The Forestry Lab

Summary Report

May 2017

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Purpose and Design

CONTEXT:

Forestry is a core component of Nova Scotia's rural economy, but market pressures, economic downturns, mill closures, and supply constraints have created significant instability over the past decade. Historically, high levels of government support have been used to temper the impacts of these challenges. While that may have worked in the past, it is increasingly recognized that sector-led transformation is necessary for the forest industry to build a viable future.

Public concerns about environmental impacts, and increasing calls for multiple-value approaches to resource management, are also challenging the industry to operate differently. The public, stakeholder groups and Aboriginal communities have begun to play a major role in resource decision-making.

At the same time, many rural communities have declining populations. Land ownership is passing from a generation that tended to work in the forest to one that no longer depends on the land as a source of income. Ownership is now motivated by a wider set of values, and active participation in forest management is dependent on the ability of foresters, harvesting contractors and other service providers to meet those values.

With the majority of the industry's wood supply coming from private land, this shift in demographics and motivations requires substantial adaptation. Small-scale management capacity is being lost, and current industrial harvesting capacity often can only be deployed at a scale largely requiring the liquidation of most or all of the timber on a property. Because this is not what many small landowners want, the percentage of woodlot owners who actually harvest timber is declining.

RESPONSE:

In response to these pressures, the Nova Scotia Woodlot Owners and Operators Association proposed to host a unique project called The Forestry Lab to identify key challenges facing the forest sector and investigate possible solutions. NSWOOA believes that the current challenges in forestry call for significant transformation in order to foster a viable future. While transformation needs to occur at many levels, 70% of the wood supply for Nova Scotia's forest industry comes from private land, and we have a unique opportunity to effect change in this context.

Solutions at this scale can only come from collaborative work that gives rise to new insights from understanding all perspectives. The collaborative effort was intended to shift the pattern

of blame and public outcry that has created further instability in the sector. NSWOOA sought to bring leading methods of social entrepreneurship and business innovation to The Forestry Lab to take on the current challenges.

PURPOSE:

At the first meeting of The Forestry Lab's Core Team in September 2015, participating leaders in the forest sector described their purpose as:

To work together to tackle the concrete challenges in building a healthy forest sector for the future.

These leaders sought to end the culture of conflict in the sector; to address the complex economic, environmental, social and policy challenges we face; and to focus on the future of the rural economy. It was hoped that techniques pioneered in "social labs" would provide the platform needed to support the work.

A social lab is just like any other lab – it is a structure that supports the work of understanding problems and experimenting to find solutions. The only difference is that the problems being addressed are more fundamentally social in nature. Organized by respected convenors and overseen by responsible stewards, social labs have been used worldwide to address such complex socio-economic problems as food security (www.sustainablefood.org) and tax reform (www.financeinnovationlab.org). The Forestry Lab was led by a 12-member Core Team. The group was charged with proposing and pursuing tangible initiatives that examined issues and opportunities identified in the stakeholder engagement process.

