



Forestry Innovation Investment®

2021/22 Investment Plan

Wood First Program | November 2020



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How to use this Investment Plan

The information included in this document provides an overview of FII's Wood First program priorities for 2021/22. The Investment Plan is a key element of FII's Wood First program Call for Proposals process, providing guidance to anyone interested in proposing activities to FII for cost-shared funding.

Funding applicants are expected to align programs and funding proposals with the priorities identified in this Investment Plan if they wish to secure funding from FII.

Applicants should clearly articulate in their funding proposals how proposed activities fit with the strategic objectives, priority activities, audiences and behaviours laid out in this plan. Funding applicants are **strongly encouraged** to review the [Wood First Program Application Guide 2021/22](#), [Wood First Program three-year Strategic Plan](#), and other information provided as a part of the Call for Proposals process. All relevant information can be found at www.bcfii.ca or by contacting FII.

Successful funding recipients are accountable for funding received and are expected to assess and report on deliverables and outcomes of their funding programs and activities. FII continuously assesses these outcomes to refine the Wood First program strategy and priority investments.

Executive summary

This Investment Plan outlines Forestry Innovation Investment's (FII) Wood First program priorities for advancing wood in B.C. in the fiscal year 2021/22. 2021-22 priorities reflect FII's [Wood First program three-year Strategic Plan](#) and recommendations of FII's Wood First Advisory Committee, as well as FII Wood First program market and industry analyses.

The Wood First program strategic objectives are:

1. Grow the culture of living and building with wood in B.C. and beyond
2. Maximize the appropriate use of wood in public and private projects
3. Strengthen B.C.'s capacity to produce competitive wood-based products and building systems that create and respond to market demand
4. Accelerate adoption of existing and emerging wood-based products and building systems
5. Position B.C. as a world leader in sustainable and innovative wood-based products and building systems in design, production, and application

For 2021/22, FII's total budget for Wood First activities will be \$2.8 million. Of that, \$2.4 million is available for non-profit organizations to deliver projects and activities through the Wood First annual Call for Proposals. The results of funded projects will be made available to the public. The remaining portion of \$400,000 will be for activities delivered directly by FII. The budget is allocated across the following five investment categories:

Investment category	2021/22 Allocations	
	Call for Proposals	
	Amount	Percent of subtotal
Identification of opportunities & barriers	\$360,000	15%
Research and innovation	\$480,000	20%
Education and skills development	\$600,000	25%
Marketing, promotion and outreach	\$240,000	10%
Strengthening manufacturing and business capability	\$720,000	30%
TOTAL	\$2,400,000	

FII's investments in each category will be limited to the levels of the respective allocations. Funding applicants are expected to align programs and funding proposals with the priorities identified in this Investment Plan if they wish to secure cost-shared funding from FII. If proposed activities do not respond to the priorities outlined in this Investment Plan, FII reserves the right to allocate investments to activities delivered by FII (or others) for that same category. Funding recipients are accountable for funding received and are expected to assess and report on deliverables and outcomes of their funding programs and activities. FII continuously assesses these outcomes to refine the Wood First program strategy and priority investments.

1. Introduction

Much of British Columbia was founded on forestry—an industry that has long sustained B.C. communities and local economies. However, with British Columbia’s relatively small population and local geographic market, the forest sector relies on export markets to grow and prosper. Forestry Innovation Investment (FII) was established in 2003 as the provincial agency responsible for maintaining and expanding markets for B.C. forest products. FII works in collaboration with the forest industry, research institutions, the federal government and other stakeholders to deliver innovative, forward-looking programming that responds to today’s domestic and international market dynamics, as well as tomorrow’s challenges and opportunities.

The B.C. forest industry is recognized globally for its production of high-quality wood products, leadership in sustainable forest management, innovation in harvesting and processing and for the development of advanced wood construction technologies and building systems. The sector continues to be a major contributor to the provincial economy, representing 27.4 percent (\$11.9 billion) of the province's total exports in 2019¹. The forest industry generated over \$991 million in public revenue in 2019/20, helping to support education, healthcare and infrastructure². The sector employs roughly 50,000 British Columbians directly and supports over 7,000 businesses.³

This Investment Plan details FII’s Wood First Program investment priorities for 2021/22 and provides guidance for organizations seeking FII funding through its annual Wood First program Call for Proposals process. FII’s investment focus is informed by an ongoing program of market research and input from a range of B.C. building, industry and government stakeholders who are involved at all steps of the strategy development and planning process. FII provides funding to non-profit forest and construction sector organizations such as industry trade associations, academic and research organizations, and to government agencies/ministries for work that they propose and ultimately deliver in relation to the Wood First Investment Plan.

This annual Investment Plan is developed in the context of the [three-year Strategic Plan](#) for the Wood First Program, as well as FII’s [five-year Strategic Plan](#) and FII’s more detailed [three-year Service Plan](#)⁴.

¹ BC Stats, 2019

² PWC, British Columbia’s Forest Industry and the B.C. Economy in 2016, 2017, 2018

³ BC Stats, 2019

⁴ FII’s Strategic Plan, Service Plan and other corporate reports are available on the FII website at bcfii.ca

2. FII investments and programs

FII works with the forest industry, provincial ministries, other levels of government and the research community to develop and diversify markets for the B.C. forest sector while promoting B.C. as a world-class supplier of environmentally friendly forest products.

