Optimization of a Small Business's Sustainability Using Life-cycle Analysis Software and Benefit Corporation Assessment Tools

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Optimization of a Small Business’s Sustainability

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The Problem

• The average person in the US consumes twice as much as they did 50 years ago
• 99% of the materials we harvest, mine, process, transport, and consume become waste within six months. Why? → Planned obsolescence, perceived obsolescence, and inefficient/wasteful manufacturing processes
• True costs of products are externalized
• Current legal and economic structure forces public companies to maximize short term profits at the expense of the environment, society, and even the long term sustainability of the business itself

Solution: Benefit Corporations

B-Corp Certification
Benefit Corporation Legislation

Case Study: American Bench Craft

American Bench Craft is a New England based company that makes quality handcrafted leather goods. They have a very specific mission that is achieved with simple innovative designs.

Mission: Quality & Durability → Simple products are more durable. Less parts equals less susceptibility to failure. Simple designs and premium materials make these products built to last.

Mission: American Jobs → The simple design concept allows for local manufacturing in the USA, using chronically underemployed populations → creating American jobs where they are needed the most.

Mission: Environmental Sustainability → The lasting durability of these products minimizes waste, and the simple, consolidated manufacturing process reduces the carbon footprint.

Life-cycle Analyses using SimaPro™

Environmental Impacts of American Bench Craft Wallet Components

Transportation Options

Impact Comparison of Global vs. In-country Transportation

Metal Fastener Options

Impact Comparison of Brass Rivets vs. Aluminum Screws

Decisions and Trade-offs: Analytical Hierarchy Process

Metal Fastener Choice
Alternatives Ranking

Brass Rivets - 0.52 Better Option
Aluminum Chicago Screws - 0.48

Criteria Priorities

Impact Comparison of Brass Rivets vs. Aluminum Screws

Importance of Durability

Leather Choice
Alternatives Ranking

Vegetable Tanning - 0.66 Better Option
Chrome Tanning - 0.61

Criteria Priorities

Importance of Cost