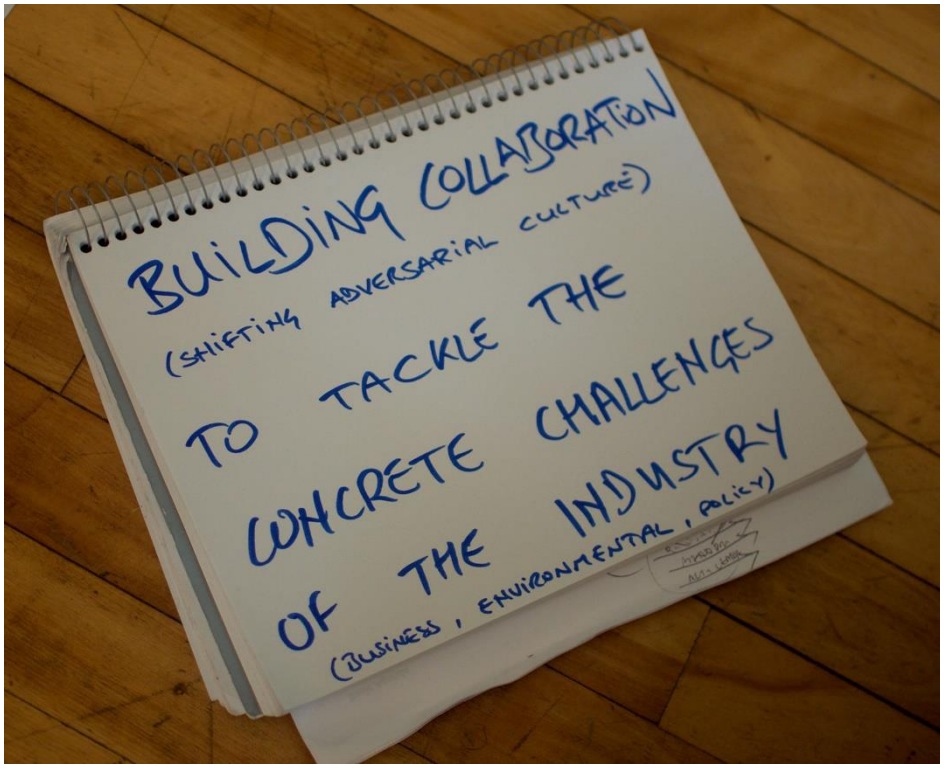
DESIGN:

The Forestry Lab was designed to provide a process and a platform to promote innovative initiatives in the forest sector. Specifically, the Lab attempted to:

- Promote significantly greater forest stakeholder involvement and collaboration;
- Build capacity in working with newer business development concepts and methods;
- Provide a dedicated incubator for new business ideas and models; and
- Work toward a more efficient policy framework for the sector.

There were two principal components of the Forestry Lab: intensive sector engagement through two sector-wide Forestry Summits, and three regional consultations; and the work of Lab organizers participants within the Lab and on a series of "prototypes" led by Core Team members.

With financial assistance from the Nova Scotia Department of Natural Resources and the Atlantic Canada Opportunities Agency, and with in-kind contributions from team members, The Forestry Lab was intended to focus on business model innovation that aligned the industry with: existing and potential competitive advantages from operating in Nova Scotia; the long-term productive capacity of our forests; and the values of our communities.



Sector Engagement

The Forestry Lab was built on significant levels of stakeholder engagement, with better collaboration and conflict resolution as an outcome. It was hoped that this would help to reduce unpredictability related to public pressures on natural resource management, which is an increasingly significant risk factor for the industry.

A principal component of the Forestry Lab has been the active involvement of a wide range of sector leaders including mill managers, foresters, landowners and conservationists. These convenors and Core Team members reached out to other forest stakeholders in two "Forestry Summits" (a third will be held 23 May 2017) and three regional consultations across the province.

The concept of The Forestry Lab was presented at the first summit, held in May 2015 in Truro, NS. The methods and tools of social labs were set out, and initial (overwhelmingly positive) feedback was gathered. In the fall of 2015, three regional consultations resulted in spirited dialogue on substantial issues and ideas. Collected in a synopsis (available on the Lab's website, www.theforestrylab.ca, and excerpted in Appendix A of this summary), these consultations provided a rich backdrop for the development of prototypes that would be undertaken by Core Team members and others who they recruited. Ultimately, seven prototypes were discussed and funded at a Core Team retreat in February 2016. Because it introduced a new process to the forest sector, The Forestry Lab itself served as an eighth prototype.

In April 2016, the Lab reported back to the sector at the second Forestry Summit, which attracted almost 100 people from government, business, and conservation organizations. The Core Team presented their prototypes and, in the process, received valuable feedback on the experiments.

THEMES AND ISSUES:

Sector input has ranged widely, from the economic and environmental impacts of short-rotation forests and the continuing decline in woodlot owner participants in active management, to new opportunities for value-added wood products and the developing market for carbon credits. This feedback can be organized around several broad topics, including markets, capacity, and government.