As directed by the Province of B.C., the mandate of FII is to:

- Position B.C. as a global supplier of world-class environmentally friendly forest products
- Actively maintain, create and diversify demand for B.C. forest products in Canada and in key world markets
- Help break down non-tariff trade and market barriers to ensure opportunities for B.C. forest products
- Work with the forest industry to promote B.C.'s forest products and forest management practices to the global marketplace
- Help ensure that the forest sector, through innovation and market development, continues to be a leading contributor to the B.C. economy

2.1 Guiding principles for investments

As a B.C. Government Crown Corporation, FII receives its funding from the Province of B.C.'s Ministry of Jobs, Economic Development and Competitiveness (JEDC). Part of FII's funding is used to share the cost of industry-led market initiatives and part is used to pursue specific objectives the B.C. Government has set for the sector and for FII. This is typically done in close cooperation with other public agencies and with the forest industry. In all cases, FII's activities and approach are aligned with the international and domestic market development objectives of both JEDC, and the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD). FII is governed by a Board of Directors accountable to JEDC, ensuring consistency with the government's strategic priorities. Industry has an active role in advising FII and its Board to ensure that programming reflects industry priorities and growth opportunities.

With the intent of maximizing economic benefit to the forest sector and the province, the following key principles guide FII's decisions about its own activities and about providing funding to other organizations. These guiding principles provide a framework to balance investments across markets and areas of competing interest within the forest sector.

Innovation—FII anticipates changing market, economic and geo-political forces that impact the forest economy and invests in new programs, research and product development that offer competitive advantages to the forest sector.

Credibility and integrity—FII activities and funded projects are based on government and industry priorities and strategies developed in partnership with stakeholders. FII services are transparent, timely and openly communicated.

Collaboration—FII works in partnership with key stakeholders in industry, the research sector and government to develop initiatives and ensure programs are delivered effectively.

Engagement—FII is actively involved in the market and product development programs it funds and delivers. FII not only responds to government and industry priorities, but also takes the initiative to identify new market opportunities and counsel industry and government on emerging issues.

Evidence based decision-making—FII is oriented towards growing markets but recognizes that there are risks in pursuing opportunities. As much as possible, investment decisions are firmly rooted in current, relevant, and comprehensive market information that provides a sufficiently compelling business case for each market initiative.

Accountability—FII strives for transparent decision-making and investment processes. FII staff have a duty to ensure the appropriate use of the public funds entrusted to them. Activities are expected to be founded on clear objectives, generate a positive return and have well-developed performance measures.

FII works collaboratively with industry trade associations, with other levels of government including the Government of Canada and other provinces, and with research institutions to deliver programs and activities that respond to today's domestic and international market dynamics, as well as tomorrow's challenges and opportunities. FII invests in innovative, forward-looking programming to enhance the value of B.C.'s forest resources and strengthen employment throughout the province.

While FII works closely with forest sector associations on these activities, it also plays a lead role in initiating and managing related projects on behalf of the Province. Where forest sector organizations or research institutes are positioned to support project activities, FII may contract directly with these organizations to assist with, or play a lead role in, project implementation. FII's investments are focused on pursuing priorities of the government and industry for B.C.'s forest sector.

2.2 Programs

FII organizes its efforts under three key programs:

- **Market Outreach**—communicating the benefits of wood, and positioning B.C. as a global leader in the supply of innovative and quality wood products from sustainably managed forests (delivered by FII on behalf of, and in consultation with, industry and government partners).
- **Market Initiatives**—developing and expanding markets for B.C. wood products internationally in order to strengthen the sector, open new opportunities and sustain forest sector employment (delivered by third-party organizations in overseas markets with funding managed through an annual Market Initiatives Call for Proposals, as well as by FII in selected markets).
- **Wood First**—advancing wood use and innovative wood construction technologies at home in B.C. and showcasing them on the world stage (primarily delivered by third-party organizations with funding managed through an annual competitive Wood First Call for Proposals process).

A brief summary of these initiatives is included below for reference.

Market Outreach

Market Outreach works to expand opportunities for B.C. forest products by positioning wood as an environmentally friendly, preferred building material, and by highlighting B.C. as a reliable supplier of quality products from sustainably managed forests. These activities create a solid foundation for answering the questions, “Why wood?” and, “Why wood from B.C.?”—upon which many of the market development investments and activities of FII and industry are based.

The program focuses on taking advantage of two significant trends in the marketplace—the emerging recognition of wood products as renewable and sustainable, and increasing demands from consumers for forest products that are produced in an environmentally responsible manner. While industry associations and companies promote their specific sectors and products, there is a need for communications that position the B.C. forest sector, B.C. building innovations and competitive advantages as a whole. The Market Outreach program provides audiences with factual, consistent and credible information about the environmental parameters of B.C.’s forest products and the forest practices that underlie their production. Specifically, the program:

- Provides information regarding B.C. forest practices and products to architects, engineers, developers and builders, foreign government regulators, importers, and to a limited extent, consumers
- Champions science- and fact-based approaches to document B.C.’s forest practices and the merits of wood-based construction technologies in the context of mitigating climate change and adopting green building standards
- Collaborates with forest sector stakeholders to encourage consistent and compelling messages about product and building innovations and reducing environmental impacts
- Monitors and advocates for codes, standards and policies that recognize the merits of wood and B.C. forest products

Learn more about FII's marketing efforts by visiting the comprehensive information resource, naturallywood.com.

