



World Bamboo Congress

Bamboo Fiber for Industry

August 15, 2018

Presenter:

David Knight
Co-Founder, President/CEO



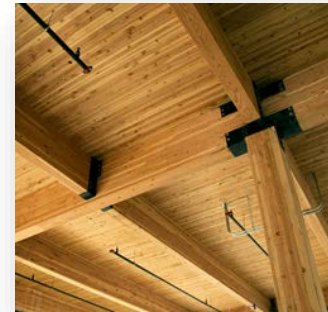


Resource Fiber – The Only U.S. Integrated Bamboo Fiber Company

Bamboo and its unique material properties are significantly underutilized in large-scale industrial applications.

Resource Fiber is:

- manufacturing high performance bamboo products;
- growing a sustainable bamboo forest in Alabama to support its bamboo product strategies; and
- selling bamboo fiber to other industrial users.



Recognized Industry Leaders

100+ years experience in bamboo industry



David Knight, CBI

Co-Founder, Investor
President/CEO
Co-Founder, Teragren Bamboo



Ann Knight

Co-Founder, Investor
CCO/EVP
Co-Founder, Teragren Bamboo



Marsha Folsom

Co-Founder, Investor
Chief Development Officer
Former First Lady, Alabama



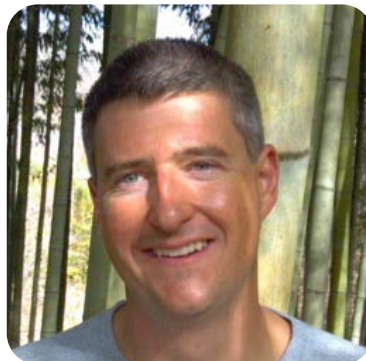
Mary Valenta, DBA, CPA

Financial Expert, Investor
Principal, On The Green
Former CFO, O'Neal Steel



Lee Slaven

Investor
COO, Manufacturing
Former R&D Director, Teragren



Roger Lewis

COO, Agriculture
Investor
Principal, Lewis Bamboo

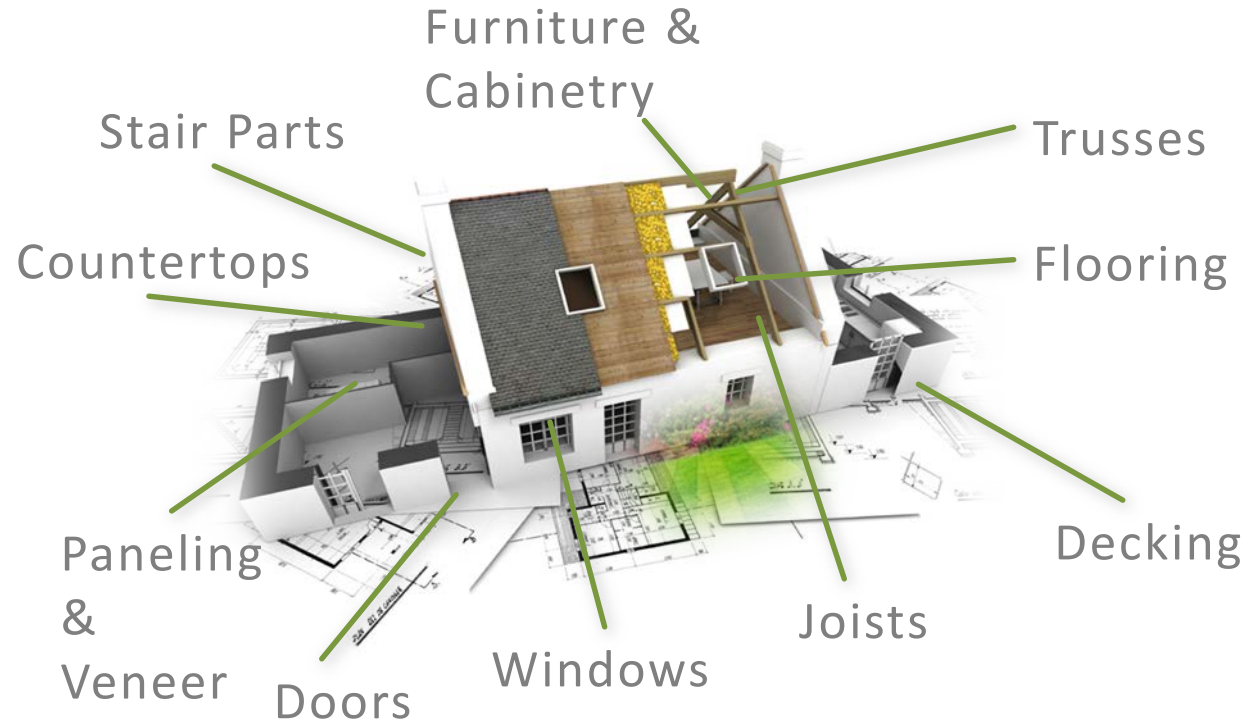


Scott Bryant

Land Asset Manager
Investor
Principal, Cyprus Partners



Recognized Industry Professionals Lead Resource Fiber



Co-founders David and Ann Knight established Teragren Bamboo in 1998 with an emphasis on environmentally and socially responsible practices.

