curriculum Framework and Training Outline, n.d., North Pacific Metrics Inc and BC Wood
- SPW Pilot Proposal – VAW Skilled Production Worker, August 2024, BC Wood
- Evaluation of the BC Wood SLMP – Direct to Work Training Component, February 2024, Qatalyst Research Group, BC Wood, Government of Canada, Province of British Columbia
- Skilled Production Worker Environmental Scan, June 2023, North Pacific Metrics Inc and BC Wood
- Skilled Production Worker Program Outline, September 2024, North Pacific Metrics Inc and BC Wood
- Pilot Modules – VAW Skilled Production Worker, n.d., North Pacific Metrics Inc and BC Wood
- Technical Working Group Meeting, June 2023, BC Wood
- Labour Market Information Report – BC Value-Added Wood Products, December 2018, BC Wood, Government of Canada, Province of British Columbia
- Workforce Development Strategic Plan – BC Value Added Wood Products, July 2021, BC Wood, Government of Canada, Province of British Columbia
- Value Added Wood: Strategic Plan Implementation Project Interim Reports One, Sept 2023, Zielke Consulting and BC Wood
- Value Added Wood: Strategic Plan Implementation Project Interim Reports Three, July 2024, Zielke Consulting and BC Wood
- VAW Strategy Implementation Evaluation Framework, February 2023, Zielke Consulting and BC Wood
- Governance Committee Meeting – VAW Skilled Production Worker Training, March 2025, BC Wood

APPENDIX 2: SUMMARY OF DTW PARTICIPANT SURVEY

Funding provided through the Canada-British Columbia Labour Market Development Agreement.

Evaluation of the BC Wood SLMP – Direct to Work Training Component

Summary of the Participant Surveys, February 7th, 2025

CONTENTS

1. INTRODUCTION

1.1 BC WOOD

BC Wood is a not-for-profit trade association that has represented British Columbia's value-added wood (VAW) products industry for 30 years. It is an industry-led association with a membership base of 120 wood products manufacturers and a board of directors that represents every value-added sector in every region of the province.

BC Wood envisions a growing and prosperous value-added wood products industry in BC that will ultimately surpass the primary forest sector in jobs, sales and investments made. To achieve this vision, BC Wood understands that it's policies and procedures must reflect the priorities of all its' stakeholders including employees, members communities, Indigenous peoples, customers, shareholders, and government partners. An increasingly important theme in those stakeholder priorities is the support for furthering diversity and inclusion initiatives in the workplace. Established in 1989 as a partnership between industry and government, BC Wood provides marketing programs to registered value-added manufacturers, which includes cost-shared participation in international tradeshows and events, out-going and incoming trade missions, lead generation, and networking opportunities. In addition, BC Wood members have access to an extensive resource library, both on-line and in our office.

BC Wood's mandate is to assist BC's secondary wood product manufacturers to grow faster by helping them access and exploit markets they would not otherwise enter. By diversifying the members' market activities, the dollar value of BC fibre is maximized while the business risk is minimized.

BC Wood member companies produce hundreds of different value-added wood products grouped into the following seven sectors:

- Millwork
- Cabinets
- Furniture
- Prebuilt Housing
- Engineered Wood Products
- Log Home and Timber Frame
- Remanufactured Wood Products

These seven product-based sectors represent the diverse range of specialty products and manufacturers in BC's export wood markets. Industry sector advisory committees encourage sector collaboration to better target and deliver services more effectively. The marketing activity BC Wood carries out encourages manufacturers of BC's specialty wood products to innovate, change, grow and compete more effectively by responding to changing markets.

BC Wood's programs depend on a wide range of expertise provided by their Vancouver based sector specialists and their in-market specialties located in the United States, China, South Korea and Japan. The areas of expertise include:

- Providing timely market intelligence information
- Developing and implementing company specific marketing strategies
- Evaluating new product and market opportunities
- Delivering sector-based trade promotion programs
- Developing and consumer testing new products
- Providing company specific coaching on entrepreneurship and marketing

BC Wood plays a major role in accelerating the ongoing growth of the value-added wood products industry by addressing a key limitation to growth: market intelligence and access to markets. To do this, BC Wood (in collaboration with its partners including the provincial government, the federal government and other government agencies and organizations) networks and connects BC's secondary wood manufacturers with global buyers of our specialty wood products.