Market Initiatives

With nearly 90 percent of B.C.’s forest products destined for export, we rely on foreign markets to support the thousands of businesses and tens of thousands of people who make up the provincial forest sector. This is why building new markets and strengthening existing markets is integral to a strong future for B.C.’s forest sector and a central objective of FII. To accomplish this objective, FII is mandated to conduct research, and deliver and/or facilitate market development activities that help the forest industry capitalize on high-potential market opportunities.

The Market Initiatives program encourages the development of export markets and new market segments. Expanding B.C.’s trade relationships to fast growing markets in Asia helps to diversify the sector, open up new opportunities and sustain forest sector employment. Recognizing the long-standing importance of the North American market, FII is also prepared to invest in high-potential market segments to grow demand for B.C. wood products closer to home. FII works collaboratively with the forest industry, the federal government and the research community, focusing activities and leveraging resources to maximize results. Market Initiatives focuses on:

- Researching opportunities in emerging and potential future markets and initiating early market development activities
- Supporting industry trade associations in developing and/or expanding markets and market segments for B.C. forest products
- Supporting industry efforts to mitigate market access and plant health issues

Typically, FII uses a small portion of its Market Initiatives budget to lead market research efforts to evaluate high-potential emerging opportunities for the sector. In this pre-commercial phase, FII may also initiate early market development activities where opportunities to introduce B.C. forest products in a region or market segment look particularly promising. While pre-commercial work is often led by FII, efforts are generally undertaken in conjunction with the federal government and with the engagement and support of the forest industry. When interest and commercial demand has begun to develop and entry risk has been reduced, FII looks to industry and related trade associations to play a more active role in leading market development efforts.

While activities to explore emerging markets are an important element of the Market Initiatives program, the majority of effort and investment under the program is focused on advancing opportunities in existing markets such as the U.S., China, Japan, South Korea, India and Vietnam where the greatest short- and medium-term opportunities exist for the sector. Most of these market development efforts are delivered by forest sector trade associations, with cost-shared funding support from FII and the federal government.

A Market Priorities Committee of senior industry representatives provides FII with external guidance and advice with respect to establishing priorities for market development programming. Activities under the Market Initiatives program are primarily delivered by third-party organizations on behalf of the industry-government collaborative. Available funding under the program is managed through an annual Call for Proposals⁵ process.

Wood First

The Wood First program focuses on advancing wood use and innovative wood construction technologies in the Province and establishing B.C. as a showcase for forest products in construction, interior design and daily living. The scope includes both residential and non-residential buildings.

Planning and delivery of the Wood First program is a collaborative effort involving the building construction industry, the forest sector and government. FII provides overall management and administration of the program, including aligning priorities and ensuring the best use of the funds. An advisory group (the Wood First Advisory Committee) representing a cross-section of primary and secondary manufacturing industries and wood product end-use sectors provides recommendations on program priorities. Based on these recommendations, FII develops an investment plan that allocates and prioritizes available funding on an annual basis across several categories of activity including research, education, marketing and value-added capacity building. Specifically, Wood First focuses on:

⁵ Information on the Market Initiatives program Call for Proposals can be found at bcfii.ca

- Growing the culture of living and building with wood in B.C. and beyond
- Raising awareness of the province as a world leader in advanced wood construction and design
- Advancing the use of wood building systems and technologies
- Encouraging a robust valued-added sector in B.C. through enhanced capacity and competitiveness
- Maximizing the appropriate use of wood in public and private projects
- Accelerating the adoption of existing and emerging wood-based products and building systems
- Strengthening B.C.'s capacity to produce competitive wood-based products and building systems that create and respond to market demand
- Positioning B.C. as a world leader in sustainable and innovative wood-based products and building systems in design, production, and application

The activities of the Wood First program are delivered primarily by third-party organizations under a cost-sharing framework that relies partially on contributions from industry. Organizations receive funding from FII through an annual competitive Call for Proposals. Learn more about applying for funding through the Wood First program by visiting bcfii.ca.

FII has separate strategies and Investment Plans for its Market Outreach, Market Initiatives and Wood First Programs. **This Wood First Investment Plan for 2021/22 summarizes the activities and areas where FII places the highest priority for Wood First investments in 2021/22 in alignment with the Wood First Program three-year Strategic Plan 2020–2023 strategic focus areas.**

3. Wood First program

The B.C. Government initiated Wood First in 2009 to ensure that the province's forest industry is vibrant and globally competitive, providing benefits for current and future generations and acting as one of the foundations for strengthening B.C. communities. FII's Wood First program focuses on advancing wood use in the province by promoting and supporting innovation in manufacturing, building design and construction. These goals are achieved by positioning wood as a preferred building material and B.C. as a global leader in wood innovation.

3.1 Funding, progress and results

Funding for FII's Wood First program comes from the Province of B.C.'s Ministry of Jobs, Economic Development and Competitiveness. This Investment Plan seeks to align priorities and ensure the best use of available funds to support the advancement of wood use and a wood culture in B.C. The activities in the Wood First program are delivered primarily by non-profit organizations under a cost-sharing framework that functions partly on contributions from the forest industry.

