



Forestry Innovation
Investment®

MARKET DEVELOPMENT SUMMARY

BRITISH COLUMBIA

Lake Revelstoke, B.C. | Photo: SMJones/iStock via Getty Images (top)

Wolf carving in Wii Gyemsiga Siwilaawksat Student Building, Terrace, B.C. | Photo: Bright Photography (bottom)

Advancing wood use in B.C. reduces greenhouse gases, supports better affordable housing, and strengthens demand for B.C. products and expertise in global markets

SUPPORTING INNOVATION & SUSTAINABILITY

The B.C. forest economy—from harvesting and manufacturing to building construction and design—has a long history of success at adapting and responding to changing economic, environmental, and social needs. Today, with the challenges of adequate housing and supporting community infrastructure, as well as combatting climate change, the need for innovation is greater than ever.

British Columbia is one of the world's largest producers and exporters of wood products. With a small population relative to its forest resources, the province relies on export markets to prosper. Wood innovations showcase B.C. as a leading competitive supplier, enabling ongoing international market development.

FII acknowledges and appreciates the opportunity to live, learn and work in the traditional territories of the xʷməθkʷəy̍əm (Musqueam), səliłwətał (Tsleil-Waututh), and Skwxwú7mesh (Squamish) Nations.

SUSTAINABLE FOREST MANAGEMENT

B.C.'s goal in forest management is simple but powerful —protect our diverse, natural forests. Of major forest jurisdictions around the world, B.C. has one of the highest percentages of total land covered by forests. This vast area has been stable over the past few decades with near zero deforestation (0.01%)—among the lowest in the world. Canada accounts for almost 35 percent of all certified forests globally—the largest of any country worldwide. All harvested forests in B.C. are replanted with native tree species appropriate to the respective biogeoclimatic zone. More than 14 million hectares, 15 percent of the province, is protected from future harvesting. These protected lands will expand to 30 percent of the province by 2030 through partnerships with the Government of Canada and First Nations, balancing conservation and commercial activity.



Photo: Michael Bednar, courtesy naturallywood.com

OVER 75%
of B.C. FORESTS (41 MILLION HECTARES)
are **THIRD PARTY CERTIFIED**—
one of the **HIGHEST RATES** of FOREST
CERTIFICATION in the WORLD

Total area of B.C.
95 million hectares

Forested land base
60% of total area

**Land available for
timber harvesting**
23% of total area

Annual area harvested
0.35% of forested land base

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**1.7 billion seedlings planted
on Crown land since 2017**



Climate change is impacting forests in B.C. and around the world, disrupting harvesting and threatening forest health. Following a devastating pine beetle epidemic in the early 2000s, the province has faced repeated, major wildfires. B.C. is responding by integrating forest carbon and wildfire science, as well as traditional Indigenous knowledge to improve management practices to mitigate risks of wildfires and encourage forest growth. Allowable annual harvest levels are adjusted on a regular basis to address the health of the forest ecosystem and respond to evolving public policy objectives.

With the passing of B.C.'s Declaration on the Rights of Indigenous Peoples Act, the province is forging a path for shared governance and decision-making. Putting First Nations at the centre of land-based decisions builds a foundation for reconciliation, recognizes the generations of experience with forest resources and creates certainty for the sector, communities and global customers.