Markets: It is recognized within the sector that low prices and concentrated markets for wood fibre are limiting returns from both intensive and selective harvesting; few woodlot owners earn a living income from their lands. The traditional pulpwood-driven woods sector is in decline, competitive national and global markets for forest products lead to significant financial stress across the sector, and the uncertain long-term outlook affects government efforts and

resolve to support alternative markets such as biomass for electricity generation, wood pellet fuel and marine bio-diesel. What can be done to expand commercially viable markets for logs, and non-timber markets for carbon and recreation?

Capacity: With the post-2008 contraction in demand for wood products from eastern North American forests, and (for a time) the exodus of younger, outdoor-oriented workers to Alberta, the past decade has seen substantial labour adjustment in the sector. This has led to growing concerns about the quantity and quality (training and experience) of the next generation of forest workers, even as the current generation is rapidly aging. Ever-more-efficient machines are delivering wood to mills faster and more cheaply than non-mechanized loggers doing lower-impact harvesting, but woodlot owners are increasingly demanding a lighter touch. Public opposition to widespread, heavy cutting remains a significant problem for the sector.

Government: Feedback from the summits and regional consultations confirmed some on-going policy issues, including tax treatment of forest capital gains and inheritance, and the adequacy and management of funding for silviculture treatments. More broadly, inconsistent and changing forest management policies and standards continue to create uncertainty among all forest stakeholders.

The Prototypes

The Forestry Lab has been an incubator for business ideas, concepts and models relevant to the next-generation woods sector in Nova Scotia. The central activity in this process has been the development, selection and management of a number of prototypes designed to test innovative ideas and transformative concepts.

Recognizing that governments and industry were already investing in the development of industrial-scale wood fibre technologies, the Lab prototype teams, with limited direct funding and a relatively short timeframe, pursued ideas and issues of narrower scope and smaller scale. Consistent with social lab values, the prototypes have also sought to capture explicit sector and community benefits.

At its retreat in February 2016, the Lab core team used the substantial input for the sector as the basis for developing and selecting seven Lab prototypes, each pitched and led by a core team member, to proceed to an exploratory (feasibility/utility) phase. The prototypes were:

- Applying Learning from Finland – examining Scandinavian forest management and manufacturing practices;
- Capturing Higher Roundwood Values – looking for more value from premium logs through advanced in-woods sorting and bucking;
- A Participatory Values-Mapping Process for St. Margaret's Bay – looking for process improvements in the Crown land management process;
- Expanding Contractor Capacity in Western Nova Scotia – seeking to consolidate and serve the demand for sustainable woodlot management;
- Growing a New Generation of Forest Workers – finding new ways to address the sector's labour shortage;
- The Hidden Gem Co-op: A Timber Makery – setting up a local wood crafts co-op and template for replication across the province;
- A Contractor Success Package for Cape Breton – determining what's needed to expand small harvesting capacity.

In addition, The Forestry Lab itself constituted an eighth prototype. Five of the eight investigations proceeded to completion. Thumbnail sketches of these are provided in Appendix B.

Broadly speaking, the prototypes focused more than was originally expected on near-term capacity issues, rather than on future markets and market requirements. A number of the projects, notably the Western contractor incubator and Cape Breton “contractor success package,” were able to work with and re-enforce related initiatives such as the Western Woodlot Service Area and the Cape Breton Privateland Partnership.

Learning and Guidance

The opportunity to learn more about the province's primary forest sector and its future, and about pursuing entrepreneurial opportunities in the next-generation sector, has been at the centre of The Forestry Lab. This section looks first at particular insights from the Lab process and experience, and then at possible guidance from the Lab to the next phase of sector innovation and transformation.

LEARNING:

The Forestry Lab highlighted and analysed a number of important situations and circumstances in the sector, in the process **suggesting a number of principles for management of future entrepreneurial projects**. These lessons included:

- Focusing a collaborative team effort on one (or two connected) prototypes, rather than on several;
- Creating a shared vision and collective responsibility;
- Securing meaningful time and other commitments from all participants;
- Communicating and sharing with related sector initiatives; and
- Utilizing available Lab resources and expertise.