FII invites funding proposals from non-profit organizations that can provide services in line with the allocations, activities and audiences outlined in this Investment Plan. This Investment Plan serves as a key reference tool for interested organizations to develop their funding proposals. Proposals must conform to the format and requirements of the FII online funding management system. Proposals will be evaluated by a panel made up of FII staff, the Chair of the Wood First Advisory Committee, and independent industry experts. Final funding decisions are made by FII's CEO. Successful applicants will then enter into recipient agreements with FII.

FII's investments in each category will be limited to the levels of the respective allocations. If proposed activities do not respond to the priorities outlined in this Investment Plan, FII reserves the right to allocate investments to activities delivered by FII (or others) for that same category to support the advancement of wood use in B.C. and to fill gaps in the program that are not covered by eligible funding applicants.

Funding recipients are accountable for funding received and are expected to assess and report on deliverables and outcomes of their funding programs and activities. Funded projects will be monitored by the FII Wood First program to ensure the funds are used appropriately and activities are proceeding in the intended direction. Tracking projects and activities is important for measuring the progress towards the Wood First program objectives and target behaviours. FII expects that projects include tasks and methods to obtain feedback (such as satisfaction, economic benefits gained, etc.) and/or key information and data (such as attendance at events, amount of wood use etc.). The information will be linked to explicit metrics that are used to track performance of the Wood First program-funded recipients and projects, as well as to refine Wood First investment priorities. FII continuously assesses these outcomes to refine the Wood First program strategy and priority investments.

3.2 Wood First program—three-year Strategic Plan

FII and the Wood First Advisory Committee established the following goal and strategic objectives for the Wood First program which are further described in the three-year Strategic Plan for the Wood First program.

3.2.2 Goal

B.C. is a leader in using innovative forest products and building systems.

3.2.3 Strategic objectives

The following objectives provide direction and context for the Wood First program to contribute to employment opportunities for British Columbians.

Objective 1: Grow the culture of living and building with wood in B.C. and beyond

The beauty of wood, its social and sustainable qualities and structural properties are valued by all British Columbians as the material to design, build and live with. British Columbians take pride in producing high-quality wood products from sustainably managed forests.

Objective 2: Maximize the appropriate use of wood in public and private projects

British Columbians involved in specifying building, finishing and furnishing materials choose wood over other options in all appropriate parts of design, construction and finishing.

Objective 3: Strengthen B.C.'s capability to produce competitive wood-based products and building systems that create and respond to market demand

B.C. companies continuously invest in equipment, technology and personnel in new or existing operations. They have sound business cases developed from a solid understanding of market demand and supply dynamics, improved product development and manufacturing processes, and effective marketing plans. They support fundamental research and incorporate research results into their operations. Companies collaborate effectively along the supply chain and B.C. has competitive, advanced wood-based products and building systems.

Objective 4: Accelerate adoption of existing and innovative wood-based products and building systems

Architects, engineers, designers, developers and builders specify more wood because they have the skills, ability and confidence to choose wood-based products and building systems over alternatives, encouraging ongoing changes to the B.C. Building Code that facilitate expanded use of wood.

Objective 5: Position B.C. as a world leader in sustainable and innovative wood-based products and building systems in design, production and application

Governments, design teams and customers from around the world visit B.C. to learn how wood innovation is advancing in the Province, and increasingly draw on innovative B.C. design resources and wood-based products and building systems.

4. 2021/22 Investment priorities

FII's Wood First program continues to adjust priorities to meet strategic objectives, while considering various external trends and industry factors. The 2021/22 priority audiences and activities in this Investment Plan are aligned with the opportunities and challenges as outlined in the Wood First Program three-year Strategic Plan.

4.1 2021/22 priority audiences

The following are priority audiences to be addressed through 2021/22 funded projects and activities. Appendix A lists the definitions for these priority audiences, as well as secondary target audiences.

(In alphabetical order)

- Architects
- Assemblers
- Builders
- Building inspectors
- Building and fire officials—municipal and provincial
- Developers
- Educational institutions—Ministry of Advanced Education, Post-Secondary, Secondary
- Engineers
- Insurers and financing
- Manufacturers—primary, secondary
- Public institutions
- Quantity surveyors
- Research institutions

4.2 2021/22 priority activities

The following four elements are important to consider across all audiences and activities.

Priorities and single vs. multi-year activities: Funding applicants should ensure their proposals directly respond to the objectives, priority audiences and activities outlined in this plan. While funding can only be committed to for the 2021/22 fiscal year, if activities, such as research, are anticipated to span more than one fiscal year, a clear overview of the key steps and elements of work for each additional year should be clearly outlined. Results of earlier phases of research associated with the proposal should also be included.

Collaboration: FII encourages closer links between similar activities carried out by Recipient Organizations. Where multiple funding recipients are targeting the same audiences or activities, it is strongly recommended that recipient organizations collaborate in planning and implementing a coordinated strategy that demonstrates a common vision, plan and alignment in relation to target audiences and priority activities. For example, events and educational activities that profile wood

products, building systems and technologies to architects, engineers, developers and manufacturers such as workshops and lunch and learns.

Knowledge mobilization: Knowledge mobilization includes a wide range of activities relating to the production and use of research results, including knowledge dissemination, synthesis, transfer, exchange, and co-creation by researchers and knowledge users. FII requires a **knowledge mobilization plan** in two investment categories (4.2.1 and 4.2.2). Projects in the other categories are encouraged to share information and results developed.