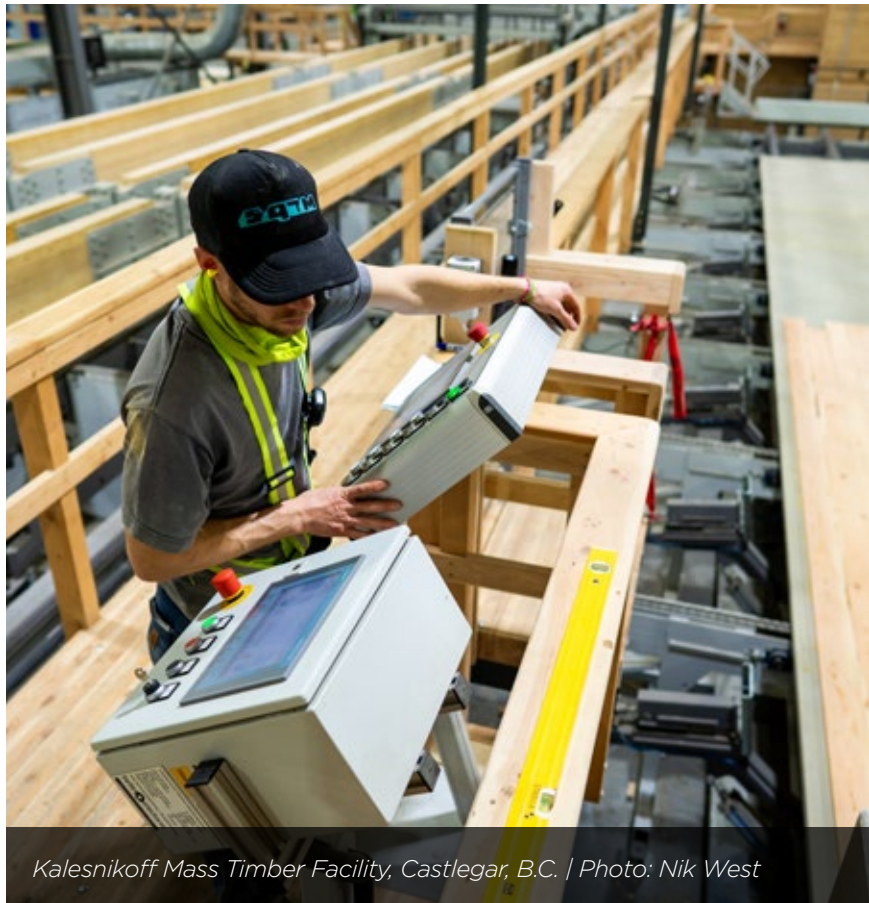
B.C.'s approach to sustainable forestry involves Forest Landscape Planning (FLP) and is developed in partnership with First Nations, local governments and communities. FLP establishes clear objectives for the long-term management of old growth, biodiversity, climate change and wildfire risk.

B.C. FOREST ECONOMY & JOBS

The wood economy consists of separate but interconnected activities including forest management, silviculture and harvesting through to transportation, milling, pulp, paper, wood pellets, bio-refining, engineered wood products and value-added manufacturing. It also extends to the architects, engineers and consultants that support and drive the innovative use of wood in buildings and infrastructure, both in B.C. and in markets around the world.

To support this wide range of activities, the sector relies on businesses supplying equipment, transportation, information technology, financial and professional services. All of these businesses are integral to the provincial economy, generating jobs and revenue in both urban and rural communities.

First Nations are increasing their participation in the sector with new tenures, ownership of sawmills and logging companies, and joint ventures with forest companies. With a focus on building capacity and creating long-term job opportunities for their communities, the First Nations Forestry Workforce Strategy aims to double First Nations employment in the forest sector by 2027.



Kalesnikoff Mass Timber Facility, Castlegar, B.C. | Photo: Nik West

400+ SUPPLIERS

SUPPLIERS OF A DIVERSE RANGE OF
SUSTAINABLY-SOURCED FOREST PRODUCTS
OPERATE ACROSS THE PROVINCE

\$1.85

**Billion in taxes and fees
generated by the forest sector
in 2022/23**

120+

**Indigenous nations and
organizations are involved in
the B.C. forest industry**

340

**Communities providing goods
and services to B.C.'s forest sector**

DRIVING VALUE THROUGH INNOVATION

B.C. is North America's largest producer of softwood lumber and Canada's second-largest producer of pulp and paper products. Beyond these primary industries, B.C. has a large value-added wood manufacturing sector. Alongside traditional goods like cabinets, furniture, millwork and prefabricated building components, B.C. manufacturers produce mass timber and next-generation engineered wood products. In 2022, exports of value-added products topped \$1.2 billion.

Beyond building materials made with wood, B.C. supplies customers with a wide variety of consumable forest products from sustainable paper products and wood pellets to specialty pulps used in everything from rayon fabrics to medical face masks.

B.C.'s diverse forests and forest product suppliers are positioned to respond to market demand while adhering to sustainable resource management practices.

Mass timber supports a flexible, interconnected design in this two-storey, light-filled and seismically safe elementary school designed for today's students and teaching needs



Sir Matthew Begbie Elementary School Seismic Replacement, Vancouver, B.C. | Photo: Bright Photography

Mass timber

Buildings where the primary load-bearing structure is made of solid or engineered wood.