GUIDANCE:

The prototypes illustrate a number of issues and opportunities going forward, but the main product of the Forestry Lab has been **solid documentation of current and expected future environment of the forest sector.** Key observations include:

- The recognition that challenges facing the primary forest sector are not likely to get easier in the medium term;
- The need to find higher-value (or, at least, adequate-value) new products and markets for Nova Scotia logs as the pulpwood industry continues to decline (with periodic upticks);
- The difficulty for stakeholders facing constant work and cost/price pressures to find the time to look in depth at structural issues in the sector;
- The considerable activity across sector organizations, often working together, to address topics from organizing woodland services to capturing carbon credits; which suggests …
- The need for a mechanism to help keep track of and connect relevant work on key forest issues and opportunities.

Moving Forward in the Forest Sector

LAB LEARNING:

The Forestry Lab examined topics and issues in the forest sector at two levels:

At the industry level: In a synopsis of two sector summits and three regional consultations, the Lab identified and described factors likely to affect the sector's future, and then

On the ground: In a series of prototypes, the Lab connected themes drawn from this intensive, year-long, sector engagement to real-world situations and applications.

At both levels, on-going challenges and opportunities have been identified, were reinforced by the experiences of other sector groups and initiatives. Some of the prototype learning has been situation-specific, but much has broad applicability.

MOMENTUM:

This social lab process has built on a number of past and current collaborative sector initiatives, from the Colin Stewart Forest Forum through the Small Woodland Owners Forum and continuing to the present. The issues examined by the Lab's Core Team and their prototypes – and related activities being pursued in other sector and regional organizations – cover a wide range of challenges and opportunities. It is understandably difficult for any one primary forest sector organization to keep track of, let alone lead, more than a few of the issues in this complex picture.

MACHINERY:

Though these matters are important, nobody wants to create another organization or structure to address them, so The Forestry Lab has looked at other ways to achieve a better focus on, and give active attention to, next-generation forestry challenges and opportunities. Input from stakeholders who attend the third Forestry Summit on 23 May 2017 will be critical in setting a course for future efforts to work collaboratively.

FOREST SUMMIT 3:

The third Forestry Summit will look in two directions: First to the Lab experience – the sector input, the prototypes, and where they might lead us; and second to whether an effective, low-

overhead platform to support continuing work on the next-generation forest sector in Nova Scotia is needed, and if so, what it might look like.

FINAL DOCUMENTATION:

This summary report has been prepared as background material for participants in the third Forestry Summit on Tuesday, 23 May 2017, at Pictou Lodge, and for others interested in the future of Nova Scotia's forests and forest-based economy and communities.

Attached are: a synopsis of sector consultation input; abstracts of Lab prototypes; and a listing of Lab players. After the third Forest Summit and completion of the Lab's internal evaluation, a final report to funders will be prepared.

Appendix A:
Stakeholder Consultation Synthesis

Focused discussions were held at three locations across Nova Scotia during November 2015 to gather in-depth data that could be used to inform solution building in the Forestry Lab. A total of forty-five stakeholder representatives attended one or more of the sessions, with wide representation from all industry sectors, landowners, and non-governmental organizations. The combined learning from these sessions was meant to serve as the foundation for prototypes run by the Core Team of The Forestry Lab.

Key Findings

Capacity

There was near-universal agreement at all three sessions that Nova Scotia faces a shortage of harvesting contractors with appropriately sized equipment willing to work with forest landowners on smaller lots. The identified challenge was the insufficient evidence that such work can be profitable. The opportunity, would be access to many – perhaps most – small landowners, who are reluctant to accept more intensive approaches to forest management.

Topic: Equipment

- Many contractors do not have the right equipment for the job
- High equipment costs and long pay-back times make replacement difficult
- Contractors need easier access to financing; guaranteeing loans leads to more contractors
- Demand from wood buyers is directed to big contractors rather than small ones
- The profitability of small-scale selection cutting at current pulpwood/studwood prices is uncertain

Topic: Workers

- Uncertainty about employment stability is a major concern for forestry workers
- Few younger workers are willing to stay in Nova Scotia and work in forestry
- There is insufficient education and training for forestry workers (both in machine operation and forest management principles)
- The existing workforce is aging
- Average wages are too low ($17-22/hour)
- There is a need for more professionalism in the industry

Markets

For many stakeholders, a lack of diverse, well-paying markets is the single most important issue facing the forest products industry in Nova Scotia. Wood purchases and production by existing mills do not generate enough profit to ensure a healthy sector. The challenge is to find more buyers for higher-value products from the forest. The opportunity is to create an industry that is less focused on commodity markets; better able to adapt to the changing economic fortunes of individual mills; and generates more

income for mill owners, foresters, harvesters, truckers and landowners.