Activity impact tracking: FII requires funding recipients to assess and report on deliverables and outcomes for their funding programs and activities. One core measurement tactic is *exit surveys*, which is a category of project deliverables to evaluate activity effectiveness and impact. To improve and streamline data collection and analysis, FII will administer online exit surveys using technologies that facilitate an efficient and economical workflow. Further details on the process are described in the [Wood First Application Guide](#).

The following tables set out, for each investment category, the priority audiences for investment, the desired behaviours that these investments support and priority activities to achieve these behaviours.

4.2.1 Identification of opportunities and barriers

This investment category focuses on identifying opportunities and assessing barriers to the use of wood in structural and non-structural applications in B.C. Projects can include development of guides, case studies, reviews, market research and other non-technical research. Technical research in engineering and material sciences is covered under the *Research and Innovation* investment category (page 14).

A knowledge mobilization plan is expected with any project in this category. The knowledge mobilization plan requirements are described in the [Wood First Application Guide](#).

Activities and audiences are listed in order of priority.

Audiences	Priority activities	Desired behaviour
Developers Insurers and financing Quantity surveyors Public institutions Architects Engineers Builders	<ul style="list-style-type: none">• Create a monitoring data inventory and guide for mass timber buildings for evidence of long-term performance• Develop data standards for wood-based designs/systems/components for use in BIM• Better understand how wood buildings and wood interiors benefit occupants<ul style="list-style-type: none">○ Metrics for assessing health and productivity benefits○ Economics of wood buildings and wood interiors• Develop a best practice guide for refurbishing, renovating and reconfiguring a mass timber building• Identify market relevant competitiveness issues and potential solutions on low-rise non-residential, mid-rise and taller residential and commercial projects<ul style="list-style-type: none">○ Cost related, such as building life-cycle cost, construction, financing, insurance, maintenance, operation, renovation, repair and end of life disassembly○ Design values, costing tools and assessments○ Embodied carbon, such as improving tools and methodologies in the context of the Low-carbon assets through life cycle assessment initiative○ Processes, such as contracts, lean construction and integrated project delivery, procurement○ Digital technology, such as building information modelling (BIM) and design for manufacture and assembly (DfMA)○ Wood design for disassembly and reuse	Understand the advantages of using wood, how to overcome challenges and where wood-frame, mass-timber, and wood hybrid building systems are economically viable

Building inspectors Building and fire officials—municipal and provincial Insurers and financing	<ul style="list-style-type: none"> • Develop information required for officials to support approval of specific projects via alternative solutions provisions • Develop documentation on fire safety for course of construction of taller mass timber projects. • Develop data-supported matrix to assess priorities and barriers to wood use in residential and non-residential buildings at regional and municipal levels 	Provide guidance in reviewing applications of existing building code provisions and in evaluating new building systems
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4.2.2 Research and innovation

This investment category focuses on developing solutions, through applied technical research, to overcome barriers in advancing the applications of wood-based products and building systems. Research projects should improve target audience understanding and enhance the performance of wood in applications that offer significant market potential.

FII recognizes that numerous research programs and projects related to wood design and construction are underway throughout Canada and the United States. Wood First program investments focus on priority research topics that can leverage funding from other sources and/or fill research gaps.

Wood First program investments are intended for short-term research projects that can be completed within the annual funding period, or for clearly defined research tasks within larger projects funded from other sources. However, recognizing the complexity of many research projects as well as the constraints of funding or academic calendars, if research is anticipated to span more than one fiscal year, a clear overview of the key steps and elements of work for each additional year should be clearly outlined. Results of earlier phases of research associated with the proposal should also be included.

A knowledge mobilization plan is expected with any project in this category. The knowledge mobilization plan requirements are described in the [Wood First Application Guide](#).

Activities and audiences are listed in order of priority.

Audiences	Priority activities	Desired behaviour
Building and fire officials—municipal and provincial Building inspectors Developers Insurers and financing Architects Builders	<ul style="list-style-type: none"> • Improve modelling of connections including fire modelling • Address challenges in seismic design provisions for mass timber designs, including connections and seismic force resisting systems • Develop holistic system designs for high acoustic, vibration and fire performance of wood and hybrid systems • Assess structural repair methods for mass timber buildings following a fire 	Develop knowledge and proficiency in delivery of wood and hybrid building systems Provide guidance in reviewing applications of existing building code provisions and in evaluating new building systems, and supporting future building code changes

	<ul style="list-style-type: none"> • Identify options and considerations for wood-based building systems and envelopes for net-zero energy ready buildings • Develop an evaluation and rehabilitation guide for mass timber buildings following fire/moisture • Develop wood designs for disassembly and reuse 	
Manufacturers – primary and secondary Research institutions	<ul style="list-style-type: none"> • Identify options and considerations for wood-based structural building systems and envelopes for net-zero energy ready buildings • Improve the performance of B.C. mass timber/mass timber hybrid systems and develop new products recognizing B.C. species availability and wood supply 	Guide research institutions and manufacturers in development of new equipment, procedures and products

4.2.3 Education and skills development

This investment category focuses on increasing knowledge and experience related to designing and building with wood, including products and building systems. It covers a range of species, products, design applications, and construction techniques.

Outreach to building and fire officials regarding innovations and performance of wood-based products and building systems (particularly mass timber and hybrid) is a priority. Emphasis is also placed on activities specific to the needs of developers, insurers and financiers, builders, assemblers, and installers to develop understanding of the benefits and appropriate uses of wood. There is a need to break down misperceptions and barriers as it relates to wood acceptance in the current building regulations, as well as alternative solutions.