Around the world, mass timber and engineered wood product development and building systems are on the rise, helping shape more resilient, climate-smart communities.

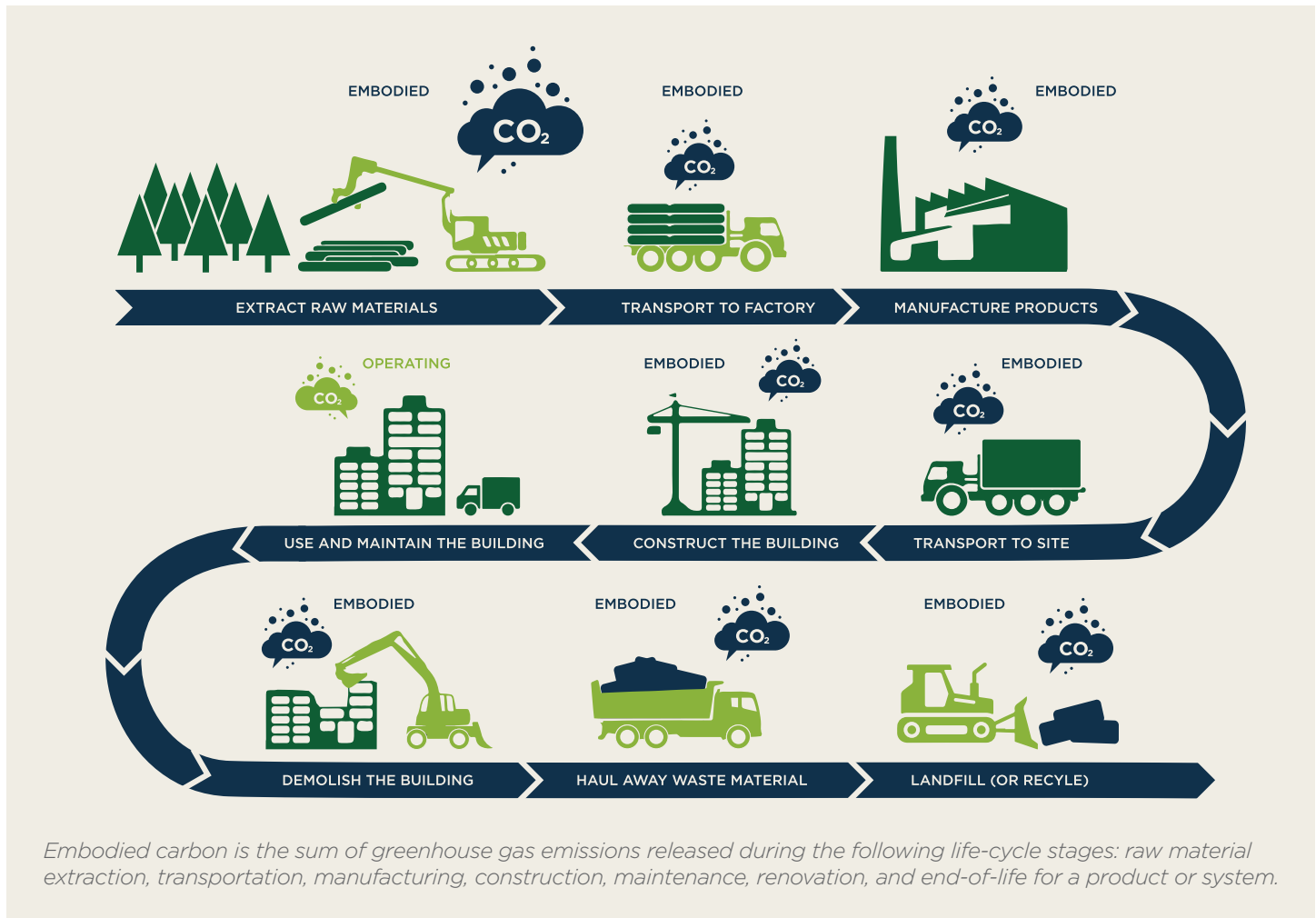
- Fabricated off site as panels and beams
- Comparable in strength and durability to concrete and steel
- Light weight while still meeting performance standards for safety, structural resilience and fire protection



KF Aerospace Centre for Excellence, Kelowna, B.C. Photo: Shawn Talbot

Technology meets tradition in this multipurpose aviation centre that draws inspiration from historic aircraft design and takes advantage of the latest in mass timber building systems

MARKET TREND: REDUCING CARBON IN THE ‘BUILT’ ENVIRONMENT



Buildings are a major source of carbon emissions—from a broad range of building materials and operating infrastructure to construction activity and demolition. Cutting carbon output is a priority for industry and government. Understanding carbon inputs and outputs at all stages of the building life cycle is important when making choices to optimize carbon emissions.