Topic: Insufficient Profitability to Ensure a Healthy Sector

- All stakeholders need open and easy access to markets and prices
- The current prices for wood do not support wages for forestry workers that are equivalent to other skilled trades
- The financial premium for higher quality wood is insufficient
- There is a limited market for higher grade (non-pulpwood/biomass) products

Topic: The Search for New Business Models

- The current emphasis on survival in tight markets does not foster innovation in this sector
- We need to develop ways to match producers to markets
- Very little wood is required to run a successful, value-added mill
- Even so, small mills need access to Crown land
- The low Canadian dollar ought to be creating opportunities for exporting
- There may be economic advantages in co-locating smaller wood products firms in regional Wood Hubs

Topic: Biomass & Heat

- Nova Scotia needs a provincial policy for production of heat and electricity from wood, not only biomass but also firewood and pellets
- Large biomass and pellet plants are causing significant disruptions in wood supply
- Biomass use should be focused on combined heat and power production that supplements employment on a small/local scale

Topic: Trucking & Sorting

- Trucking costs are too high; more local markets are needed (e.g. within 100 km radius of harvests)
- Floating is expensive and limits the profitability of smaller harvests
- Sorting wood and shipping partial loads is expensive, so higher-value wood often goes to lower-value uses

Landowner Engagement

Stakeholders raised many questions about how to best engage private woodlot owners as primary suppliers in the forest sector. While there was much experience and some strong opinions in the room, there was also significant uncertainty over how to best relate to the vital role landowners play in the sector. Over the past 30 years, research in Canada and across the world has shown that landowners have increasingly complex goals for forest ownership. Timber income remains important, but it is no longer the primary reason that people own woodlands. Wildlife habitat, outdoor recreation, solitude, an investment for future generations, and many other reasons now drive landowners' decisions about how to manage their lands.

The challenge is to effectively support landowners in achieving their goals and develop the capacity to manage forests efficiently across the complexities of smaller privately owned properties. The opportunity is to stabilize and possibly expand the timber supply in the province.

Topic: Marketing to Family Forest Owners

- It is difficult to identify and contact small landowners
- Many woodlot owners don't want to participate in the current system
- Most small woodlots are owned by seniors
- Some companies are seen as harassing woodlot owners to buy stumpage
- Harvesters and other service providers should focus on respect, trust, communication and accountability
- Professionals develop good reputations by meeting people and showing them good work
- Word of mouth and the "neighbourhood effect" is more valuable than a hard sell
- There are significant diseconomies of scale (need to match size/type of equipment with the jobs woodlot owners want done)
- Working with small landowners results in inefficiencies in management and operations; there are diverse goals and values to be satisfied, and everyone wants something different
- Foresters and contractors need more training in multi-value management
- Divisiveness and lack of respect within the forestry sector does not improve credibility with the public

Topic: Woodlot Owners do not Understand Forest Management

- A declining percentage of forest owners have grown up in rural areas or worked in/around the woods
- There are more urban residents and less understanding of forestry
- It's a societal problem, not an industry problem
- People need to spend more time in the woods
- More demonstration forests are needed to serve as "outdoor labs" to help to educate/engage woodlot owners and the public
- There are not enough field days that teach basic skills (e.g. boundary lines) in the woods
- Need a written handbook and/or field course that explains basic forestry concepts (management principles, working with contractors, woodlot finances, inheritance and taxes)

Government, Taxes and Subsidies

Regardless of participants' perspectives on the proper role for government in the forest products industry, there was a widespread belief that the Department of Natural Resources does not listen or respond to stakeholders. Some participants cited regulations that accomplish little but create needless work and make long-term planning difficult. For others, the lack of strong provincial action to ensure good forest management was seen as the root of the industry's declining profitability.