FII and the Wood First program have supported many activities in past years to educate and train a range of audiences in a wide range of topics. We are looking for innovative, effective and efficient delivery methods and topics, with efforts balanced between the continuing education of practicing professionals and educating future practitioners. FII encourages leveraging strategic collaborations and networking with third parties and/or material agnostic venues to deliver programming.

Activities and audiences are listed in order of priority.

Audiences	Priority activities	Desired behaviour
<p>Educational institutions—post-secondary</p> <p>Ministry of Advanced Education</p> <p>Professional associations representing specifiers (architects, engineers, technologists)</p>	<ul style="list-style-type: none"> ○ Incorporate the use of wood in mass-timber and wood-hybrid building systems into curricula of architects, engineers and technologists, including interactive design/build workshops ○ Include BIM/DfMA into post-secondary and continuing education curricula for architects, engineers and technologists 	<p>Professors and trainers are equipped to teach undergraduate, graduate and continuing education courses on wood engineering and design and the role of digital technology</p>
<p>Building inspectors</p> <p>Building and fire officials—municipal and provincial</p> <p>Insurers and financing</p> <p>Quantity surveyors</p>	<ul style="list-style-type: none"> ● Provide high-level expert technical assistance, advisory services and guidance in reviewing applications of existing building code provisions and in evaluating new building systems ○ Focus on communities in the Lower Mainland, Greater Victoria and those based on proven data that have the greatest opportunity to influence projects for increased acceptance of wood, including but not limited to the early adopter jurisdictions of the 2020 Building Code. 	<p>Increase acceptance of wood and wood-hybrid systems in mid-rise and taller buildings</p>
<p>Developers</p> <p>Architects</p> <p>Assemblers</p> <p>Builders</p> <p>Installers</p> <p>Building inspectors</p> <p>Building and fire officials—municipal and provincial</p> <p>Engineers</p> <p>Architects</p>	<ul style="list-style-type: none"> ● Deliver content (including but not limited to drawings, lessons learned, guides etc.) for multiplatform dissemination (i.e. web-based, seminars, events etc.): <ul style="list-style-type: none"> ○ mixed-use, mid-rise building code provisions, tall wood and wood-hybrid building systems ○ Mass timber installation including moisture management, transitioning from concrete to wood, connections ○ BIM/DfMA in wood construction ○ Energy efficient, high-performance mid-rise or taller wood buildings ○ Connection systems, including fire protection of systems ○ Convene full integrated design and construction teams to develop common solutions ● Provide tools or expertise regarding alternative solutions in non-combustible projects, e.g. symposium on alternative solutions. 	<p>Facilitate immediate efficient application of new building code provisions</p> <p>Encourage construction of wood-frame, mass timber and hybrid wood residential, mixed use and non-residential buildings</p>

	<ul style="list-style-type: none"> • Leverage learnings from early adopters (i.e. 2020 Building Code change to allow for 12-storey mass timber construction) to address barriers and share tested solutions to facilitate rapid adoption • Provide details of the business case for working with mass timber as compared with other materials with examples in residential, commercial, and industrial application. 	
Engineers Architects	<ul style="list-style-type: none"> • Deliver content (including but not limited to drawings, lessons learned, guides etc.) for multiplatform dissemination (i.e. web-based, seminars, events etc.) on B.C. secondary wood products (including, but not limited to, doors, windows, mouldings, joinery, engineered wood products and prefabricated solutions) 	Understand supply and properties of B.C. secondary wood products
Educational institutions—Ministry of Advanced Education Education institutions—secondary Educational institutions—Ministry of Education	<ul style="list-style-type: none"> • Develop and promote career pathways <ul style="list-style-type: none"> ○ Secondary wood product manufacturing (non-structural) ○ Engineered structural wood product manufacturing 	Institutions develop and offer materials on careers in wood product manufacturing and construction to raise awareness, improve attraction and improve retention

4.2.4 Marketing, promotion and outreach

This investment category focuses on promoting the benefits of and extending the latest developments in wood building design and construction, including excellence and innovation in B.C. businesses and workforce.

Efforts should be on communicating to key parts of the supply chain (such as developers, builders, manufacturers), while maintaining a modest outreach to architects, engineers, building officials, and elected municipal officials. Proposed activities should take a cost-effective approach to reaching key audiences with consistent wood messaging.

Messaging about the benefits of wood as a building material (strength, adaptability, cost-effectiveness, beauty, sustainability, carbon sequestration, and other environmental and health benefits) are already captured and promoted domestically and internationally through FII's information resource on B.C.'s forests and forest products, [naturally:wood](#). Funding recipients are expected to leverage this messaging and material and further collaborate with other recipient organizations and other programs on consistent information and facts shared with target audiences.

Activities and audiences are listed in order of priority.