For example, wood is carbon-efficient because trees grow by taking carbon out of the atmosphere. The choices made in the “built” environment—whether in construction,

renovation or operation—all have a significant impact on achieving carbon reduction goals. Factory-built, precisely manufactured timber construction makes better use of resources and reduces the number of deliveries to a building site, in turn decreasing overall vehicle emissions. Prefabricated wood construction results in considerably less on-site construction waste. These benefits, along with wood’s ability to serve as a carbon sink, can make timber buildings a compelling choice to achieve low-carbon construction and design targets.

MARKET TREND: SUPPORTING LOW CARBON INFRASTRUCTURE & HOUSING SOLUTIONS

B.C. is working to speed delivery of better, more affordable homes through its BC Builds program. It is also driving carbon emissions reductions through the Clean BC Roadmap, a guide to reducing carbon outputs by 40 percent by 2030. Advanced wood building systems are an important part of this strategy.

The Roadmap includes B.C.'s Mass Timber Action Plan, a program to accelerate the use of mass timber construction while ensuring codes, expertise and associated technologies keep pace. Initiatives such as the Mass Timber Demonstration Program have been incentivizing mass timber innovation in the private sector, while government policy has prioritized the use of wood and engineered wood products in public projects.

By driving innovation through high-performance commercial and residential applications of wood and mass timber, B.C. is positioning itself as a global supplier of low-carbon building goods and services. This underscores its commitment to more renewable, scalable and environmentally friendly building solutions. These initiatives aim to build awareness of wood's role in reducing carbon impacts among key stakeholders including the forest industry, government bodies, building designers, and construction professionals in B.C., Canada, and in other global markets.

As wood and wood-hybrid buildings become taller, larger and more complex, the use of integrated project delivery (IPD) and digital design tools such as building information modelling (BIM) is important to improve cost and construction efficiencies to deliver timely and affordable building solutions.



Photo: Wade Comer Photography, courtesy naturallywood.com

MARKET TREND: BUILDING MARKETS & WOOD CONSTRUCTION




Photo: James Jones Photography, courtesy Cascadia Architects

Lean project delivery methods, offsite prefabrication and advanced digital tools were used to build Goldstream Avenue, an affordable, energy-efficient, high-quality multi-family complex