BC Wood staff annually organizes and participates in as many as 24 cost-shared tradeshows and events around the world. BC Wood has a 25-year track record of providing services to the value-added industry with an outstanding level of customer satisfaction. Programs are universal in nature and are open to all companies in the value-added industry on a cost shared basis.[8]

1.2 THE DIRECT-TO-WORK PROGRAM

The Direct-to-Work Training Program was a single piece of a larger Workforce Development Program which also included - Workforce Development Supports (HR Tool Kit) and the Development of Skilled Production Workers. The Direct-to-Work program structure and curriculum were developed by CT Resources and Vancouver Island University. The Pre-Planning Standard outlined, at a high level, the instructor requirements, facilities requirements, and scheduling requirements to give the participants the sense of the program structure and institutional requirements that are anticipated. The program was designed to be delivered over four weeks in length (140 hours), Monday to Friday. One site delivered the program from Thursday to Saturday to take advantage of their shop availability, which extended the duration of the program. During the four weeks, participants spent their time working in the shop, out in the field on trips or tours of different worksites, and in class learning relevant material or listening to guest speakers. Some of the topics covered in the program include:

- Overview of the Value-added Wood Industry
- Employment Trends and Career Pathways
- General Safety, Tools, & Equipment Orientation

[8] BC Wood, "About Us." https://bcwood.com/about-us/, 2023.

- Communication Techniques and Skills
- Work Ethic
- First Aid and CPR
- Organization Information Management
- Qualities and Properties of Wood Species
- Resume Writing Workshops
- Competency Assessment/Coaching
- Hardware, Adhesives, Joinery, Finishes
- Carpentry Math and Measurements
- Fire Safety
- Pedestrian Safety
- Nutrition & wellness
- Bending, Lifting, and Trip and Fall Hazards
- Hazards and Risks in Wood Manufacturing Industries
- BC Employment Standards
- Tips to Secure Employment

The project plan budgeted $250,000 to deliver the program at five sites, equal to $50,000/location. However, citing post-pandemic inflation, each Institution required more than the $50,000 budget. BC Wood did not pay over $60,000 per site. The increase in budget per program meant that the number of delivery sites declined from the original five to four (Port Alberni, Courtenay, Salmon Arm, and Prince George). The program included a focus on attracting under-represented groups to join the value-added workforce.

A breakdown of the attendance for each of the four courses is provided in the table below.

Overview of the Four Courses

Site	2024 Dates	Number of Students					Under-represented Groups				
		Contracted Seats	Appli-cations	Seats Offered	Attend-ing	Fully Subscribed	Women	Men	Indi-genous	New-comers	Youth
North Island College (2 sites)											
Port Alberni	May 6 to June 6	12	8	8	4	No	2	2	0		
Courtenay	May 9 to June 22	12	18	14	6	No	2	4	0		
Okanagan College											
Salmon Arm	May 13 to June 14	10[9]	16	11	6	No	3		1	2	n/a
The College of New Caledonia											
Prince George	May 27 to June 21	13[10]	46	13	10	Yes?[11]	4	9	2	4	8
Total		**47**			**26**						

[9] There was a Contract Amendment requested by OC (March 12) increasing their participant level from 8 to 10.

[10] CNC (PG) was offered a Contract Amendment increasing their Contracted Seats from 12 to 14. Partially due to having strong interest within the region as well as to help offset other underperforming markets. Resulting from this they were able to add one additional participant bringing their number to 13.

1.3 PURPOSE AND METHODOLOGY

The purpose of this document is to report the results of a survey completed with participants in the Direct-to-Work Program.

