Williams Lake Flooring Ltd.

Business Plan

Submitted to:

Robert A Kozak
Associate Professor
Department of Wood Science

Krista Klein
Sunny Li
Maryam Niroomand
Sally Sellars
Will Waldstein

April 7th, 2005

University of British Columbia

Williams Lake Flooring Ltd.

Table of Contents

List of Illustrations

List of Tables

List of Figures

Executive Summary

Due to massive settlement and forest fire suppression, the forests of British Columbia contain a very high volume of mature, slow grown Douglas-fir trees. These trees posses special properties and represent a unique and lucrative business opportunity. Often located in Mule Deer winter range, forest resource managers have a mandate to enhance the environment for these animals by thinning the stands of these trees.

Williams Lake Flooring Ltd. plans to capitalize on this unused resource by producing engineered wood flooring. The engineered wood flooring that will be produced by Williams Lake Flooring Ltd. is effectively 1/8" solid wood laminate on a tongue and groove plywood substrate. By manufacturing such thin strips, as opposed to thick solid wood flooring, we can maximize the square footage yield of the small diameter logs. Furthermore, engineered flooring is more stable than conventional solid wood flooring and can be installed over concrete, thus expanding our consumer base.

The demand for real wood flooring is growing both locally and internationally. However, unlike most flooring manufacturers who focus on hardwood, Williams Lake Flooring Ltd. is manufacturing a unique softwood based product with special appearance characteristics. Furthermore, the softwood will be hardened with a natural hardening agent to further differentiate our product.

Operationally and financially, this business plan illustrates the sound business model upon which our product is based. Profit in the first year of operations will reach over six million dollars by running a mill at only one quarter capacity.

1.0 General Company Description

Williams Lake Flooring Ltd. is a privately owned company located in Williams Lake, BC. Our management team is formed by 5 individuals with background education of either Forest Resources Management or Wood Products Processing. Our company is entrusted to become a principal producer of soft wood engineered flooring for high end users with raw material of small diameter Douglas-fir.

Mission Statement:

Williams Lake Flooring Ltd. is a high-quality flooring producer that focuses on environmental sustainability and quality.

Vision Statement:

We hope to become an internationally recognized flooring producer.

Value Statement:

- We believe in a strong, effective, and high level of service.
- We believe in high quality products.
- We believe in sustainable forest management.
- We believe in high professional standards of integrity, ethics, and behavior.

- We believe in loyalty and support for each other and the company.
- We believe in recognizing and valuing each individual's contribution to the company, regardless of position, assignment, or role.
- We believe in all members working together to achieve goals through cross functional teams.

2.0 Marketing Plan

2.1 Product

Product Type:

The primary product is softwood engineered flooring with dimensions of 1-inch width, 15-inch length, and ½-inch thickness for each strip. By manufacturing such thin strips, as opposed to thick solid wood flooring, we can maximize the square footage yield of the small diameter logs. The tight, clear, vertical grain, differentiates our product from other Douglas-fir flooring. A secondary product, waxy wood chip fire starters, will be produced to maximize the use of the raw material.

Total Product:

The product will give customers long-term use, pleasure and satisfaction. The company's desire is to have a product with guaranteed quality and strength. To ensure the quality of the end-product, all logs will be screened for defects such as, crook, sweep, twist, and windshake. The softwood flooring will have equal or better strength than hard wood flooring, specifically because of enhanced tight vertical grain.

We make certain that each process in our mill is "green". Only small diameters of Douglas-fir, which help to advance Mule Deer winter habitat are selected. Low soil impact harvest methods are used in order to minimize environmental damages. Professional foresters, environmentalists, and specialist for mule deer habitat are

consulted for all procedures. In addition, skilled laborers are employed to process logs for each manufacturing process.

A sales and service department will ensure the highest degree of services. The department is responsible for all orders taken and the delivery of the flooring product to the contractor. Customers are our first priority and will be given special attention to meet their wants and needs.

2.2 Place/Distribution

The engineered flooring will be handled and sold to contractors by our sales and service department within North America. A partnership will be formed with CanWel for product distribution. The flooring will be shipped by truck from the site and monitored by the company from warehouse to the final destination. The company will able to guarantee 1 to 2 weeks of delivery time for pallets (570^{+} sq ft) and 8 to 10 weeks for container ($15{,}000^{+}$ sq ft) within North America. Road transportation within North American is more cost effective and time effective.

The final product of flooring will pack in either 5 pieces or 10 pieces with open-top cardboard box and plastic wrap top. Each package will be consistent with our company logo and “Happy Deer” figure. Packaging in pallets (570^{+} sq ft) and container ($15{,}000^{+}$ sq ft) are also available in large quantity.

2.3 Price

Fixed Cost:

The fixed cost of a new operation includes equipment and office supplies. Machinery will be considered as a fixed cost associated with start-up, and depreciated over the financial year. Administration fees and salaries will also be considered as fixed costs, and labour salaries vary with company standards.

Variable Cost:

Costs that vary according to level of production mainly include raw material costs, such as logging, hauling, and yarding cost. In addition, other variable costs include labor wages, cost of shipment, and promotion cost.