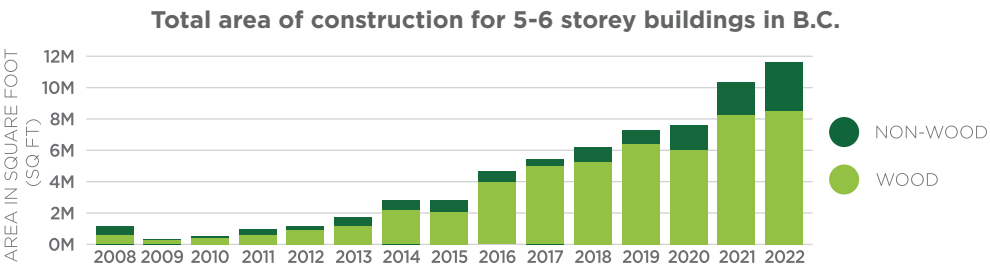


Belmont Secondary / Photo: Barry Calhoun, courtesy naturally:wood

Light-frame mid-rise residential

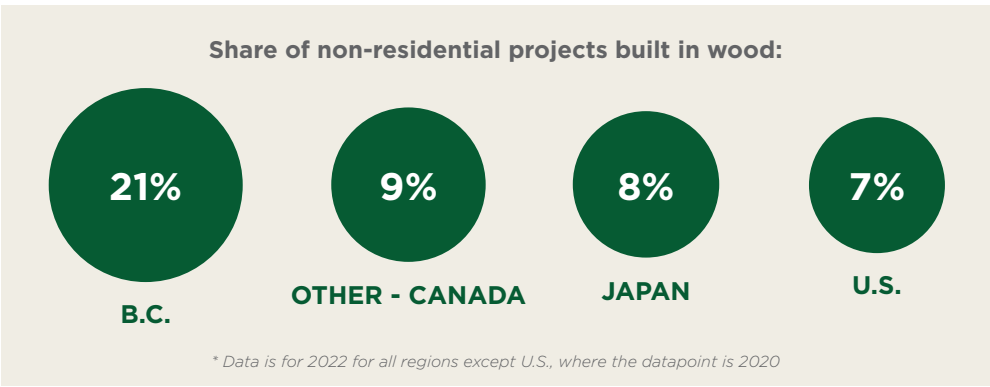
Over ten years ago, B.C. led North America by increasing the maximum height from four to six storeys for light-frame wood building systems for residential construction. Developers quickly realized that this wood-based system was the solution to providing reasonably priced and energy efficient housing in the mid-rise market.

Demand skyrocketed. The floor area for wood-frame structures in the 5-6 storey segment grew from 700,000 square feet in 2008 to more than 8.6 million square feet in 2022—a 12-fold increase. With recent advances in wood building systems, such as the use of mass timber components, hybrid wood-frame and mass timber systems, the opportunity exists for wood to capture an even greater share of this market.



Non-residential

Wood market share in the B.C. non-residential sector is the highest in the world. This reflects the broad awareness and capacity to specify wood in the design, developer and construction sectors.



Provincial and local governments continue to encourage wood usage in public and institutional buildings to support B.C. forest industry and leverage the visual appeal of wood, environmental and low carbon impacts, health benefits and seismic performance.

Mass timber and tall wood

Over the past fifteen years, 375 mass timber projects have been commissioned in B.C. This is almost half of the mass timber buildings in Canada. B.C. has become North America's leader in design and engineering expertise, as demand for building taller and bigger with wood has incentivized more architects, engineers and building professionals to broaden their skillsets.

B.C.'s early adopter role with advanced wood building systems continues to influence the growing mass and tall timber markets in Canada and the U.S.



oN5 building construction, Vancouver, B.C. | Photo: KK Law

It has also influenced professionals, who see increasing benefits to building with wood. In 2022, perceptions among B.C. building industry professionals involved in multi-family residential buildings and non-residential design and construction were that:

- 95 percent felt that wood will be an important part of B.C.'s future
- 88 percent agreed that wood is an environmentally sustainable material
- 80 percent agreed that wood products have less of a carbon footprint than other building materials and wood products are a good value for money.

8 OF CANADA'S TOP 10 MASS TIMBER ENGINEERING FIRMS ARE LOCATED IN B.C.

121 ARCHITECTURE FIRMS, 38 ENGINEERING FIRMS, AND 103 BUILDING FIRMS IN B.C. HAVE EXPERIENCE ON MASS TIMBER PROJECTS

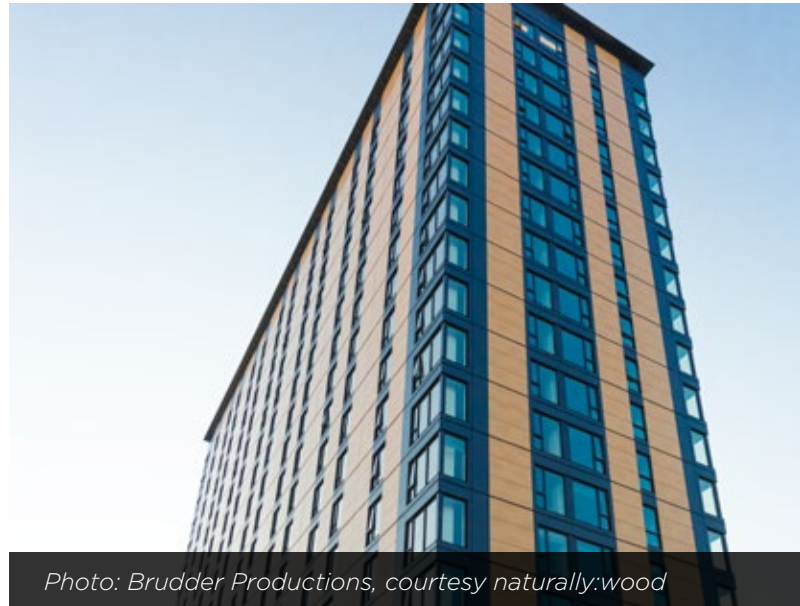


Photo: Brudder Productions, courtesy naturally:wood

Brock Commons Tallwood House, B.C. is home of the first mass-timber building in North America and the tallest hybrid mass-timber building in the world in its day. In 2022, B.C. had 7 tall mass timber buildings (over 6 storey) completed or under construction.