Upon completion of the program, participants were contacted to share their experiences with the program and how it has impacted their employment outcomes. Of the 26 people who participated in the Direct-to-Work Program, 16 completed the survey (response rate of 62%). Participants who completed the initial survey in Phase one of the engagement were contacted again in October 2024, four months after they had completed the Program to update their employment outcomes and share any change in opinion of the Program. Eight of the 16 completed the second survey.

As mentioned above, the Direct-to-Work Training Program was focused on attracting under-represented groups. To that end:

1) Six of the participants were women (38%)
2) Four of the participants had immigrated to Canada in the last five years (25%)
3) Three of the participants identified as First Nation or Metis (19%).

1.4 STRUCTURE OF THE REPORT

Chapter 2 summarizes the results of the initial Direct-to-Work Training Program Survey. Participants were asked to share how they became aware of the program and what motivated them to participate, their experience with the program including things they liked and would like to see changed, and they employment outcomes since participating in the program. Chapter 3 summarizes the results of the follow up survey, four months after completion of the program. Participants were again asked to share their experience with the program and anything they would like to see changed and any updates to their employment outcomes. These results are then compared to the initial survey to understand how participant perceptions and outcomes have changed over time. The report concludes with a summary of key findings.

2. PHASE 1 SURVEY OF PARTICPANTS

2.1 AWARENESS AND MOTIVATION

Respondents most commonly became aware of the Direct-to-Work Training Program through social media (38%) and the college website (31%), with a smaller number citing friends or family members (25%) and college employees as their sources (6%).

How did you become aware of the training program?

Methods	#	%
Through social media	6	38%
From the College website	5	31%
Friend or family member	4	25%
From the course instructor or other college employee	1	6%
Other (e.g. Via email from the college)	1	6%
Total Responding	**16**	**100%**

The primary objectives for participating in the training program were to acquire hands-on skills and knowledge in carpentry and woodworking (67%), enhance career prospects (60%), to learn more about the Value-Add Wood Industry in BC (13%), and to receive formal training (13%).

What were your objectives for participating in the training program? What were you hoping to get out of it?

Objectives	#	%
Skill Development	10	67%
Career Advancement	9	60%
Industry Knowledge	2	13%
Formal Training	2	13%
Total Responding	**15**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

2.2 PROGRAM EXPERIENCES

All respondents reported a positive return on their decision to participate in the Direct-to-Work Program.

When asked how successful they were in achieving their objectives, 75% of respondents reported that they were successful or very successful. The remainder of respondents reported some success (25%), while none indicated that they were unsuccessful in meeting the objectives which motivated them to begin the program.

How successful have you been to date in achieving these objectives?

Rating	#	%
1 – Not Successful	0	0%
2	0	0%
3 - Somewhat Successful	4	25%
4	4	25%
5 - Very Successful	8	50%
Total Responding	**16**	**100%**
Average Rating	**4.3**	

Respondents were most successful in obtaining new skills and knowledge to help them work more safely and confidently.

Respondents reported success in acquiring practical skills related to carpentry and the use of power tools (60%), as well as gaining confidence and knowledge in their respective fields (20%). Many highlighted improved job prospects, networking opportunities, and a newfound interest or confidence in their work.

In what areas have you been successful?

Successes	#	%
Skill Acquisition	9	60%
Career Advancement and Improved Job Prospects	4	27%
Confidence Building	3	20%
Networking	2	13%
Total Responding	**15**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

Respondents reported the program's lack of practical experiences kept them from mastering the skills they learned, which ultimately may make it harder for them to find a job.

Respondents commonly expressed challenges in acquiring practical skills and hands-on experience (45%). For example, four respondents felt that they did not have enough time to become confident enough in the skills they had learned and that they would not be able to find a job in the Value-Added Wood Industry. Another respondent expanded on this by saying that even though they enjoyed building their own chair, they were hoping to accomplish something more difficult.

Four respondents (27%) gave specific skills that they were not as successful in developing such as identifying wood imperfections, measuring, and reading blueprints. Finally, of the two of respondents who reported tool and resource limitations, one said they wish the program gave them more time in the shop, while the other said their lack of personal tools at home kept them from mastering the skills they were taught.

In what ways have you been less successful that you anticipated?