Audiences	Priority activities	Desired behaviour
Developers Insurers and financing Public institutions Builders Engineers Architects	<ul style="list-style-type: none"> • Showcase projects and disseminate materials addressing costs, performance, health, climate and other environmental impacts, as well as how using wood helps address specific issues important to local regions and communities in B.C., such as resilience (including post-disaster), durability, economy and climate change adaptation/mitigation, renovation and design for disassembly (DFD), and a spectrum of economic considerations including, but limited to, leased spaces, occupant experience in consideration of marketing efforts. <ul style="list-style-type: none"> ○ Priority should be placed on low-rise commercial and public buildings, mid-rise and taller residential and non-residential wood buildings 	Champion and support wood as sustainable and a feasible environmental impact mitigation option <hr/> Specify wood where appropriate and available
Educational institutions—elementary, secondary, post-secondary	<ul style="list-style-type: none"> • Promote careers in wood-related trades, addressing misperception and negative stereotypes associated with wood construction trades 	Aware of and have a positive perception of careers in wood-related trades and construction

4.2.5 Strengthening manufacturing and business capability

Growing demand for new and innovative wood-based products and building systems are driving a need to improve the capacity and effectiveness of all components of the supply chain—primary and secondary manufacturers, architects, engineers, developers, builders, assemblers, installers—and strengthen relationships to reduce gaps between producers and users. A key part of being successful is the economic competitiveness of each link in the supply chain.

This category focuses on strengthening the supply chain and improving the competitiveness of the manufacturing sectors by developing sustainable approaches to manufacturing wood-based products and building systems. Activities should improve manufacturing and marketing capabilities and fill gaps in the supply of wood products. Activities that would facilitate dialogue along the supply chain, including architects, engineers, quantity surveyors, manufacturers and assemblers, are also considered.

FII supports the continuation of highly effective activities that help manufacturers improve their production, marketing and business processes—and thus, competitiveness. General-industry outreach and communication activities will be supported only to the extent that they would drive interests and adoption of other program elements under this category (e.g. company-specific projects).

For all proposals, specific efforts to evaluate the impacts and results of each project must be included in plans. Where more than one service delivery agency is involved in delivering company-specific projects, FII will require a common project evaluation format to be used by all organizations.

Activities and audiences are listed in order of priority.

Audiences	Priority activities	Desired behaviour
Manufacturers— primary and secondary	<ul style="list-style-type: none"> Assess B.C. wood products and systems, particularly exterior doors and windows, to comply with net-zero energy ready building requirements and potential for standardization of components 	Enhance collaboration in the design of products and building systems to satisfy markets
		Manufacturers understand market needs and demands, as well as potential opportunities in the supply chain relative to mass timber
		Innovation clusters and sector groups emerge to increase technical knowledge and skill sets
Manufacturers— primary and secondary Installers Assemblers Builders Architects Engineers Developers Educational institutions—post- secondary	<ul style="list-style-type: none"> Explore targeted business clusters in wood products and construction, including the current/potential effect of clusters on industry competitiveness 	Create competitive advantage for their company through interaction and collaboration with other cluster members
Manufacturers— secondary	<ul style="list-style-type: none"> Conduct company-specific projects (e.g. prefabrication, automation, BIM/DfMA, product testing, design and product development support, protocol development for manufacturing, plant layout support, standardized training program development, branding exercises and strategies, preparing for and attending conferences and trade shows, social media training, search engine optimization and training), including assessments of outcomes from previous company-specific projects 	Develop products and building systems to effectively meet market demand

Assemblers Builders Developers Installers Manufacturers— secondary	<ul style="list-style-type: none"> Conduct company-specific wood prefabrication projects (e.g. prefabrication, automation, BIM/DfMA, plant layout support, standardized training program development), including assessments of outcomes from previous company-specific projects 	Develop products and building systems to effectively meet market demand
Manufacturers— primary and secondary	<ul style="list-style-type: none"> Identify ways to address existing and anticipated skill shortages at the production worker, supervisory, skilled trades and technologist levels 	Understand how to attract and retain employees
Educational institutions— Ministry of Advanced Education	<ul style="list-style-type: none"> Optimize current state of wood-based curriculum, materials and occupational credentials to address gaps in labour availability 	Support development of training programs and/or training materials to facilitate wood use in B.C. by professionals, trades, and code officials
Builders Assemblers Engineers Architects Manufacturers— primary and secondary Developers	<ul style="list-style-type: none"> Promotion of excellence and innovation in B.C. businesses, their workforce development and utilization <ul style="list-style-type: none"> Wood product manufacturing Design and construction of low-rise non-residential, mid-rise and taller residential and non-residential wood buildings 	Recognize industry leadership in the wood supply chain and learn about business best practices/solutions, i.e. BIM

5. 2021/22 Allocations

FII receives the majority of its annual funding from the Ministry of Jobs, Economic Development and Competitiveness. For 2021/22, FII anticipates receiving a level of funding similar to the current year.

The 2021/22 Wood First program Call for Proposals supports market and industry capacity development activities focused on B.C. International market development activities delivered outside of B.C. are funded through a separate Market Initiatives program Call for Proposals ⁶.

For 2021/22, FII's total budget for Wood First activities will be \$2.8 million. Of that, up to \$2.4 million is available for non-profit organizations to deliver Wood First activities through the annual Call for Proposals. The remaining portion of \$400,000 will be for activities undertaken by FII.

Table 1 shows the allocations of the 2021/22 Wood First Investment Plan in the five investment categories. These allocations are based mainly on the 2021/22 priorities recommended by the Wood First Advisory Committee (WFAC) as outlined in Section 4.2. FII intends to maintain the allocations as stated. FII reserves the right to adjust this information up until the time that FII enters into formal funding agreements.

