

## **1-Abstract**

This is the first semester of EnPro 350. Although the title suggests wood reclamation via arts and crafts, we have decided to expand the focus to reclamation via urban wood and lumber. We would like to start a business that addresses a need in the market for convenient removal of dead or infested trees in an urban setting. This encompasses all trees not located in forests or tree groves, and includes those found in urban setting. Often, the expense to remove one's trees from his property is a time-intensive, confusing, and expensive process. We have decided to provide the service of tree health assessment, removal, processing, lumber certification, and marketing through utilizing the concept of vertical integration.

### **Mission Statement:**

"To Satisfy Our Customers by Providing High Quality Wood from Urban Forests while Creating a Positive Change in the Environment"

## **2 – Background**

A – Our customers will include local Chicagoland governments and businesses that would otherwise buy wood from generic sawmills. These would include construction companies, developers, furniture makers and home furnishing manufacturers (cabinetry, flooring...). Our sponsors would provide us with potential grants that support the awareness of the Emerald Ash Borer infestation and also the expansion of urban forestry. One of the sponsors would be the Illinois emerald Ash Borer Wood Utilization Team. Another sponsor on a national level would be the U.S. Forest Service Wood Education and Resource Center.

B – The goal of our Enpro is to find a use for urban trees that are cut down and wasted. Our Enpro is focused in finding a more efficient and green way of reclaiming the wood from urban trees that were either affected by the Emerald Ash Borer or had to be removed for another reason. Our research began focusing on the Emerald Ash Borer infestation and how thousands of trees with salvageable wood weren't being used to their full potential or even at all. We then realized that the problem was much bigger and extended to any tree being taken down in an urban setting, where most of the time, they ended up being made into sawdust or completely thrown away.

Problems our company will face include getting our product certified as a sustainable material so that in the future, LEED points will be granted to consumers that use our wood in their projects. Another problem we might encounter is the lack of control over the quality and quantity of supply of our raw material. Lastly a big challenge will be to educate and raise awareness of this urban wood market, so that our customer base is expanded.

C – The technology involved in our business deals with the actual milling of the urban wood we process. Because of the presence of metals in the wood, metal detectors are needed. However, we do not see technology as a possible failure for the business. Our main concern is to get certified, because based on

other sawmills that deal with Urban Forestry, certification is necessary to grow your client base and to sell the product at a higher price.

D-Not applicable because this is a first semester EnPro.

E – Our business will be morally responsible in that we will not only make a profit off of the Emerald Ash Borer problem, but we will invest into the research to find solutions for it, and also to educate the public about it. Wood will also be donated to charities, such as Habitat for Humanity. We are also true to our mission statement in that we will only use wood from urban trees that were cut down either because they were infested with the Emerald Ash Borer or because they posed a safety concern to the community they were in. Also, another responsibility the company will have is to guarantee the wood is safe for the potential consumer.

### **3-Objectives**

1. To achieve the aforementioned goals, we must fulfill the following objectives:

- a. Local- we must create a partnership with local governments as both customers and support for potential tax break laws.
- b. Urban-we are focused on wood from local urban setting, and thus, must evaluate the profitability of each city's urban wood offerings
- c. Quality, variety- we will understand how to utilize and market the variety of woods we will be obtaining.
- d. Problem-we must address the issue and contribute to education regarding the EAB issue that inspired the EnPro. Emerald Ash Borer beetles are destroying ash trees across the Midwest, subjecting them to removal. The wood is of quality and not properly utilized.
- e. Sustainability- we must project to the customer how our product is sustainable and also find a way to contribute back to the initial environmental problems associated with some urban woods (EAB).
- f. Competitive pricing- we must determine how to turn a profit, beat out our competitors, and find investors
- g. Certification- we would like to offer some sort of certification that our wood is a.) safe b.)of quality and c.) sustainable/ green
- h. Education- we must find a way to market our sustainability and create connections with local environmental associations
- i. Target market- We must look to target individuals or groups that are concerned with environmental issues or our wood product.

## 4-Methodology

GOAL: business solution for utilization of reclaimed wood  
Work Breakdown Structure

1

### RESEARCH

- \* ASSESMENT
  - ARBORISTS
- \* STATISTICS
  - TREE TYPES AND DATA
- \* MACHINERY
- \* TREE REMOVAL, TRANSPORT & STORAGE
- \* MILLING
- \* VALUE CHAIN ANALYSIS AND COST
- \* MARKET RESEARCH
  - WHO AND HOW CAN WE SELL
- \* COMPANY FINANCE
  - GRANT POSSIBILITIES
  - LOANS
  - INVESTORS

2

### SOLUTION

- \* TYPE OF RECLAIMED TREES
- \* FINAL PRODUCT

3

### CERTIFICATION

- \* COST
- \* GOVERNMENT PROGRAMS
  - LEED
  - RECLAIMED WOOD COUNCIL

4

### MARKETING

- \* SUPPORT
- \* MEDIA
- \* CONVENTIONS
- \* MAGAZINES
- \* GREEN
- \* TAX INCENTIVES
- \* STORY BEHIND THE PRODUCT

5

### GIVING BACK & EDUCATION

- \* SUPPORT RECLAMATION RESEARCH
- \* SCHOOLS
- \* INFORMING THE PUBLIC ABOUT THE PRODUCT THROUGH THE PRODUCT



## 5-Project Budget

I PRO Budget		
Field Trip	\$120	Transportation for field trip to arboretum
I PRO Day Table	\$100	Table at I PRO day
Poster	\$160	Posters for I PRO day
Postage	\$10	Postage for grant applications
Class Website	\$20	Maintain an I PRO 350 class website
Brochures	\$30	Printing brochures for I PRO day
Field Trip	\$60	Transportation for field trip to forest preserve
Total	\$500	