Limitations	#	%
Lack of Practical Experience	5	45%
Skill Development Challenges	4	36%
Tool and Resource Limitations	2	18%
Total Responding	**13**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

Most respondents agreed that the Direct-to-Work Program increased their interest in working in the Value-added Wood Industry.

Respondents were asked to what extent the Program impacted each of the following four statements. Of the four statements, 94% of respondents reported that the Program increased their interest in working in the Value-added Wood Industry, with an average rating of 4.4 out of 5. Followed closely by helped you further develop your skills (4.3) and increased your awareness of opportunities in the industry (4.2).

Regarding the concerns around the length of the program and the time participants were given to develop their skills that was noted in the previous question, roughly a quarter of respondents reported that the Program had little to no extent in helping them obtain employment.

To what extent has the Direct-to-Work Program:

(on a scale of 1 to 5, where 1 no extent, 3 is some extent, and 5 great extent)

Statements	1 – No Extent	2	3 – Some Extent	4	5 – Great Extent	Average Rating
Increased your interest in working in the Value-added Wood Industry?	0%	0%	6%	50%	44%	4.4
Helped you to further develop your skills?	0%	0%	6%	63%	31%	4.3
Increased your awareness of opportunities in the industry?	0%	0%	13%	56%	31%	4.2
Helped you to obtain employment?	13%	13%	31%	19%	25%	3.3

The Program had the largest impact on participants by improving their networking and industry related skills.

The Program had a positive impact on participants, enhancing their networking skills (33%), developing industry relevant skills (27%), improving their career opportunities (13%), and increasing their knowledge of the industry (13%). Two respondents also said that they liked the Program so much that they took up woodworking as a side hobby.

What other impacts has the course had on you?

Impacts	#	%
Networking and Community Building	5	33%
Skill Development	4	27%
Career Opportunities	2	13%
Personal Enjoyment and Hobbies	2	13%
Increased Knowledge	2	13%
Total Responding	**15**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

2.3 ABOUT THE DIRECT-TO-WORK PROGRAM

Respondents were most satisfied with the program facilities and instructors.

When asked about their satisfaction with different aspects of the program, all of the respondents reported that they were satisfied or very satisfied with the facilities, and 94% were satisfied or very satisfied with the instructors. Followed by hands-on shop time (average rating of 4.6), field trips (4.1), subject matter (4.1) and in-class presentations (3.8).

How satisfied were you with the following aspects of the program?

(on a scale of 1 to 5, where 1 is not at all satisfied, 3 is somewhat satisfied and 5 is very satisfied)

Aspects	1 – Not At All Satisfied	2	3 – Somewhat Satisfied	4	5 – Very Satisfied	Average Rating
The facilities	0%	0%	0%	25%	75%	4.8
The instructor	0%	6%	0%	6%	88%	4.8
The hands-on shop time	0%	6%	6%	13%	75%	4.6
The field trips	0%	0%	31%	25%	44%	4.1
The subject matter	0%	7%	20%	33%	40%	4.1
In-class presentations from industry representatives	0%	13%	13%	56%	19%	3.8

While overall the participants were satisfied with all aspects of the program, they did provide some feedback when given the opportunity. Respondents generally appreciated the instructors and found the course beneficial, particularly valuing hands-on training and field trips. However, there were concerns about excessive safety videos, a lack of course structure, and a desire for more practical, useful knowledge.

Comments	#	%
Instructor Praise	2	22%
Course Structure	2	22%
Safety Information	2	22%
Hands-on Training	2	22%
Course Duration	1	11%
Total Responding	**9**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

Hands-on experience and the high-quality instructors were the participants' favourite parts of the program.

Respondents most appreciated the hands-on experience (67%), particularly the time spent in the workshop, and the knowledgeable, supportive instructors (33%). Four respondents gave other aspects of the program they liked the most, including learning the theory behind building a house, meeting local business owners, visiting different mills in the Alberni Valley, and the facilities and study materials provided during the program.

What did you like most about the program?