- 1 million SF manufacturing facility in China
- Grew revenue 30% to 40% annually for over 10 years
- Rated #1 in *Consumer Reports* multiple years running
- Teragren serviced over 4,000 flooring stores in North America



Notable Teragren Installations

Notable Installations

A curated selection of commercial and public projects that use Teragren products



**RIO PIEDRAS
APARTMENT BUILDING**

Location: San Pedro Sula, Honduras. Signature
Naturals Bamboo Flooring and Vertical Grain
Caramelized Panels



**U.S. ENVIRONMENTAL
PROTECTION AGENCY**

Location: Denver CO
Signature Naturals Bamboo Flooring and Vertical
Grain Caramelized Panels



**CHICAGO MUSEUM OF
SCIENCE & INDUSTRY**

Location: Chicago IL
Synergy® Strand Bamboo Solid-Strip Flooring



**U.S. DEPARTMENT OF ENERGY
SOLAR DECATHALON**

Location: Washington DC
Traditional Bamboo Panels and Specially
Developed Open-Web Bamboo Joists



**WEST COAST GREEN
HARBINGER HOUSE**

Location: San Jose CA
Signature Colors Bamboo Flooring



**YALE UNIVERSITY'S
GREEN BUILDING PROJECT**

Location: New Haven CT
Synergy® Strand Bamboo Solid-Strip Flooring



HUTTON HOTEL

Location: Nashville TN
Synergy® Strand Bamboo Solid-Strip Flooring
and Strand Panels



**AMGEN RESEARCH +
TECHNOLOGY CENTER**

Location: Seattle, WA
Signature Naturals Bamboo Flooring, Vertical
Grain Natural Panels and Custom Stair Parts

Why Create Sustainable Companies?