These attitudes are creating momentum for the further expansion of wood use to taller buildings (7-12 storeys). As in the mid-rise sector, the environmental and cost benefits are creating compelling arguments to build up with wood. With further refinements to building codes, B.C. will be positioned to show further leadership to drive growth and market share in Canada and the U.S.

In 2020, an important milestone in creating a commercial market for wood construction in larger buildings was reached in B.C. when the floor area of private sector buildings completed exceeded public sector buildings for the first time. By 2035, the mass timber market in B.C. is expected to grow by 100,000 cubic metres, equivalent to almost three additional mass timber plants.¹ The Western Canada/U.S. market area is projected to grow by 1.9 million cubic metres. Given the right set of market conditions, B.C. suppliers could capture a sizeable portion of this growth.

¹ Assuming 50,000 cubic metre average plant size operating at 70 percent capacity.



Wood Innovation and Design Centre, Prince George, B.C. | Brudder Productions

MARKET & INDUSTRY DEVELOPMENT

SUPPORT INNOVATION

B.C.'s wood design and manufacturing sectors continue to evolve their capacity to construct next-generation, wood-based products and building systems that create and respond to market demand. FII works with partners to support continued advancement through research and demonstration building projects.

B.C.'s Mass Timber Demonstration Program encourages the use of mass timber in new and innovative ways by supporting early adopters. First announced in September 2020, the program now supports 20 innovative mass timber, mass timber-concrete, and mass timber-steel hybrid projects. FII and the B.C. government's Office of Mass Timber Implementation (OMTI) work closely with the projects—documenting and sharing lessons learned, results and research findings—to help build capacity and expertise across B.C.

Research

In North America, a growing body of applied research is currently underway, focusing on performance-based building codes addressing issues related to prefabrication, repeatability, scalability, embodied carbon, acoustic performance, health and biophilic properties in mass timber and wood-hybrid assemblies. FII funds a variety of non-profit research and academic institutions, including the Canadian Wood Construction Research Network, the University of British Columbia, the University of Victoria, the University of Northern British Columbia and FPInnovations. These areas present opportunities and challenges that necessitate in-depth investigation and analysis.

Demonstration projects

Demonstration projects are used to expand and advance opportunities for mass timber and engineered wood use and serve as a showcase for provincial, North American and international markets. These projects are an important step in creating a commercial market. This translates into greater economic, social and environmental value from B.C. forest resources. It also bolsters government priorities for climate action, innovation, housing affordability, the long-term sustainability of the forest economy and shared prosperity across the province.

ACCELERATE ADOPTION

Design and construction professionals choose wood products and building systems when they have the skills, ability and confidence to design for and specify wood. Together, FII and its partners work to accelerate adoption by improving the capacity of the whole supply chain—from primary and secondary manufacturers, architects, engineers, and developers, through to builders, assemblers, and installers.

Training and capacity building

FII with its industry and government partners continues to support strengthening manufacturing and building B.C. capacity in wood use through training programs in business, marketing, design and technology. Practical and applied education and skills development is vital to enable effective and efficient solutions to healthy and low carbon housing and non-residential buildings.

- **Technical workshops** offer insights on key topics relating to structural timber engineering, fire safety and prefabrication.
- **Company-specific projects** delivered by partnering with BC Wood and UBC's Centre for Advanced Wood Processing provide capacity building and training for firms across the province including business marketing, manufacturing process design and technical solutions.
- **Culturally and community-appropriate skills training** delivered by a partnership with the Construction Foundation of BC works to grow interest in woodworking among Indigenous youth and provides hands-on trades discovery for K-12 classes.