Stakeholders also expressed disappointment with government handling of silviculture payments. Inadequate funding and irregular timing negatively affect both contractors and landowners. Meanwhile, participants agreed that income, property and inheritance taxes related to woodlot ownership often serve as disincentives to good forest management and should be overhauled.

Topic: Unresponsive Government

- Government asks questions but doesn't listen to the answers
- Stakeholders need a more open relationship with the Department of Natural Resources
- The province needs more government/less government/different government (a range of opinions were expressed)
- Nova Scotia regulations are disconnected from reality
- Regulatory goal posts should not change with each new government
- Red tape prevents work from getting done (e.g. lumber grading rules)
- Stakeholders need a commitment from DNR to get updated forest information and estimates of allowable annual cut
- There needs to be more regulation of the harvesting process (e.g. in Ontario, tree marking is required on private land)
- DNR should be restructured/re-focused to address local issues, not serve industry

Topic: Funding Timber Stand Improvement

- Nova Scotia needs more subsidies/no subsidies/more predictable subsidies (a range of opinions were expressed)
- All stakeholders should have fair and equal access to subsidies
- The effectiveness of silviculture treatments should be assessed
- Contractors and woodlot owner-operators face cash flow crises because of slow or low funding for silviculture
- More predictable funding/better timing of availability (e.g. January not August) is needed
- Need new/more subsidies to support road building and boundary line maintenance; or
- Alternatively, Nova Scotia needs to make harvesting more sustainable so people don't need silviculture funding

Topic: The Tax System does not Support Good Forestry

- Harvesting puts seniors at risk of losing income because of low threshold before retirement benefits are cut
- The property tax structure (forest resource classification) does not encourage owners to be active managers of sustainable woodlots
- Many landowners are unaware of CRA requirements for tax-free intergenerational transfer of forestland

Forest Management

There is widespread concern about the management of Nova Scotia's forests. Opportunities to develop diversified; higher-value wood products markets are limited by a lack of supply due to the dominant emphasis on short-rotation softwood production. The challenge is to sustain existing mills while moving toward a more diverse forest. The opportunity is to create a more resilient and profitable industry that provides new jobs and income for Nova Scotians.

Topic: Forest Practices

- The total value of Nova Scotia's forests is declining; we have focused on quantity rather than quality
- This leads to fewer economic options for landowners, harvesters and mills
- There are widespread questions about the sustainability of the wood supply

Topic: Preparing for the Future

- Nova Scotia needs to sketch out the post-commodity world and start managing forests for that world
- The challenge: Responding appropriately to global economic forces that have significant local impacts
- Management decisions should: Support better growth on more diverse species; support fair markets; respect landowner wishes; and consider both current income and long-term sustainability

Appendix B:
Abstracts of the Prototypes

Ultimately, seven prototypes plus The Forestry Lab itself investigated issues related to positive change in the forest sector. A brief synopsis of the work is offered below.

Expanding Contractor Capacity in Western Nova Scotia

Team: Amanda Lavers (Mersey Tobeatic Research Institute) and Patricia Amero (Picea Forestry Consulting), leads, working with Jane Barker, Forest Stewardship Coordinator at MTRI, and Mary Jane Rodger, general manager of the Medway Community Forest.

Tasks: This prototype explored ways to expand and improve contractor capacity in the western region by understanding the needs and challenges small private woodlot owners and contractors face in our industry and how to better match suitable contractors to woodlot owners who want multi-value, ecosystem based partial harvesting done on their woodlots. This was completed by designing specific sets of questions for woodlot owners and contractors and interviewing them. It is also involved developing a 'book of business' to present to contractors to illustrate the business opportunity for this niche of work.