Prices:

The flooring is being targeted at consumers looking for a high-end product. The retail price of this product will be based on its costs associated with production. Quantity discounts are available for merchants. A premium percentage will be charged for "green" guaranteed. The approximate price for our flooring is $8.00/sq. ft. for retailer/contractor (all prices are in Canadian dollars).

2.4 Promotion

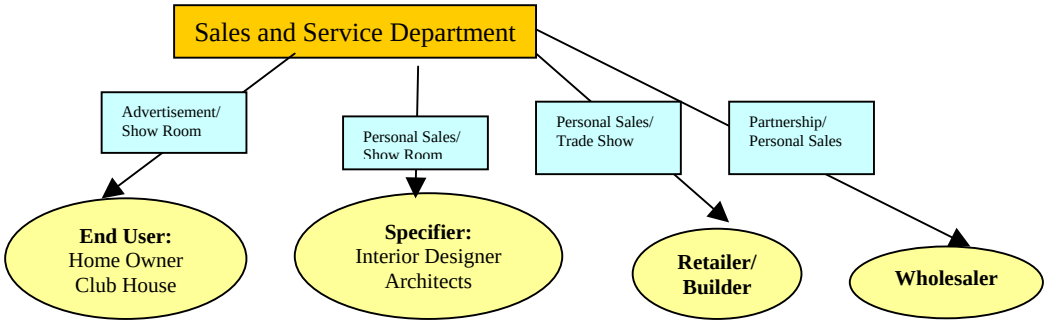


Figure 1: Marketing Promotions

Retailer/Builder:

The retailers and contractors are the main customers for the company's product. Potential retailers and contractors will be contacted by a member of our sales and service department personally. The most effective method to offer technical support, develop a relationship, and promote communication, is through personal sales.

Wholesaler:

Partnership relationships with wholesalers widen our product distribution. Each potential wholesaler will be contacted by our sales personnel department in order to provide detailed product knowledge.

Specifier:

- American Society of Interior Designers
- International Interior Design Association

End User:

Although the primary customers for Douglas-fir engineered flooring are retailers, contractors, other individual customers are able to create market awareness for our product. The high-end residential home and country club contractors will be direct end users for our products. Advertisement in local interior design magazines will promote our product to targeted markets. For example, Canadian Home and Country, Better Home and Gardens, are some home magazines where promotion of Douglas-fir engineered flooring would be effective.

Other Promotion Methods:

Tradeshows and home shows are another industry-wide marketing channel. Tradeshows allow a new opportunity to explore new markets and new customers. They will also provide new opportunities for Williams Lake Flooring Ltd. to introduce and promote engineered flooring. Another promotional method is show rooms, a cost-effective, mass promotional method. In the future, show rooms may be set up by our sales and service department across North America. Technical support and order forms will be available in the show rooms. The internet will enable the company to contact customers in a more time effective manner. Online purchase orders will also be available through the official website.

Williams Lake Flooring Ltd. will become a member of the National Wood Flooring Association, another opportunity for consumers to reach us and distribute the Williams Lake Flooring Ltd. product.

3.0 Markets

3.1 The Raw Material (Douglas-fir)

Douglas-fir *(Pseudotsuga menziesii)* is native to Canada's west coast and has been British Columbia's main export good since as early as 1865. Douglas-fir is the only material still available in substantial volumes of clear wood fiber. Its easy workability and high strength-to-weight ratio properties position it as the ideal general-purpose wood for all phases of residential or light commercial construction. Douglas-fir is a structurally stable wood that holds nails and screws securely, as well as readily accepts glues, and is boldly attractive. Qualities that distinguish Douglas-fir from other wood species include its strong fiber, and high durability, which is combined with a dense-grained structure, and fine texture. These qualities are what make Douglas-fir a unique, but highly suitable and excellent choice for interior flooring.

The conditions under which the Douglas-fir grew, makes the material unsuitable for use as a general-purpose construction material. Although the trees are at a harvestable age, they are only 20 centimeters in diameter at a maximum. Unlike the Douglas-fir used in the construction market, there is a gap in the market for these small diameter trees. The

Underutilization of these logs in British Columbia is due to the lack of product ideas, the lack of specialized processing machinery, and the fact that the waste factor from processing such small logs is typically very high. They're uniqueness, appealing appearance, straight grain, and high density makes them perfect for flooring, especially engineered flooring.

3.2 Market

According to Rita Patlan, a commercial specialist, the Canadian flooring products market is expected to grow by least 5% between 2002 and 2005. Flooring is rapidly becoming one of the most profitable categories in home remodeling and residential improvement. However, sales of ceramic flooring have outpaced wood as the alternative flooring choice for the middle-income segment. This is due to the high price of hard or soft wood flooring. By producing engineered flooring using small diameter Douglas-fir, Williams Lake Flooring Ltd. can capitalize on the attractive texture and attractive coloration of the wood, and offer it to customers at a lower cost compared to other engineered flooring manufacturers. In the long run, lowering the price of composite flooring by way of using small diameter trees and improved technology, as well as natural softwood hardening agents, Williams Lake Flooring Ltd. can displace a significant portion of the ceramic and laminated flooring market.