Technical experts and knowledge mobilization

To build capacity and foster knowledge sharing, technical advisors such as WoodWORKS! BC, researchers and design professionals, as well as a wide variety of resources such as digital tools, construction guides and research libraries are available. All of these highlight the possibilities of building with wood, showcase examples of wood innovation and promote lessons learned by early adopters from across B.C.

Databases and Resources

B.C. Research Library: market and export data, sector reports, as well as product, technical, building/construction and environmental information—all funded and commissioned by FII and its funding recipients. See <https://www.bcfii.ca/research-library/>

naturally:wood Learning Centre: toolkits, calculators, must-have guides and published research on topics ranging from B.C. forest practices and products to B.C. building design and construction expertise, including profiles of over 200 buildings using next-generation B.C. mass timber and lumber products and systems. See <https://www.naturallywood.com/resources/>

Think Wood Research Library (managed by FII): almost 2,000 research reports and technical resources from across Canada and around the world on light-frame and mass timber mid-rise to taller wood building systems. See <https://research.thinkwood.com>

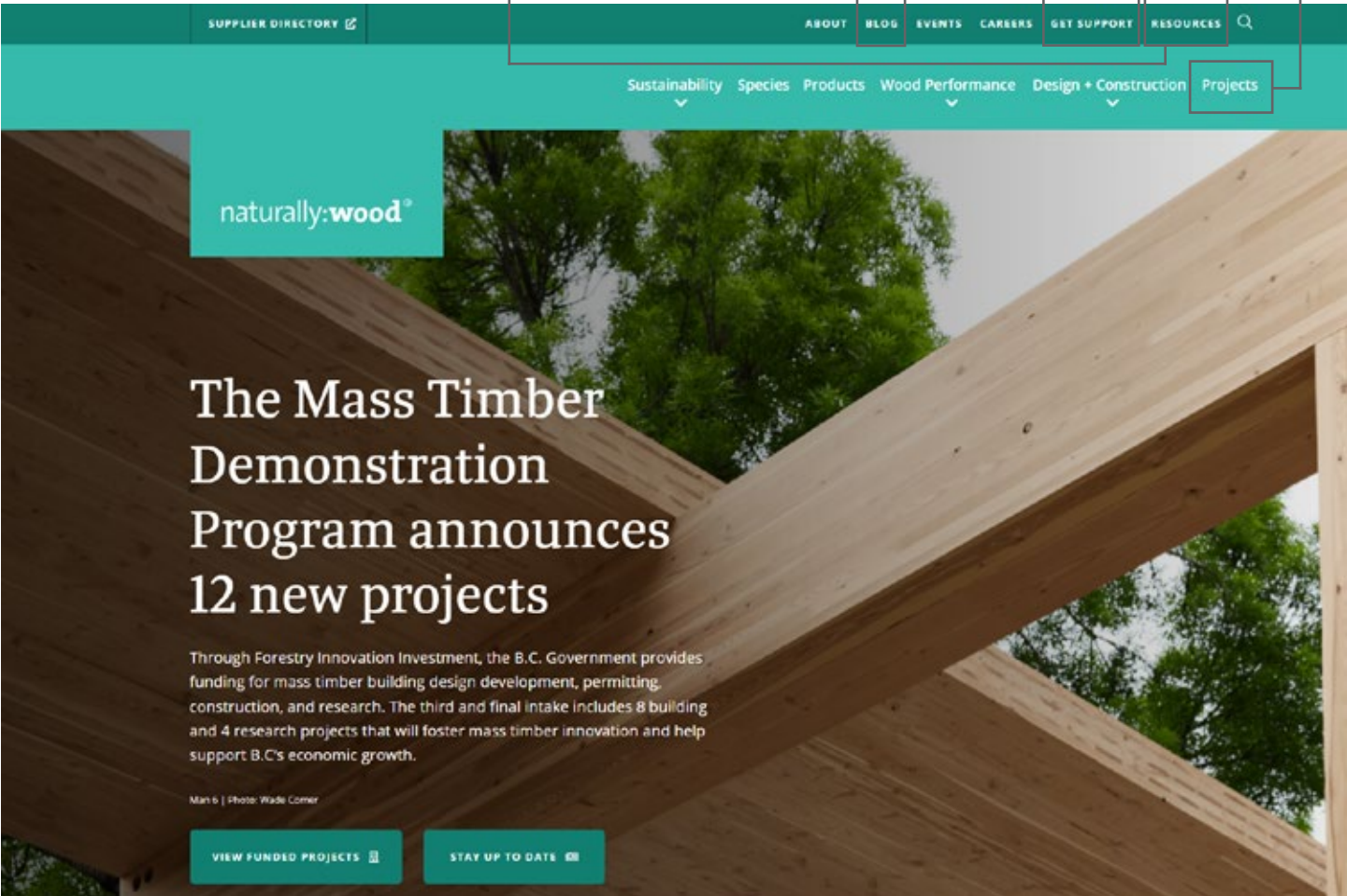
SHOWCASE B.C.