Learning:

1. Appropriate silviculture prescriptions, layout and communication to the contractor are essential.
2. Versatile machines and skilled operators are key to completing good partial harvest jobs and meeting woodlot owner objectives.
3. Many of contractor's operators enjoy the challenge of partial harvesting.
4. Clustering woodlots in similar locations are more feasible, attractive to pursue.
5. There is an apparent lack of trusted contractors amongst woodlot owners due to past experiences and/or perception from what they see on our forested landscape.
6. Some woodlot owners are willing to take less stumpage if they can be reassured a good job will be done that meets their management objectives.
7. There is a serious need for demonstration field days to provide opportunities to show partial harvest operations and a chance for woodlot owners and contractors to interact and talk about the work involved, challenges, etc.
8. The biggest limiting factor continues to be market conditions particularly in the west for low grade material, and inadequate financial returns.
9. In hindsight, a better title for the prototype would have been, "Matching Woodlot Owners with Contractors and Vice Versa."

A Contractor Success Package for Cape Breton

Team: Kari Easthouse (Cape Breton Privateland Partnership), lead, with Andrew Fedora (Port Hawkesbury Paper), Peter Christiano (formely of Finewood Flooring) and Marc Chisholm (Coastal Woodlands).

Task: To assess what combination of equipment, financing, skills and assurances of harvesting demand/clients is most likely to promote the expansion of small harvesting capacity in the eastern region.

Learning: Mill employees and harvesters met with the prototype team at the Antigonish library. They supported working with a third party who would meet with landowners and arrange the harvests (which offered significant time savings for the contractors). The prototype hired a trusted local service provider to do the work. He met with 21 landowners in a small test area who had smaller volumes of wood ready for harvest. About 80 percent of the owners agreed to be part of the pilot. If all of them continue with the pilot, the total harvest on all of the lots will be 1,200 tonnes. For contractors, the key issue is identifying viable volumes of wood on lots near each other. For landowners, it's having a trusted person sitting at the table to explain the proposed harvest.

Growing a New Generation of Forest Workers

Team: Stacie Carroll (A Forest Tree Service), leader, with input from several forest education organizations.

Task: Given the importance of the pre-teen years to students' emerging understanding and attitudes, the lack of forestry education programming in Nova Scotia schools leaves young people dependent on messages in the commercial and social media. This prototype looked at how to work with impressionable pre-teens to understand their connection to the forest and forest products, and the many benefits of using wood products.

Learning: There are some interesting initiatives for young people, but there appears to be little communication or collaboration among them. What is needed is not another program, but rather a partnership to map, connect and enhance this skeletal network.

The Hidden Gem Co-op: A Timber Makery

Team: Debbie Reeves (forest landowner), lead, working with New Ross-area craftsmen, loggers and woodlot owners.

Task: The Hidden Gem prototype examined the feasibility of, and requirements for, setting up a wood-products co-operative in the New Ross area, in the process providing a template for similar initiatives in other areas of the province.

Learning: Although some craft woodworkers choose to operate at a hobby level, there is modest potential to develop a more commercial supply if (1) selling venues and opportunities can be expanded and (2) partners, such as municipalities, schools and community associations, are found to manage common assets such as woodworking tools.

Capturing Higher Roundwood Values

TEAM: Rick Archibald (Northern Pulp), leader; Jody Hamper (Group Savoie); Val Traversy (Eastern Shore Forest Watch); John Vautour (Group Savoie); Matt White (Northern Pulp).

TASK: The Roundwood Values prototype began as a Merchandizing Yard prototype, focusing on yard capacity to process more premium wood. Finding more cost than capacity-related challenges to marketing hardwoods, the prototype team shifted to examining and comparing the cost structures of different ways of sorting and bucking premium-value logs, in-woods and at-mill.

LEARNING: The prototype team's analysis indicates that, at current prices, only premium stands sorted and bucked in-woods by trained foresters will yield more than a firewood benchmark. This prototype also points to the need for advanced species-identification training for the next generation of forest workers in NS.

Applying Learning from Finland

Team: Harold Alexander (North Ridge Forest Products), lead, with Peter Burchill (Nova Scotia Landowner and Forest Fibre Producers Association), Mel Hobbs (Selby Testing), John MacDougall (Federation of Nova Scotia Woodland Owners) and Jim Crooker (Federation of Nova Scotia Woodland Owners).

Task: In order to identify ways to improve the profitability, efficiency and sustainability of Nova Scotia's forest sector, the prototype team conducted a study tour of small, privately owned Finnish forests, reporting back on forest management and manufacturing practices.