According to the Canada Mortgage and Housing Corporation, renovation reached CDN $27.1 billion in 2001, and is expected to increase rapidly, mainly due to an increase in the

trend of new residential construction and home renovation, as well as the low mortgage and interest rates. Flooring specialty stores in Canada will continue to take over the high-end segment of the flooring market, while big box stores in Canada compete on price and selection to capture market share. Introduction of new small diameter engineered flooring (SDDF) can boost the competition and assist big box stores to attain more than 20% of market share.

Based on the Central Oregon Intergovernmental Council, the infusion process of soy and corn starch into wood can improve the grading of softwood lumber into hardwood. This shows that employing new lumber hardening technology (Indurite) resulted in a 27% increase in the hardness of heartwood and an 89% increase in sapwood. Another advantage that interests the consumer is that the hardening process will increase the fire resistance of the flooring to the highest possible standard index for any wood species.

According to an American housing survey (AHS) in the year 2000 and 2001, the flooring segment in remodeling and home improvement is estimated at $2,356,000,000 and approximately 30% to 60% of this could be satisfied by small diameter timber. Furthermore, according to year 2000 U.S. Census Bureau data, home ownership is dominated by 50 to 70 year olds, which provides a good market niche for Williams Lake Flooring Ltd. to target.

3.3 Canadian Market

Home improvement and home renovation industries are major consumers of wood products. Canada is the largest export market for US building manufacturers, which represent 78% of Canada's total home improvement and building supplies. In 2003, the Canadian market for building material increased by 2.6%. Forty-three percent of flooring in Canada is imported from the US and import volumes are expected to grow by 4% annually over the next five years. The recent decline of the US dollar has improved export opportunities to Canada. However, by introducing quality domestic engineered flooring, while reducing the cost of shipping and transportation, our company can capitalize on a favorable and robust climate in Canada's building and renovation products market. According to the Canadian Housing and Mortgage Corporation, economic growth in the Canadian housing market has boosted the remodeling and home improvement sector since 1999. Renovation spending in Canada will steadily grow, increasing by over CAN $32.1 billion.

It is vital to recognize if the new product being produced is part of an overall trend or corresponding to a niche market. Engineered flooring, especially those that have self-locking joints that minimize installation time is currently the trend in the Japanese and Turkish markets and is growing in popularity in North America. Nevertheless, according to the European Producer of Laminated Flooring, the world market for laminated flooring is growing at a lower rate than engineered flooring in North America and in the Asia Pacific area because laminated flooring remains in the introductory stages of the product

lifecycle. This is a strategic time for Williams Lake Flooring Ltd. to take hold of the engineered flooring market before laminated flooring enters the growth sector of the product life cycle.

3.4 International Market

The potential for Williams Lake Flooring Ltd. to expand into Japanese market is strong. Since 1999, the Japanese government proposed some incentive to boost housing construction by US $1.4 million. To achieve this, the Japanese government lowered the mortgage interest rates and increased the tax-deductible housing loan interest. Based on market research conducted by Wahl, Cohen, Kozak, and Gaston in 1999, it was found that composite wood is the most popular material used for flooring in the Japanese residential sector and accounts for 95% of the flooring market (Figure 2).

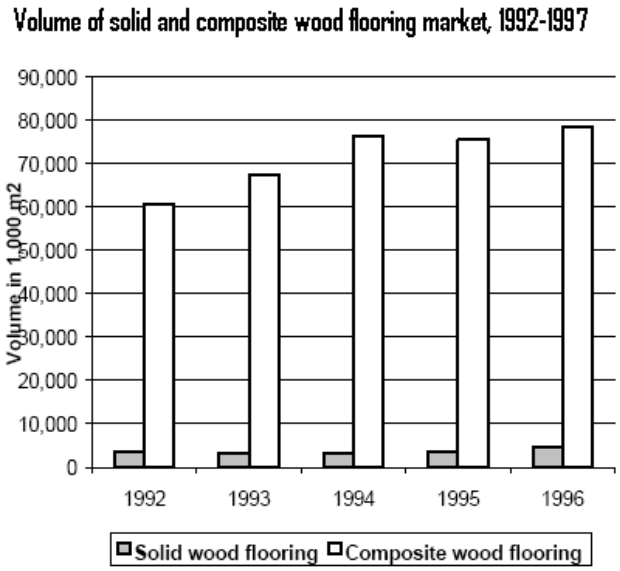


Figure 2: Volume of Solid and Composite Wood Flooring Market, 1992-1997
Source: Wahl. Cohen, Kozak, Gaston, The Japanese Market for Wood Flooring and Wood Windows, May 1999)

It was also discovered that certain characteristics of wood flooring is essential to the Japanese consumers.