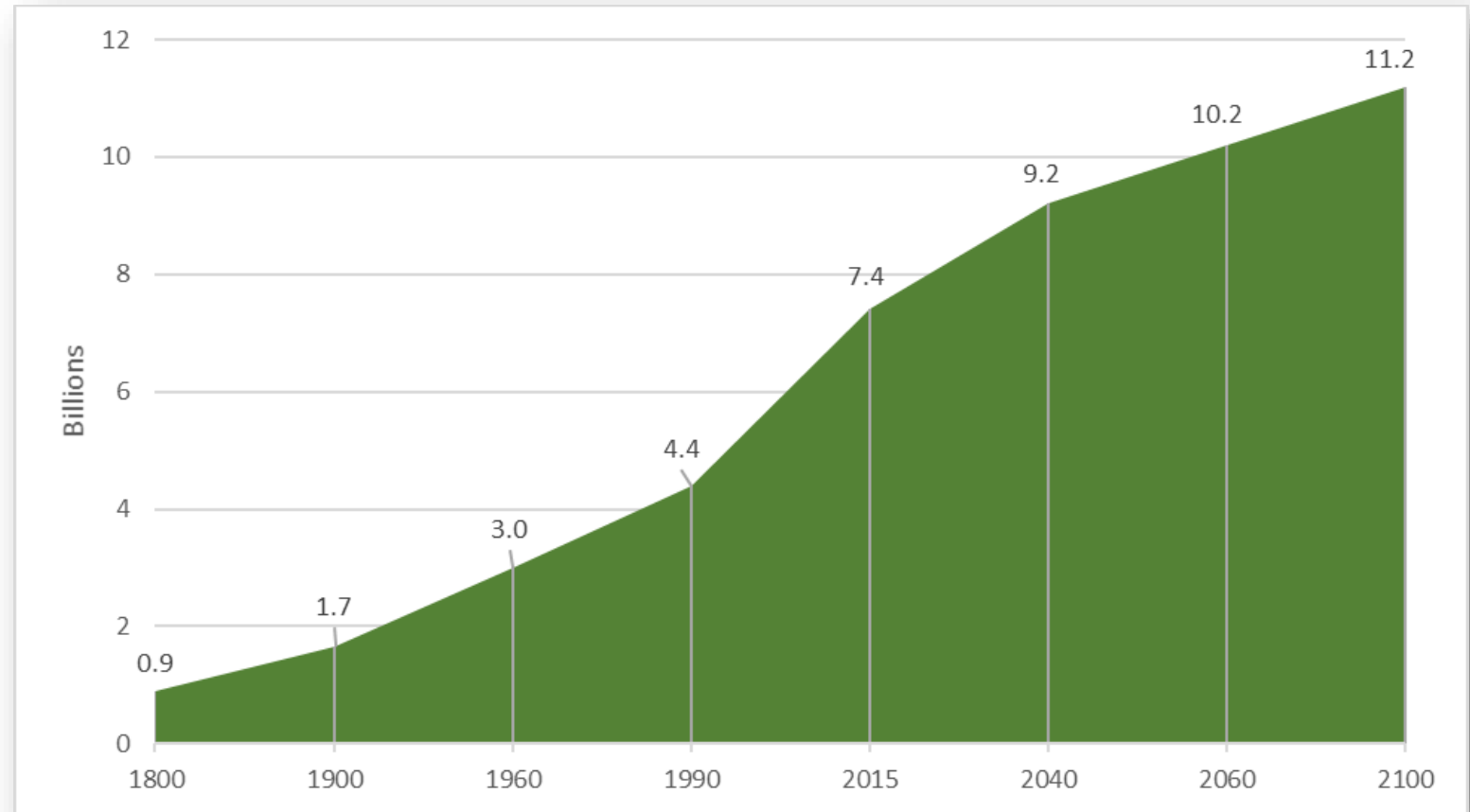
- Sustainability must balance:
 - ✓ responsible environmental management
 - ✓ social justice
 - ✓ wealth creation
 - corporate and local communities

The world needs it....



Global Population (billions)

- Already 40% over carrying capacity of earth
- Adding ~80 million people annually
- 2.4 billion MORE people in next 30 years



Source: UN Population Division (2015)