Learning: The Finnish approach to forestry can help rural Nova Scotia realize a new level of socio-economic benefits. Five key areas emerged:

1. Culture and attitude – Nova Scotian culture around forestry needs to change, starting with government engagement and encouragement (at the local and provincial government levels).

2. Strong landowner support system – We need organization and unification of existing forest owner supports in NS to educate woodlot owners, give them access to trusted services and give them a voice and power as suppliers.

3. Intensive sustainable forest management regime – Early and periodic silviculture treatments have to be built into a revamped silviculture program designed to suit and sustain our complex Acadian forest health and structure.

4. Intensive market development – We need a fully integrated forest product value chain especially focused on markets for low-grade wood. A bioenergy strategy is needed for the province. A bioeconomy strategy is also needed.

5. Quality forest inventory and information sharing – Nova Scotia needs a reliable forest inventory and good infrastructure (information technology, transportation), particularly to attract investors. Investors want a known, guaranteed, long-term, sustainable wood supply.

A Participatory Values-Mapping Process for St. Margaret's Bay

Team: Matt Miller (formerly of Ecology Action Centre), lead, with input from the St. Margaret's Bay Stewardship Association and others.

Task: For some years, and with some success, community-based groups like SMBSA have brought responsible public engagement to the fore in a variety of land-use planning and resource development situations across the province. The intent of this prototype was to explore ways to achieve a more inclusive management planning process for Crown land.

Learning: It was recognized early in the project that, in addition to a range of sector and government stakeholders, there are many communities of interest within any region, often pulling in different directions. Early feedback suggested that an environmental organization might not be seen as sufficiently neutral to lead the dialogue or to broker a new approach.

The Forestry Lab

Team: As a collaborative initiative, the Forestry Lab has drawn broadly across the forest sector. Appendix C identifies the Lab's convenors, organizers, facilitators and Core Team. In addition, many individuals from across the sector and across the province participated in a series of well-attended summits and regional consultations.

Task: The purpose of the Forestry Lab has been to look beyond today's activities and markets to explore factors affecting the next-generation woodlot sector and the challenges and opportunities ahead. A Social Lab framework was selected to (1) promote stakeholder engagement; (2) provide a dedicated incubator; (3) build business skills; and (4) improve the sector policy environment.

Learning:

- **About social labs**: a communitarian approach may be more applicable when focusing team resources on a common project, such as a community facility, rather than when pursuing a series of commercial prototypes.
- **About the issues**: the main structural problems impacting the sector persist, including lack of capacity for non-intensive harvesting, declining markets, and inconsistent forest management rules and regulations.
- **About the future**: Both long-standing issues and new opportunities related to markets, capacity and regulation need on-going attention and action.
- **About moving forward**: There are many useful initiatives being pursued across forest sector organizations; a networking structure would help.

Appendix C:
Core Team, Convenors, Facilitators and Staff

The Core Team of The Forestry Lab was composed of sector leaders from across the sector and across the province:

Harold Alexander, North Range Forest Products
Patricia Amero, Picea Forestry Consultants
Rick Archibald, Northern Pulp
Stacie Carroll, A Forest Tree Service
Marc Chisholm, Coastal Woodlands
Peter Christiano, formerly of Finewood Flooring
Kari Easthouse, Cape Breton Privateland Partnership
Andrew Fedora, Port Hawkesbury Paper
Amanda Lavers, Mersey Tobeatic Research Institute
Matt Miller, formerly of Ecology Action Centre
Debbie Reeves, Forest Landowner
Val Traversy, Retired Federal Forestry, Trade & Development Official

Convenors included:

Jeff Bishop, Forest Nova Scotia
Peter Duinker, Dalhousie University
Patricia MacNeil, Nova Scotia Department of Natural Resources

Facilitators and staff were:

Tim Merry, Myrgan Inc.
Sera Thompson, New Leaf
Marguerite Drescher, Brave Space
Alastair Jarvis, WoodsCamp
Christie Verstraten, NSWOOA
Andy Kekacs, NSWOOA
Will Martin, NSWOOA