Aspects	#	%
Hands-on Experience	10	67%
Instructor Quality	5	33%
Other	4	28%
Total Responding	**15**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

Roughly half (43%) of respondents expressed a desire for more hands-on shop time and practical experience, with some also suggesting a reduction in video watching and unrelated discussions. There were additional calls for longer course durations and more structured learning to enhance knowledge retention and practical skills.

What are things you would most like to see changed?

Themes	#	%
More Shop Time	6	43%
Course Duration and Structure	3	21%
Less Video Time	2	14%
More Certifications	1	7%
More Structure	1	7%
Less Breaks	1	7%
Group Projects	1	7%
Total Responding	**14**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

Most respondents (63%) felt that the length of the program was appropriate, though a notable minority believed it was too short, with one respondent again mentioning the need for more shop time.

Was the length of the program appropriate given the material that was covered?

Themes	#	%
Yes	10	63%
No	5	31%
Other (Needs to be longer for more shop time.)	1	6%
Total Responding	**16**	**100%**

Respondents generally recommend increasing the duration of the course or specific components, particularly advocating for more hands-on shop time and practical experience. There is also a sentiment against excessive theoretical content, with suggestions to reduce unnecessary video watching and reading.

What changes would you recommend to the overall length of the course or the lengths of particularly components?

Themes	#	%
More Hands-On/Shop Time	5	42%
Extend Course Duration	3	25%
Reduce Theoretical Content	2	17%
Improve Course Structure	1	8%
Satisfaction with Current Length	1	8%
Total Responding	**12**	**100%**

All of the respondents indicated that they received personal protective equipment (PPE) as part of the course, while 50% mentioned receiving meals, such as breakfast or lunch.

As part of the course, did you receive:

Themes	#	%
Personal protective equipment (PPE)	16	100%
Meals (i.e. breakfast or lunch)	8	50%
Total Responding	**16**	**100%**

Roughly 38% of respondents indicated that there was no cost to them. Among those who did incur costs, common expenses included fuel, parking fees, and babysitting. Some also mentioned opportunity costs such as time and lost income.

Was there a cost to you for this? If so, what was the cost?

Themes	#	%
No Cost	5	38%
Parking Costs	3	23%
Fuel Costs	2	15%
Opportunity Costs	2	15%
Childcare Costs	1	8%
Total Responding	**13**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

Almost all (94%) of respondents completed the course, with only one individual mentioning they missed a few classes due to a leg injury and did not receive the woodworking certificate but completed other components.

Did you complete the course (or did you stop attending at some point)?

Themes	#	%
I completed the course	15	94%
Other (Did not achieve all certifications)	1	6%
Total Responding	**16**	**100%**

2.4 EMPLOYMENT OUTCOMES

Almost all of the respondents expressed a high level of interest in working in the value-added wood sector, with most ratings being 4 or 5. One respondent indicated moderate interest, while no responses indicated a lack of interest.

How interested are you in working in the Value-Added Wood Sector?

(On a scale of 1 to 5, where 1 is not at all,
3 is to some extent, and 5 is to a great extent)

Themes	#	%
1 – No Extent	0	0%
2	0	0%
3 - Some Extent	1	7%
4	5	36%
5 - Great Extent	8	57%
Total Responding	**14**	**100%**
Average	**4.5**	

Over half (56%) of respondents are not currently employed but are actively seeking work. Among those who are employed, a 25% are looking for new job opportunities, while a 13% is content with their current employment.

Are you currently employed and/or looking for work?

Themes	#	%
Not employed but looking for a job	9	56%
Employed but looking for another job	4	25%
Employed and not looking for another job	2	13%
Not employed and not looking for a job	1	6%
Total Responding	**16**	**100%**

Of the six respondents who are employed, 50% indicated that their current positions are not related to what they studied in the training program. The other 50% of respondents reported that their roles involve skills or tasks related to their training, such as working with wood or in carpentry.

Is your current position related to what you studied in the training program? (if so) In what ways?

Themes	#	%
Unrelated to Training	3	50%
Related to Training - Carpentry/Woodworking	3	50%
Total Responding	**6**	**100%**

Some students also applied to other programs following completion of DTW. According to the institutions, four students applied for further paid training including Carpentry Foundations (2), Automotive Service Technician (1) and the Joinery Program (1).

