

Value Chain Workshop Summary: Construction

Thursday, March 12, 2015; 12:30 – 4:30 pm

Richmond Free Library, Richmond, Vermont

Participants

Facilitators:

Samantha Dunn and Melissa Levy, Yellow Wood Associates

WLEB:

Jared Duval

Paul Frederick

Matt Langlais

Lauren Masseria

Joe Nelson

Kathleen Wanner

Invited Participants:

Andy Harper, Winterwood Timber Frames

Jay Ancel, Black River Design Architects

Sherry Lussier, Green Mountain Technical Career Center

Joel Currier, Currier Wood Products

Linda Wortman, Vermont Office of State Purchasing and Contracting

Debbie Damore, Vermont Office of State Purchasing and Contracting

Ken Davis, Davis Contracting (logging contractor). Owner of Mountain Wood Products.

Allan Ryder, Timber Resource Group (Maine)

Lynn Gardner, Clifford Lumber

David Mullin, Green Mountain Habitat for Humanity.

Paul Wyncoop, Bread Loaf Corporation

Eli Gould. IronWood. Sticks L3C

Keith Thompson, Chittenden County Forester, Vermont Dept. of Forest, Parks and Recreation

Jared Moats, Structural Energy Corporation

Louis Dupont, Stark Mountain Woodworking

Ken Bean, UVM

Demand Opportunities and Trends in Construction

(The two areas chosen for value chain discussion at the workshop are highlighted)

- LEED – green building (FSC Certification, local sourcing)
- Smart buildings – high performance
- Wood for flooring, millwork, cabinets, etc.
- **Solid sawn lumber / Heavy timber** for bridges and landscaping, including covered bridges (spruce), ski lodges, rest areas, universities
- Energy efficient housing
- Construction innovations
- Affordable housing
- **Local engineered wood products**
- Pre-built (manufactured) homes
- High performance mobile homes
- Commercial opportunities within a 500 mile radius
- Solid timbers

Gaps, Barriers, and Value Chain Opportunities in Construction

- Lack of a Vermont stud mill
- There is a need for spruce/fir/hemlock
- Improving affordability through increased efficiencies, changing appraisal practices, and construction innovation
- Educating appraisers to recognize the added value of innovations related to energy
- There is a gap in locally/regionally produced sheet stock

Value Chain Analysis by Opportunity

Solid-Sawn Wood Timbers

The opportunity is to meet market demand for bridges and landscaping, including covered bridges (spruce), ski lodges, rest areas, universities, residential and commercial construction that use solid sawn wood timbers from Vermont.

The group that worked on solid-sawn wood timbers identified the following functions needed to address demand. The functions with a (T) are primarily transactional player functions and those with an (S) are primarily supporting player functions. They are arranged in approximate order from consumer to raw materials. The gaps are in bold.

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- **Raise market awareness among out of state clients (T) & (S)**
 - **Target “new” Vermonter, upper middle class and build product demand (T) & (S)**
 - **Connect with demand through architects, engineers, realtors, designers (T) & (S)**
 - Create stories (T) & (S)
 - Transporters to job sites (T)
 - **Enough skilled timber framers to meet demand, especially for larger commercial projects (T)**
 - **Training for landowners, loggers, foresters, timber framers, appraisers, others (S)**
 - Transporters for large timbers (T)
 - **Kilns that can handle long material and large material; more kiln operators with appropriate technology and knowledge to dry this material (T)**
 - **Proper grading of timbers to facilitate mixing grades (T)**
 - **Mills with the capacity to handle long and large timbers (T)**
 - **Log aggregation, woodyards with stocks of large timbers (T)**
 - **Education of landowners, loggers, and foresters to recognize trees with potential (T) & (S)**

Some clarifications and questions that emerged from this discussion include:

- The cost of timber framing is 20% greater than the cost of a traditional stick built home. The market is relatively upscale – mostly “recent” Vermonter and out of stater.
- Solid sawn timbers refer to timbers < 6 x 6; heavy timbers refer to timbers > 8 x 8; anything under 6 x 6 could be kiln dried.
- Grade mix is important.
- Existing regulations around grade are much more of an issue in commercial than in residential markets.
- Are there enough timber framers out there to make use of materials?
- Are existing Vermont companies large enough to take on large commercial projects?