The focus of this funding is on the priority activities as outlined under the five investment categories identified by the WFAC and further B.C. industry consultation and market reviews. A summary of these priorities is included in Section 4.

Table 1: 2021/22 Wood First Investment Allocations

Investment category	2021/22 Allocations	
	Call for Proposals	
	Amount	Percent of subtotal
Identification of opportunities and barriers	\$360,000	15%
Research and innovation	\$480,000	20%
Education and skills development	\$600,000	25%
Marketing, promotion and outreach	\$240,000	10%
Strengthening manufacturing and business capability	\$720,000	30%
TOTAL	\$2,400,000	

* Allocations reflect the recommendations of the Wood First Advisory Committee

⁶ Information on the Market Initiatives program Call for Proposals can be found at www.bcfii.ca

The allocations for each category in this Call for Proposals are projected amounts. Only projects of high priority will be considered for funding. If proposed activities do not address the priorities outlined in this Investment Plan, FII reserves the right to decline the proposal and re-allocate the resources to activities delivered by FII or other commissioned third parties.

5.1 Cost sharing

FII-funded work is built on the premise of partnerships and industry cost-sharing contributions. Most of the projects are required to be cost shared with contributions from industry or other sources. It is the proponent's responsibility to seek out, obtain and confirm these contributions by the time of the submission of the application. Industry cost-sharing must be based on cash contributions. In-kind contributions cannot be used as a part of calculating the industry cost-sharing contributions. Projects with a higher-than-required industry contribution, which indicates strong industry support for the project, will be ranked higher in some aspects of the evaluation of proposals.

For 2021/22, the following table identifies the minimum required cost-sharing requirements.

	Percent contribution	
	Funding recipient (at least)	FII ¹ (up to)
1. Identification of opportunities and barriers	n/a	100
2. Research and innovation		
3. Education and skills development	20	80
4. Marketing, promotion and outreach	50	50
5. Strengthening manufacturing and business capability	n/a	100
- Company-specific needs assessments		
- Company-specific site visits, plant assessments or consultations		
- Company-specific projects	50	50

¹If the funding recipient receives other government funding for a given activity, FII may reduce its share accordingly.

FII reserves the right to adjust these cost sharing ratios up until the time that a final contract has been signed by FII. If FII receives less than the anticipated program funding from the Province, available funding in the Call for Proposals will be adjusted on a pro-rata basis. Proponents will be notified of changes, should any occur.

Appendix 1: Target audiences (in alphabetical order, not in order of priority)

Audience	Definition
Architects	Persons who plan, design, and review the construction of buildings
Assemblers*	Those who (in-plant or on-site) take wood-based components and assemble into a wood-based product (e.g. assemble engineered wood panels, insulation, barriers and cladding into a prefabricated wood wall product)
Builders*	Run a construction project; work with both assemblers (off-site) and installers (on-site)
Building and fire officials—municipal and provincial	Officials concerned with building performance and fire safety
Building inspectors	Persons who ensure that the construction and quality of buildings meet codes and standards
Consumers	Persons considering making a purchase of, or who have in the past purchased, wood-based products or building systems
Developers	Persons who assume the risk and reward to add value to real estate. They arrange rezoning, financing, design, construction and sales/leasing to meet market demand
Educational institutions—Ministry of Advanced Education	The ministry ensuring B.C.'s post-secondary system delivers value while providing educational and training opportunities for young people entering the workforce and existing workers who need to upgrade their skills
Educational institutions—Ministry of Education	The ministry ensuring B.C.'s school system provides children with the knowledge, skills and abilities needed to contribute to a healthy society and prosperous and sustainable economy.
Educational institutions—post-secondary	Includes public education institutions (universities, institutes of technology, colleges), private and out of province public degree granting institutions, seminaries and theological colleges, First Nations-controlled institutes, and other private career-training institutions
Elected officials—municipal and provincial	B.C. elected municipal government officials (includes city, town or village incorporated for local self-government) and provincial government officials

Engineers	Persons who analyse and design buildings and the built environment with expertise in performance of building materials and structural analysis, works closely with architects and other engineering specialists.
Influencers	Anyone (government, non-government, industry, public, etc.) who can affect a purchasing decision at some point in the value chain. Need to identify the specific influencer (person) in each situation, and target communication to that individual
Installers*	Persons who install pre-manufactured products, with some site-fabrication as necessary, on a construction project
Insurer	Persons or company that underwrite an insurance risk
Financiers	Persons or company whose business is providing, investing or lending money.
Manufacturers—primary*	Manufacture raw materials or materials in their near-natural state (e.g. logs) to produce primary products such as cants, lumber
Manufacturers—secondary*	Further process products that have already undergone some manufacturing (e.g. lumber) to produce value-added products (e.g. doors, cabinets, walls, flooring, furniture, glulam, plywood)
Public institutions	School boards, facility manager associations and authorities responsible for the decisions related to public services infrastructure such as schools, healthcare etc.
Quantity surveyors	Persons with expert knowledge on construction costs and contracts who provide services such as cost consulting, cost estimating, value determination, risk management and calculation
Research institutions	Private or public organizations that carry out research into wood-based products or building systems

*In this document, **supply chain** is defined as a chain of events that transforms natural resources, raw materials and components into a finished product that is delivered to the end customer. The audiences involved in the supply chain are considered to be manufacturers—primary and secondary, architects, engineers, quantity surveyors, builders, assemblers and installers.