Essential Characteristics of Wood Flooring in the Japanese Market:

- Appearance, color matching
- Containing non-toxic components
- Durability
- Ease of installation
- Instruction for installation
- Maintenance
- Price
- Quality of drying
- Surface smoothness
- Width and thickness tolerance
- Wood quality

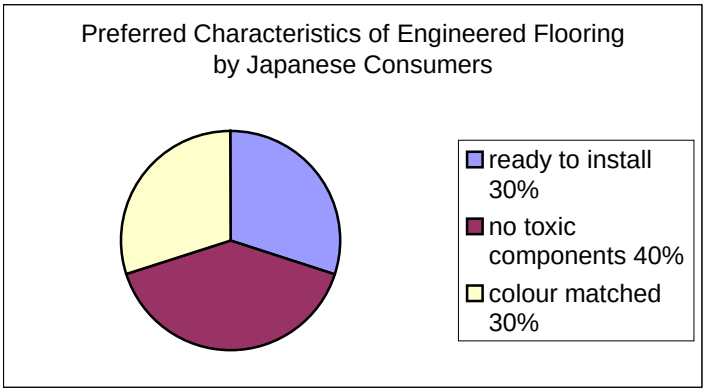


Figure 3: Preferred Characteristics of Engineered Flooring by Japanese Consumers
Source: (Wahl,Cohen,Kozak and Gaston, May 1999)

Japanese and Southeast Asian manufactures dominate the market share in engineered wood flooring. We have to keep in mind that Japanese and eastern species have superior properties, such as greater hardness. Williams Lake Flooring Ltd. will infiltrate the domestic market in a step-wise fashion, while perfecting its processing operations, polishing market strategies, and refining the product model. Once significant market penetration has been achieved domestically, Williams Lake Flooring Ltd. will present its product to the Japanese market as an environmentally sustainable, and green, possessing superior aesthetic properties and joinery.

With the help of new technology, such as Indurite for hardening softwood, there is room for production possibilities for British Colombia Douglas-fir. Williams Lake Flooring Ltd. can eventually gain a share in the Japanese market by offering high aesthetic value. More research and information will be gathered in regards to competition in the Japanese market for engineered wood flooring.

There is a large opportunity for Williams Lake Flooring Ltd. to enter the Turkish flooring market which is expecting a 10% growth within next three years. Turkey's urbanization and population growth, forces them to meet current and future housing requirements by 450,000 units per year opening a market opportunity for wood flooring.

Turkey's flooring market has reached US $350 million, which includes wood flooring, and carpeting. One third of this flooring material was imported in 2002. Further

information and market research is essential to provide a better assessment of the Turkish market because of the European competitors, such as Italy, Germany, Belgium, France, and Spain, accounting for US $75.2 million. The key winning factor for Williams Lake Flooring Ltd. is to enter the Turkish flooring market is to offer high esthetic value.

3.5 Green Building

Green Building is the new environmental movement, which is growing fast among architects, builders, realtors, and buyers. Green Building perception creates awareness amongst forest product buyers.

Three primary objectives:

1) Efficient use of all resources (energy, water, materials, and land) and minimization of waste.
2) Conservation of the natural environment which is the source of all our resources.
3) Creation of a healthy home environment for existing and future generations.

Green Building is a program that has emerged recently. Major Green Building groups and council are promoting buildings that are environmentally responsible, profitable, and healthy to live, and work in. These organizations include the US Green Building Council-Leadership in Energy and Environmental Design (LEED), National Association of Home Builders (NAHB), United States Green Building Council (USGBC), Austin Green Building, and Cahners Residential Group. Buyers are not only concerned with the

price and quality of their home, but also with the effects they have on the environment, and in-door air quality. Green Building promotes the conservation of the natural environment and forest resources. Builders and manufactures are beginning to recognize the opportunity and possibilities of using more green products. This is the current market trend but is soon becoming legislative.

Cahner's surveys conducted in 2000 and 2001 showed that fewer than 50% of home builders believe that buyers would pay extra for green buildings, but in reality, the survey illustrated that 96% of home buyers claim that they are willing to pay extra for building materials that are:

1st Energy efficient

2nd Recyclable and do not affect the quality of indoor air

3rd Do not use old-growth trees

Based on Green Building criteria, Williams Lake Flooring Ltd. can market small diameter Douglas-fir flooring as a green product. Architects, designers, and developers are becoming very interested in helping the environment by building green, and they can be part of the product's target market. This creates a business opportunity for launching Williams Lake Flooring Ltd. as a Green Building friendly product. It is essential for forest products produces to change their policies towards the green concept, otherwise there is a potential for lost market share.

4.0 The Competition

The competitors of softwood flooring are small compared to hardwood flooring. Even though the character of the product is comparable between Williams Lake Flooring Ltd. and the competitors, there are a number of economical rewards that will position us at a distance from other flooring producers. Williams Lake Flooring Ltd. generates an exclusive and pleasing softwood species that is innovative to the flooring market. Operation plans are exceedingly adjustable to consumer demands and the harvest methods are perceptive to the environment and generate winter habitat for mule deer. Projected use of sustainable forest management practices and high excellence softwood flooring product guarantees the consumers of Williams Lake Flooring Ltd. will have a superior product. The employment opportunities in the future will benefit the local communities and the local First Nations by adapting the horse logging harvest method to generate community support and public participation in the Alex Fraser Research Forest. The employment opportunity is plentiful in the long term and helps to establish viable relationship building for the future of First Nations and local community.