Local Engineered Wood

The opportunity is to create innovative and customized engineered wood products from local softwood and hardwood that can be used in residential and commercial construction.

The group that worked on local engineered wood identified the following functions needed to address demand. The functions with a (T) are primarily transactional player functions; those with an (S) are primarily supporting player functions and (D) represents demand partners. They are arranged in approximate order from consumer to raw materials. The gaps are in bold.

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- **Sales through distributors and specifiers (D)**
 - Transportation to buyer (T)
 - **Marketing (T)**
 - **Market research to determine if consumers will want those materials that are buried in walls and under floors (T) & (S)**
 - Distributors for local trusses and other engineered materials (T)
 - **Liability management, insurance (S)**
 - **Vermont producers of specialty truss systems, web trusses, floor joists, gradient flooring, 2x4 and 2x6 roof trusses capable of producing to code (T)**
 - **Vermont producers of pre-finished and engineered flooring that uses shorts (T)**
 - **Testing and verification (T)**
 - **Research, design and engineering for innovation (T) & (S)**
 - Raw materials (T)

Some clarifications and additional thoughts that emerged from this discussion include:

- This is a demand opportunity that may be best met through a regional Northern Forest approach. This would expand the availability of raw materials and bring a larger set of support partners into play to assist with research, product design, and testing as well as manufacturing partnerships. Manufacturing partnerships could include Canadian partners.
- Is low grade wood more valuable as an energy source or as an input into engineered wood products?
- There is a need for a regional educational and research partner; UVM should be engaged.
- There is concern about liability related to innovation and how related costs would be covered.
- Vermont has an opportunity to focus on specialized and innovative products rather than commodities.
- Automated manufacturing should be explored.
- Hardwood as well as softwood can be used in engineered wood products.
- Visual and structural grades are both options.

Attendance by Position(s) in the Value Chain

DEMAND PARTNERS

<i>Business/Org</i>	<i>Name</i>
Green Mountain Habitat for Humanity	David Mullin
VT Purchasing/Contracting	Debbie Damore/Linda Wortman
Black River Design	Jay Ancel
UVM	Ken Bean
Stark Mountain Woodworking	Louis Dupont

TRANSACTIONAL PARTNERS

<i>Function</i>	<i>Business/Org</i>	<i>Name</i>
Logging Contractor	Davis Contracting	Ken Davis
Consulting Foresters	VT Dept. Forest, Parks and Rec	Keith Thompson
Woodyard	Davis Contracting	Ken Davis
Processors/mills	Clifford Lumber	Lynn Gardner
Sawmill	Currier Wood Products	Joel Currier
Custom Dry Kiln	Winterwood Timber Frames	Andy Harper
Distributor	Currier Wood Products	Joel Currier
Brokers / Wholesaler	Timber Resource Group	Allan Ryder
Secondary Producer	IronWood Brand/Sticks L3C	Eli Gould
Secondary Producer	Stark Mountain Woodworking	Louis Dupont
Specifier	Black River Design Architects	Jay Ancel
Construction/Design	Winterwood Timber Frames	Andy Harper
Construction/Design	Green Mountain Habitat for Humanity	David Mullin
Construction/Design	IronWood Brand	Eli Gould
Construction/Design	Stark Mountain Woodworking	Louis Dupont
Construction/Engineering	Bread Loaf Corporation	Paul Wyncoop
Construction	Structural Energy Corporation	Jared Moats
Partners in Other Industries	Structural Energy Corporation	Jared Moats
Partners in Other Industries	Stark Mountain Woodworking	Louis Dupont
Millwork/Flooring	Winterwood Timber Frames	Andy Harper
Millwork/Flooring	Currier Wood Products	Joel Currier

SUPPORT PARTNERS

<i>Function</i>	<i>Business/Org</i>	<i>Name</i>
Regulatory/Policy	VT Dept. Forest, Parks and Rec	Keith Thompson
Financers	Green Mountain Habitat for Humanity	David Mullin
Technical Assistance	Black River Design Architects	Jay Ancel
Training	GMTCC Adult Ed	Sherry Lussier