2.5 DEMOGRAPHICS

Roughly two thirds of participants were male while one third was female.

Do you identify as:

Identity	#	%
Male	10	63%
Female	6	38%
Total Responding	**16**	**100%**

Four respondents immigrated to Canada in the past five years, including one international student who arrived recently.

Did you immigrate to Canada in the past five years?

Response	#	%
No	11	69%
Yes	4	25%
Other (International Student)	1	6%
Total Responding	**16**	**100%**

The responses indicate a diverse range of identities, with a notable number of respondents preferring not to answer. Among those who specified, there are mentions of being non-indigenous, First Nations, and various other ethnicities such as Caucasian, immigrant, and Filipino.

Do you identify as:

Identity	#	%
Non-indigenous	3	20%
First Nations	2	13%
Metis	1	7%
Inuk (Inuit)	0	0%
Prefer not to answer	5	33%
Other (e.g., White, Filipino)	4	27%
Total Responding	**15**	**100%**

2.6 FINAL COMMENTS/RECOMMENDATIONS

When asked to share any final comments or recommendations, three respondents expressed gratitude and positive feedback about the training session while two respondents shared that they hope the course continue to be offered. Two respondents shared that they hope the program considers the feedback shared and continues to improve. Finally, one respondent shared that the course should have more tours to different job sites.

Do you have any final comments or recommendations?

Themes	#	%
Gratitude and Positive Feedback	5	55%
Course Continuation	2	22%
Course Improvement	2	22%
Suggestions for More Trips	1	11%
Total Responding	**9**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

3. FOUR MONTH FOLLOW-UP

3.1 PROGRAM EXPERIENCES

Four months after the Program concluded, 8 of the 16 respondents (50%) who participated in the first survey completed a follow up survey.

Respondents felt less successful in achieving their objectives four months after the program compared to one month after.

After four months, participants felt less successful in achieving their initial objectives when beginning The Program. The average success rating fell from 4.3 to 3.1, including 3 respondents who went from feeling at least somewhat successful to having little to no success.

How successful have you been to date in achieving these objectives?

	One-Month Follow-up		Four-Month Follow-up	
Rating	**#**	**%**	**#**	**%**
1 – Not Successful	0	0%	1	12%
2	0	0%	2	25%
3 - Somewhat Successful	4	25%	0	0%
4	4	25%	5	63%
5 - Very Successful	8	50%	0	0%
Total Responding	**16**	**100%**	**8**	**100%**
Average Rating	**4.3**		**3.1**	

Respondents were less likely to agree that the Direct-to-Work Training Program helped them gain employment four months after the program compared to one month after.

Comparing the one and four-month follow-up surveys shows that respondents are not as confident that the Program increased their interest and awareness of the VAW Industry or helped them further develop skills and gain employment. The average rating for each of the statements

decreased, with the largest decline coming from “helped you obtain employment” (2.5 out of 5 to 3.3.).

Of the four statements, 63% of respondents reported that the Program increased their interest in working in the Value-added Wood Industry, with an average rating of 3.7 out of 5. Followed closely by increased your awareness of opportunities in the industry (3.7) and helped you further develop your skills (3.5).

To what extent has the Direct-to-Work Program:

(on a scale of 1 to 5, where 1 no extent, 3 is some extent, and 5 great extent)

Statements	1 – No Extent	2	3 – Some Extent	4	5 – Great Extent	Average Rating (one-month)	Average Rating (four-month)
Increased your interest in working in the Value-added Wood Industry?	13%	0%	25%	38%	25%	4.4	3.7
Increased your awareness of opportunities in the industry?	13%	13%	0%	50%	25%	4.2	3.7
Helped you to further develop your skills?	13%	0%	38%	25%	25%	4.3	3.5
Helped you to obtain employment?	25%	25%	25%	25%	0%	3.3	2.5

Participants felt that the course has impacted them by providing practical woodworking skills (43%) and fostering social connections within the woodworking community (43%). One participant noted an increased interest in the trade industry and potential career opportunities.