4.1 Future Competition

Woodland Flooring & Millwork, located in the Comox Valley of Vancouver Island, British Columbia, shares the idea of Douglas-fir flooring. Two varieties of the species are recognized: *Pseudotsuga menziesii* (mirb.) Franco var. *menziesii* (coastal Douglas-fir), and *Pseudotsuga menziesii* var. *glauca* (Beissn) Franco (interior Douglas-fir). The

competition sells coastal Douglas-fir as clear select and rustic knotty standard grades, whereas the interior Douglas-fir is clear select and without the rustic knotty style. The tight grain and slow growth branches are small, making the knots small and less visible, and less dense. These characteristics make it an ideal flooring material.

4.2 Barriers to Entry

In the past, interior Douglas-fir was used as flooring, but is rarely used today. This is because the market for this product has nearly disappeared. It will require considerable effort to reintroduce interior Douglas-fir into the market as a viable flooring product.

5.0 Strategic Position and Risk Assessment

5.1 Strategic Position

As a young and innovative company, Williams Lake Flooring Ltd. sets themselves apart from other flooring manufacturing companies in a variety of ways. Engineered flooring, as mentioned previously, sets itself apart from other flooring because of its unique qualities. The company's engineered flooring is being produced from small-diameter Douglas-fir, with properties distinctive only to the region of growth. Due to its tight grain and slow growth properties, the wood has a higher density compared to normally grown Douglas-fir. Furthermore, with the addition of an organic hardening agent, it can be made further resistant to markings and scratches to the surface caused by regular use.

The small diameter Douglas-fir is quarter-sawn and has high aesthetic appeal due to its slow growth and lack of taper. The wood's tight, dark grain is very straight, allowing for an interesting and different look in comparison to other engineered wood flooring. These properties help to differentiate the company's product. The harvesting operations, compared to other wood producers is very eco-friendly, since a low-impact tractor is used to remove the trees from the forest.

Certification of our product will also set us apart from other flooring manufactures. After a year of production, we will obtain WoodMark certification, which will assure the public that we are committed to good forest stewardship.

5.2 Risk Assessment

Like any new company, a lot of risk is involved in the start-up of the manufacturing process and in the logistics division. Williams Lake Flooring Ltd. should be able to excel strategically and operationally as a result of the management team's high level of expertise in the secondary wood products manufacturing sector. As managers, we understand all aspects of the manufacturing and logistics sectors of the industry, including quality control, industrial engineering, and forest management.

Williams Lake Flooring Ltd. sees a huge opportunity in the engineered flooring sector because the product sets them apart from all other manufacturers of wood flooring. We believe that once our manufacturing and logistics is at optimal efficiency, we will be able

to take hold of a significant proportion of the market. Competition in this industry is low in British Columbia because there are very few other engineered flooring manufactures in the province.

Softwood floors in general are a risk in the flooring market because hardwood and laminated materials currently dominate the standings in the engineered flooring markets. Customer perception of our product is going to be very important to Williams Lake Flooring Ltd to gain successful market penetration. To increase awareness of the benefits of our product, we will develop a marketing campaign that will change the current perception of softwood as a flooring material.

6.0 Operating Plan

6.1 Operations Strategy

From an operational perspective, capitalizing on the market opportunities will require step-wise development. Market penetration will begin in local regions before expanding abroad. This will present Williams Lake Flooring Ltd. with sufficient time and flexibility to optimize the manufacturing processes. Furthermore, detailed market analysis on our specific product will also be conducted during the initial development phases in order to determine the optimal expansion strategy.

Processing systems will begin using relatively small, but high-quality equipment with enough capacity to satisfy local markets initially. As market analysis is perfected for our

specific product, and entry into other market areas are established, higher capacity machines will be implemented. The majority of the machines purchased by Williams Lake Flooring Ltd. will be from Wood-Mizer, the world's leading manufacturer of saw-mills. Having the majority of our machinery base from one manufacturer will help to keep maintenance costs low and simplify logistics.

Quality will be Williams Lake Flooring Ltd.'s number one focus, allowing for complete customer satisfaction and production optimization. Within complete control over operations, the company will be in a position to implement the WoodMark quality certification program within one year of operations. Quality control tools, including statistical process control, total quality management, and continuous improvement will be used to analyze areas in the plant identified as the having the most significant impact on the quality of the final product. The consistency and productivity will be improved, while customers will have peace of mind knowing their flooring originates from a plant having a recognized certification system.

6.2 Location and Facilities

In order to keep transportation costs to a minimum, manufacturing space will be strategically allocated on site at the UBC Alex Fraser research forest in Williams Lake. Potentially, fewer trucks will be needed in order to satisfy the mills current and future needs as the turn-around time between the plant and the harvest sites will be low. Furthermore, having the manufacturing facility located within close proximity to the

harvesting operations will ensure a more seamless flow of raw material into the plant and will minimize traffic and motor-vehicle accident related delays. The greatest benefit of having manufacturing facilities on site is the elimination of land leasing costs in the township of Williams Lake.