## 6-Team Structure and Assignments

Name	Major, year	Skills and Strengths	Experience and Academic Interest	Team
Catherine Budzinski	Architecture, 5	Illustrator, Photoshop, AutoCAD, 3ds Max, MS Office, Viz, Powerpoint, Dr Frame, Lasercutter, shop. Public speaking ok. Organizing and managing.	architectural internship, secretary, and counseling kids. I also enjoy gardening, biking, and movies	Marketing and Education
Hernan Canales	Business Administration, 4	Business Finances (strength), not so much public speaking.	worked for a big company in Mexico, recording revenues into system.	Finance and Research
Felix Chunuwe	Mechanical	Microsoft office suite, AutoCad,Solid Edge, Organizing, and Managing.	Current working with a design engineering group, and interested in business	Finance and Research
Tasha Farris	Architecture, 4	Illustrator, Photoshop, AutoCAD, 3ds Max, MS Office	Campus and Conference Center Employee, tentatively plan on pursuing a career in digital design (3d modeling and animation). Also very interested in entrepreneurship.	Presentation
Gabriel Fontes de Faria	Architecture, 5	Illustrator, Photoshop, AutoCAD, very organized and detail oriented. Public speaking ok.	I am from Brazil and have lived in 5 cities, and 3 countries because of my dad's executive position. Aside from architecture, I am interested in photography and traveling.	Marketing and Education
Chris Heppel	Architecture, 5	Illustrator, Photoshop, AutoCAD, very organized and detail oriented. Public speaking ok.	Internship at Chicago Park District. Interested in Photography, Outdoor, Computer	Presentation
Sana Ihmoud	Architecture, 5	Illustrator, Photoshop, AutoCAD, 3d Programs, MS Office, model making	previously employed in retail, I like writing, reading, coloring. I have the experience of an average fifth year architecture student.	Marketing and Education
Melissa Lee	Biochemistry, 4	writing, speaking, facilitating team discussions, biological aspects	Intern at IIT for Service-Learning group. Have done research on non-profits and lead group discussions with 20+ peers. Interested in biology and business.	Project Management
Amy Martin	Business Admin and Applied Science, 3	collecting and organizing things, taking notes, communicating with other team members, and finding information. I'm a behind-the-scenes person.	work in telecommunications office at IIT, at home I am a pharmacy technician. Involved in SGA, chess club, tennis club, and Alpha Sigma Alpha- VP and recruitment. Really interested in biochemistry.	Project Management
Victor Mitchell	International Business w/ minor in Architecture, 4	Project leading, Visions, Design, Photoshop, AutoCad, detail oriented, Public Speaking, Presentation	Student Government Association-VP of Comm., GLAMI-VP, Student Ambassador-Admissions, Student Peer Councilor-OMSS, Gospel Choir,	Project Management
Avni Patel	Architecture, 4	Illustrator, Photoshop, AutoCAD, organizing, keeping work on task, busy work. Yuck public speaking.		Finance and Research
Karen Rivas	Architecture, 5	Illustrator, Photoshop, AutoCAD, MS Office, Power Point, planning, organizing	Project Coordinator for Interior Design Company, currently helping build bakery business specializing in custom 3-d and specialty cakes. Other interests: arts and crafts projects, photography.	Project Management
Julia Valadez	Architecture, 5	Illustrator, Photoshop, AutoCAD, organizing,	president of Architectos, iit chapter, knitting, playing guitar	Presentation
Jessica Workman	Architecture, 5	Illustrator, Photoshop, AutoCAD	associates degree in Engineering, work for small engineering firm, a member of Architectos	Presentation
Herman	Business Admin. And Applied Science, 5	microsoft office, quicken, micromanagement, organizing	member of undergraduate business council, worked on semester-long entrepreneurship project.	Finance and Research

## Project Groups

### Project Monitoring/Management (4)

\*Group Leader: to be determined

Members: Karen, Amy, Victor, Melissa

- \*Master schedule maker
- Agenda maker
- Timekeeper
- Monitor work break down- make sure people are doing their part
- Minutes, taking and posting
- Project Plan creation and reiteration
- Business Plan
- Master schedule

### Finance and Research (4)

Group Leader: to be determined

Members: Hernan, Herman, Avni, Felix

Responsibilities:

- Make sure people complete and post their research
- Organize group members and assign research
- Organize research gathered
- Responsible for making sure research is in a presentable form where pertinent.
- Finances- research
- Value chain analysis and cost
- Group schedule, submit to project management group

### Marketing and Education (3)

Group Leader: to be determined

Members: Sana, Gabe, Katie

Responsibilities:

- Awareness and education- what resources
- Giving back to the community- how?
- Group discretion
- Group schedule, submit to project management group

### Presentation Group (4)

Group Leader:

Members: Julia, Tasha, Jessica, Christopher

Responsibilities:

- Gather all material that will go into presentation
- Create poster and pamphlet
- Create final book
- Create midterm presentation

- Create final presentation
- Group schedule, submit to project management group

### Business Plan

Group Leader:

Members: everyone

Responsibilities:

- Group schedule, submit to project management group
- To be determined