What other impacts has the course had on you?

Themes	#	%
Networking and Connections	3	43%
Skill Development	3	43%
Career Exploration and Opportunities	1	14%
No Impact	1	14%
Total Responding	**7**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

When asked how the program could have been more useful, respondents discussed a desire for more practical, hands-on experience and better planning within the program (60%), with specific mentions of increased shop time and demonstrations. One participant also suggested providing lunch, while one respondent expressed satisfaction with the program as it was.

How could the program have been more useful to you?

Themes	#	%
Need for more practical sessions	3	60%
Positive feedback	1	20%
Providing lunch	1	20%
Total Responding	**5**	**100%**

Note. Categories are not mutually exclusive, may not sum to 100%

Interest in working in the Value-added wood sector has declined since the conclusion of the program.

Over half of the respondents (63%) in the four-month follow-up survey indicated they had an interest working in the Value-added wood sector. While the sample size is lower, interest in the VAW sector was higher one month after the Direct-to-Work Program concluded, translating to an average rating of 4.5 out of 5, compared to 3.6 out of 5 after four months.

How interested are you in working in the Value-added wood sector?

(On a scale of 1 to 5, where 1 is not at all, 3 is to some extent, and 5 is to a great extent)

	One Month Follow-up		Four Month Follow Up	
Interest	#	%	#	%
Not at all - 1	0	0%	1	13%
2	0	0%	0	0%
To some extent - 3	1	7%	2	25%
4	5	36%	4	50%
To a great extent - 5	8	57%	1	13%
Total Responding	**14**	**100%**	**8**	**100%**
Average Rating	**4.5**		**3.5**	

3.2 EMPLOYMENT OUTCOMES

Of the 8 respondents who completed the four-month follow-up survey, 38% were not employed, 25% were employed and not looking for another job, while 25% were employed and looking for another job, one had moved on to another woodworking course.

Are you currently employed and/or looking for work?

Employment Status	#	%
Not employed but looking for a job	3	38%
Employed and not looking for another job	2	25%
Employed but looking for another job	2	25%
Other (*"At school for woodworking"*)	1	13%
Total Responding	**8**	**100%**

Of the 4 respondents who are employed, only 1 was employed in a position that is related to what they leaned in the Direct-to-Work Training Program

Is your current position related to what you studied in the training program?

Themes	#	%
No	3	75%
Yes	1	25%
Total Responding	**4**	**100%**

When asked how their current position was related to the course they said:

> *"... I had some skills going into the course, and the course gave me the confidence I needed to pursue finishing carpentry*."

It is possible that all three people who were employed in positions related to the course one month after completion are still employed in such positions.

Only one of the three people responded to the second survey despite repeated attempts for us to reach them. That one person who responded is still employed in a related position. It is quite possible that the two who did not respond are still employed in such a position.

4. KEY FINDINGS

The key findings are summarized as follows:

- Participants joined the program to learn new skills and advance their careers in the industry
- All the participants felt like they were successful in achieving these objectives.
- Participants also reported an increased interest in working in the Value-added Wood Industry.
- Most (63%) of participants agreed the length of the program was appropriate given the content.
- However, participants still felt that if the program was longer, their employment outcomes would improve.
- The respondents felt that incorporating more practical experiences to help them master the skills they learned may make it easier for them to find a related job.
- 6 of the 16 (38%) participants were employed one month after completion, 3 of whom were employed in a job related to carpentry/woodworking.
- Four months after the program concluded:
    - Respondents felt less successful in achieving their objectives.
    - Respondents were less likely to agree that the Direct-to-Work Training Program helped them gain employment.
    - Interest in working in the Value-added wood sector declined.
    - Four participants were employed, of which only one was employed in a position that is related to what they learned in the Direct-to-Work Training Program.
    - It is possible that all three people who were employed in positions related to the course one month after completion are still employed in such positions. However, only one of them responded to survey despite our attempts to reach them.
    - One participant is attending school for woodworking.