6.3 Production

Logging operations, including, felling, yarding, bucking, and sorting are being managed by staff at the research forest. The current operation, which utilizes a slow tractor skidder, will be sustained until processing operations are at full capacity and all aspects of Williams Lake Flooring Ltd. have had time to equilibrate. Higher capacity, low-impact skidders will be necessary once operational capacity is expanded in the coming years. In areas were road and landing construction or topography are challenging, horse logging may be utilized to extract logs of the highest value. Utilization of horses as a means of transporting logs to the roadside will also be a posed as an environmentally friendly management practice and shall become a part of the marketing strategy in the future.

Fir flooring is inherently softer than pine and all hardwood floorings, and as such, a hardening treatment will be applied. An organic treatment known as Indurite, invented in New Zealand, will be used to significantly improve the performance characteristics of the end-product.

6.4 Cost of Operations

The major capital cost incurred for the manufacturing will be the construction of a building onsite. Approximately $250,000 will be required for a 1000m^2 structure. Infrastructure, including electricity, gas, water, and sewers, will add an estimated $100,000 to the capital cost. High quality machinery for precision crafted flooring, and a kiln will be the next biggest capital investment. The initial set up of primary equipment will consist of the following:

CAPITAL COST ITEM	MANUFACTURER	COST
Building	-	*$250,000*
Solar kiln	Wood-Mizer	*$50,000*
Infrastructure	-	*$100,000*
Machines		
Debarker	Wood-Mizer	$5,000
Band mill	Wood-Mizer	$25,000
Two-sided edger	Wood-Mizer	$15,000
Moulder	Wood-Mizer	$30,000
Table saw	Altendorf	$10,000
Widebelt sander	SCM	$8,000
Hot press	Italpresse	$15,000
Chop saw with Tiger Stop		$5,000
Dust collection system		$5,000
Conveyors	Wood-Mizer	$5,000
Pipeworks and platform	-	$5,000
Forklift	Toyota	$50,000
Machines TOTAL		*$168,000*
Spare parts	-	*$10,000*
TOTAL COST		**$578,000**

Table 1: Machinery Costs

Waste material, including sawdust and off-cuts will be sold to a firelog manufacturer. The waste will be collected and placed in portable crates for shipment off-site. The waste factor for high-end flooring from small diameter logs is expected to be 40-50%.

The stocking density of small diameter Douglas-fir is approximately $50m^3$ per hectare over 3500 hectares which can be harvested over a thirty year period. This amounts to a supply of $5800m^3$ per year, which equates to $16m^3$ per day. Fifty percent of this will become waste during the manufacturing process.

Williams Lake Flooring Ltd. will begin its production with a maximum available capacity of approximately one quarter the daily log supply by utilizing a single Wood-Mizer band mill and edger. Each bandmill has a capacity of $3.8m^3$ per day (eight hour shift). The company will begin operations with approximately 50% utilization of the Wood-Mizer, which amounts to $1.9m^3$ per day, thereby minimizing risk. This value does not factor in waste. Once the first Wood-Mizer is fully utilized, which Williams Lake Flooring Ltd. hopes to achieve within two years of operation, the company will be able to process almost $3.8m^3$ per day, or one quarter of the available log supply.

After factoring in waste ($0.95m^3$), in the first year, we can expect to manufacture 840 thousand square feet of flooring at one quarter capacity of a single Wood-Mizer bandmill. This represents 500 to 1000 flooring installations in the first year. At an average of $8 per square foot, Williams Lake Flooring Ltd. could achieve a revenue input of

approximately $6.7 million in the first year of operations, not including the sale of waste material. This allows for a gradual ramping of production levels.

6.5 Process Flow

Manufacturing engineered Douglas-fir flooring requires following a set of standardized operating procedures.

- Delivery and storage of logs from harvest site
- Debarking to remove dirt and debris which can shorten tooling life
- Raw wood cut to rough thickness with the band mill
- Raw wood edged to rough width with a two-sided edger
- Raw wood is kiln dried to ~7%, which is best for most North American home environments. Moisture content can be varied for other environments.
- Dried Douglas-fir planed to rough thickness
- Glue side of Douglas-fir sanded to provide a smooth surface for gluing
- Plywood substrate ripped to width
- Dried Douglas-fir laminated to plywood substrate in hot press
- Laminated strips cut to length with chop saw, optimized by a Tiger Stop unit
- Laminated strips are sent through the moulder for sizing to final dimension (minus the sanding tolerance) as well as profiling for the tongue and groove. The moulder is equipped to do all of these operations in a single pass.
- Product is sanded to final thickness in a widebelt sander
- Indurite treatment
- Final product inspection and packaging

6.6 Suppliers/Distribution

Logs will be delivered directly from the research forest. The supply of small diameter logs is plentiful from within the research forest as well as across the entire province of BC. Ultimately. there is sufficient supply to sustain operations indefinitely.

The plywood, required to form the substrate of the engineered flooring will come from outside suppliers. A reputable supplier will be selected and a relationship established in order to ensure a reliable supply. Since plywood is a commodity product, it will only be necessary to receive supply from a single manufacturer that can prove to be reliable and consistent in delivery times. West Fraser Mills would be a suitable supplier.