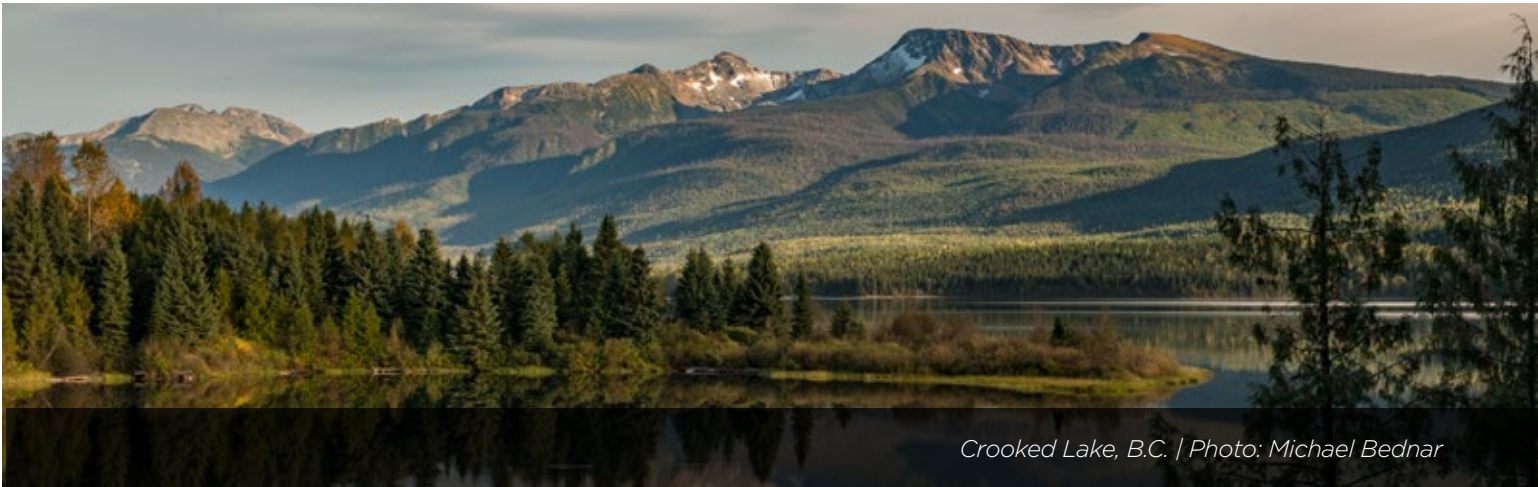
FII and its partners work to showcase B.C.'s leadership in innovative products and building system technologies to advance the use of wood across the province and around the world. This work is highlighted by a digital communications ecosystem including naturallywood.com and other digital marketing channels. It connects key audiences throughout the building supply chain, including architects, engineers, installers, wood and mass timber manufacturers, and researchers. These materials build awareness of key industry events and the latest topics on wood building and environmental performance.

Featuring hundreds of B.C.-based timber projects including ones supported by the Province's Mass Timber Demonstration Program, ranging from community spaces to offices and residences in taller wood buildings.

Highlighting B.C. organizations, experts and facilities that provide support with wood design, codes, exports, research, testing and education.

Developing resources from factsheets on B.C. forests to curated blogs on a variety of topics, as well as sharing technical guides and research on all things forestry and next-generation product innovations.





Crooked Lake, B.C. | Photo: Michael Bednar

OUR PARTNERS

Through FII and funding support from the Province of B.C., several organizations drive market development efforts across the province. By working together, government and industry continue to evolve the provincial market for B.C.'s high-quality primary and secondary wood products. Leveraging resources and encouraging cost-sharing and collaboration ensures that B.C. remains a leader in innovative wood use and building systems.