A market share distribution can be obtained thru CanWel Building Materials Ltd., one of Canada's leading distributors of building materials. They are dedicated to the best floor covering solutions. CanWel offers a multitude of styles and Williams Lake Flooring Ltd. can use this entry to help suit every taste and complement any décor. The combined quality of Douglas-fir softwood flooring is durable, meets performance and quality to ensure Williams Lake Flooring Ltd. Ltd is the best choice.

6.7 Technology and Long Range Expansion

Our unique product, capitalizing on the properties of slow-grown Douglas-fir is expected to excel in the market once Williams Lake Flooring Ltd. brand recognition is established. Our operational entry strategy of beginning at relatively low production rates with a Wood-Mizer bandmill, will ultimately guide us towards higher production machines and significant automation. Large capital investments into an automated infeed system, log scanners, and a high capacity bandmill, will enable a more streamlined and even-flow process. Furthermore, the use of a 3-axis log scanning system will enable maximum yield from each log, as well as detailed identification and positioning of log defects. Once Williams Lake Flooring Ltd. goes on-line with high-capacity automated equipment, the company will be able to infiltrate the market with more competitive pricing strategies and economies of scale. While the high-end markets will be the primary initial target, with more efficient machine investments, Williams Lake Flooring Ltd. will be able to cater to slightly lower-end interests, while maintaining a balance as a specialty manufacturer with a unique product for unique lifestyles.

7.0 Management and Organization

7.1 Organization

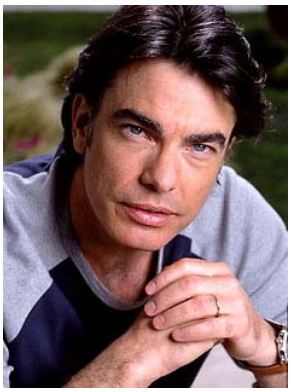
Williams Lake Flooring Ltd. will be structured as a flat organization consisting of fewer levels of management. With fewer levels of management, communication within the company will stream throughout, instilling creativity and innovation. Having cross

functional teams within our organization will encourage teamwork and creative thinking amongst all levels.

7.2 Managers

The Williams Lake Flooring Ltd. will consists of five highly educated and experienced individuals with backgrounds in the secondary manufacturing, marketing, quality assurance, forest management, as well as international relations.

These managers include:



Will Waldstein
President and Chief Executive Officer

Mr. Waldstein has Bachelor of Science Degree in Forestry majoring in Resources Management and a Bachlor of Science Degree in Woods Products Processing from the University of British Columbia. He then attained his Ph.D. specializing in advanced secondary machining processes.

Krista Klein
Vice-President, Corporate Development, General Counsel and Corporate Secretary

Ms. Klein attained her Bachelor of Science in Wood Products Processing from the University of British Columbia. She then achieved her Masters of Business of Administration from Harvard School of Business. She later received an honorary doctorate from the University of British Columbia for her accomplishments in raising the level of recognition of the wood sector of British Columbia.

Maryam Niroomand
Vice-President, Wood Products Marketing and Sales

Ms. Niroomand has her Bachelors of Science in Wood Products Processing from the University of British Columbia. She later accomplished her Masters of Business Administrations in International Relations from the University of Toronto.

Sally Sellars
Vice President, Forestry and Environment

Ms. M. attained her Bachelors of Science in Forestry majoring in Resources Management. She later achieved her Masters of Forestry in Conversation and Environmental Studies.

Sunny Li
Vice-President, Solid Wood Operations

Ms. Li has her Bachelors of Science in Forestry majoring in Resources Management. She later achieved her Ph.D. focusing on forest certification as well as sat on the board of directors that developed the LEED certification system.

7.3 Employees

This organization will be an equal opportunity employer, consisting of highly qualified employees working in the operations sector as well as in the office. Our goal as an entity is to work as a team to accomplish the goals set by the mangers. Working as a member of a team allows the employees to feel empowered as a member of Williams Lake Flooring Ltd. This is important because the company strongly believes that with a

positive attitude and outlook, the employees will feel committed and will want to do their best for the betterment of this organization.

8.0 Financials

Williams Lake Flooring Ltd.		
BALANCE SHEET		
For Period Ending December 31, 2006		
ASSETS		
Current Assets		
Cash and cash equivalents	50,000.00	
Inventory	65,000.00	
Parts and supplies	20,000.00	
Total Cash		**135,000.00**
Long Term Assets		
Buildings	250,000.00	
Equipment	168,000.00	
Total Other Assets		**418,000.00**
TOTAL ASSETS		**553,000.00**
LIABILITIES & EQUITY		
Liabilities		
	65,000.00	
TOTAL LIABILITIES		**65,0000.00**
Equity		
Owner's Equity	488,000.00	
Total Equity		488,000.00
TOTAL LIABILITIES & EQUITY		**553,000.00**

Table 2: Balance Sheet, Year 1

Statement of Projected Operations and Cash Flows For two years			
SALES PLAN			
		2006	**2007**
Units planned (sq. ft.)		840000	1680000
Dollar sales planned		6720000	13440000
FINANCIAL PLAN			
Cost of Goods Sold			
Materials			
	Plywood	195000	390000
	Glue	15000	30000
	Packaging	60000	120000
	Indurite chems	76500	153000
	Total Materials	346500	693000
Direct Labour		720000	720000
Overhead			
	Logging costs	24700	49400
	Equipment dep'n	27600	27600
	Utilities	43200	49000
	Total Overhead	95500	126000
Total Cost of Goods Sold		1162000	1539000
GROSS PROFIT		5558000	11901000
SELLING, GENERAL			
AND ADMINISTRATIVE			
EXPENSE			
	Salaries	350000	350000
	Freight	90000	160000
	Travel	5000	6000
	Office supplies	11500	500
	Miscellaneous	5000	7000
	Total S,G,A exp.	461500	523500
OPERATING PROFIT		**5096500**	**11377500**

Table 3: Statement of Projected Operations and Cash Flow for Two Years

As discussed in the operations plan, Williams Lake Flooring Ltd. has the potential to achieve income of $6.7 million revenue. Operating profit of $5 million per year is expected with a single Wood-Mizer after accounting for wages, salaries, logging costs, machinery depreciation, supplies, freight, utilities, and materials. After corporate provincial and federal tax deductions, Williams Lake Flooring Ltd. expects profit to be approximately $2.5 million.

Williams Lake Flooring Ltd. will depreciate its machinery over 5 years and sell it at the end of the period for a salvage value of approximately $30,000. Fifteen employees will be hired to do the manufacturing and each will be paid a wage rate of approximately $25 per hour.

References

American Society of Interior Designs. 2003. [Online] Available at: Find a Designer http://www.asid.org/ [Accessed March 28th, 2005]

Canadian Home & Country Magazine. 2004. [Online] Available at: Advertise with Us http://www.canadianhomeandcountry.com/ad.shtml [Accessed March 30th, 2005]

CanWel Building Materials Limited. 2004. [Online] Available at: Products Flooring http://www.canwel.com/flooring.htm [Accessed April 5th, 2005]

Indurite Organically Hardened Solidwood. 2005. [Online] Available at: Osmose Timber Technologies http://www.protimsolignum.com/osmose/frames.htm [Accessed March 21st, 2005]

International Interior Design Association. 2005. [Online] Available at: The Association for Design Professionals. http://www.iida.org/i4a/pages/index.cfm?pageid [Accessed March 28th, 2005]

Woodland Flooring & Millwork.2003. [Online] Available at: Authentic Fir Floors http://www.woodlandflooring.com/authenticfir.html [Accessed April 2nd, 2005]

A.Jones-Crabtree, "Sustainable Building: What Are Green Building Products and Where Do I Find Them?". USDA Technology and Development Program, April 1999.

Berrin Erturk. Flooring, Window Frames and Doors. [Online] Available at: http:// strategis.ic.gc.ca/epic/internet/inimr-ir.nsf/en/gr109950e.html [Accessed March 25, 2005]

British Columbia Housing Stats For Urban Area And Communities. [Online] Available at BC Stats website: http://www.bcstats.gov.bc.ca/data/dd/handouthstart.pdf [Accessed April1,2005]

Cahners Residential Group, September 2000. Building Green Services. Building Green Council of Central Oregan. [Online] Available at: http://www.3estrategies.org/council_membership.htm [Accessed March 27, 2005]

Canada's Business and Consumer Site, Search for BC & Canada Exports of Furniture to the US. [Online] available at: http://strategis.ic.gc.ca [Accessed March 27, 2005]

Chris Gaston, Journey to Future. AGM and Conference Program http://www.prf-bc.org/agm53cgaston.html [Accessed March 27, 2005]

Kazuhisa Takabatake. Home Remodeling Market 2003. [Online] Available at: Strategis.gc.ca. http://strategis.ic.gc.ca/epic/internet/inimr-ir.nsf/en/gr105549e.html [Accessed March 27, 2005]

Mater Engineering, Markets and Processing Options for Small Diameter Trees Central Oregon Intergovernmental Council June 2002, Available at: http://www.coic.org/copwrr/COICFinalRpt2.pdf [Accessed April1,2005]

Rita Patlan, New Opportunity! U.S. Building Products Trade Mission 2002. [Online] Available at: http://strategis.ic.gc.ca/epic/internet/inimr-ri.nsf/en/gr112751e.html [Accessed March 25, 2005]

World Economic Growth. The Monthly International Solid Wood Report. March 2002. Vol 7,No2.

Wood-based Flooring Products- Market Trends. Technology Profile. 2004. [Online] Available at : www.valuetowood.ca [Accessed March 27, 2005]

Wahl, Cohen, Kozak, Gaston. The Japanese Market for wood Flooring and Wood Windows. University of British Columbia and Forintek Canada Crop, May 1999.

Wood for Building Green.[Online] Available at: http://www.metafore.org/index.php?p=Wood%2Bfor%2BBuilding%2BGreen&s=34 [Accessed March 25, 2005]

Miscellaneous websites:
http://www.stat-usa.gov/
http://www.housingzone.com
http://www.bcwood.com
LEED website: http://www.usgbc.org/leed/leed_main.asp
US Census Bureau: http://www.census.gov/