Global Middle Class

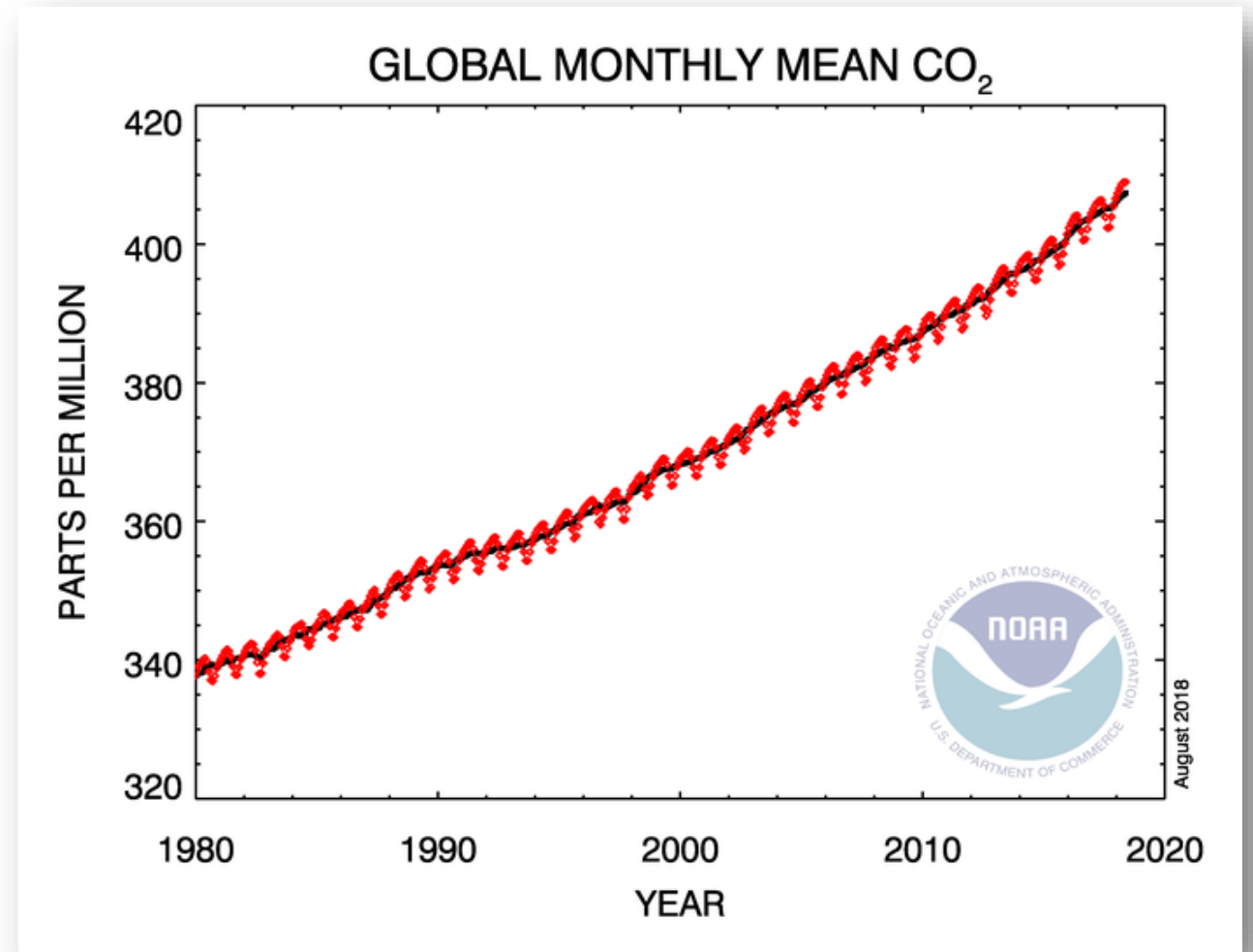
- Triple use of natural resources by 2050
- Fiber demand to continue pressure on native & old growth forests



Source: Brookings Institute (2017)

Carbon Emissions & Climate Change

- Atmospheric carbon – 409 PPM
- Hasn't been this high in 800,000 years
- Ice melting, storms and droughts intensifying, oceans warming, sea levels rising
- Carbon footprint of middle class is 50% higher
- Average human uses 100 pounds of plastic each year

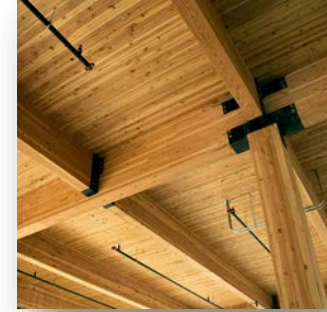


Source: NOAA (2018)

Resource Fiber Is In The Materials Business

Bamboo and its unique material properties are significantly underutilized in large-scale industrial applications.

- Middle class are consumers
- Consumption behavior won't drastically change
- Materials used in products must change
- Bamboo can make a big difference....



Why Bamboo?



Rapidly Renewable

- Yields 6X more fiber than trees
- Plants withstand extreme weather events

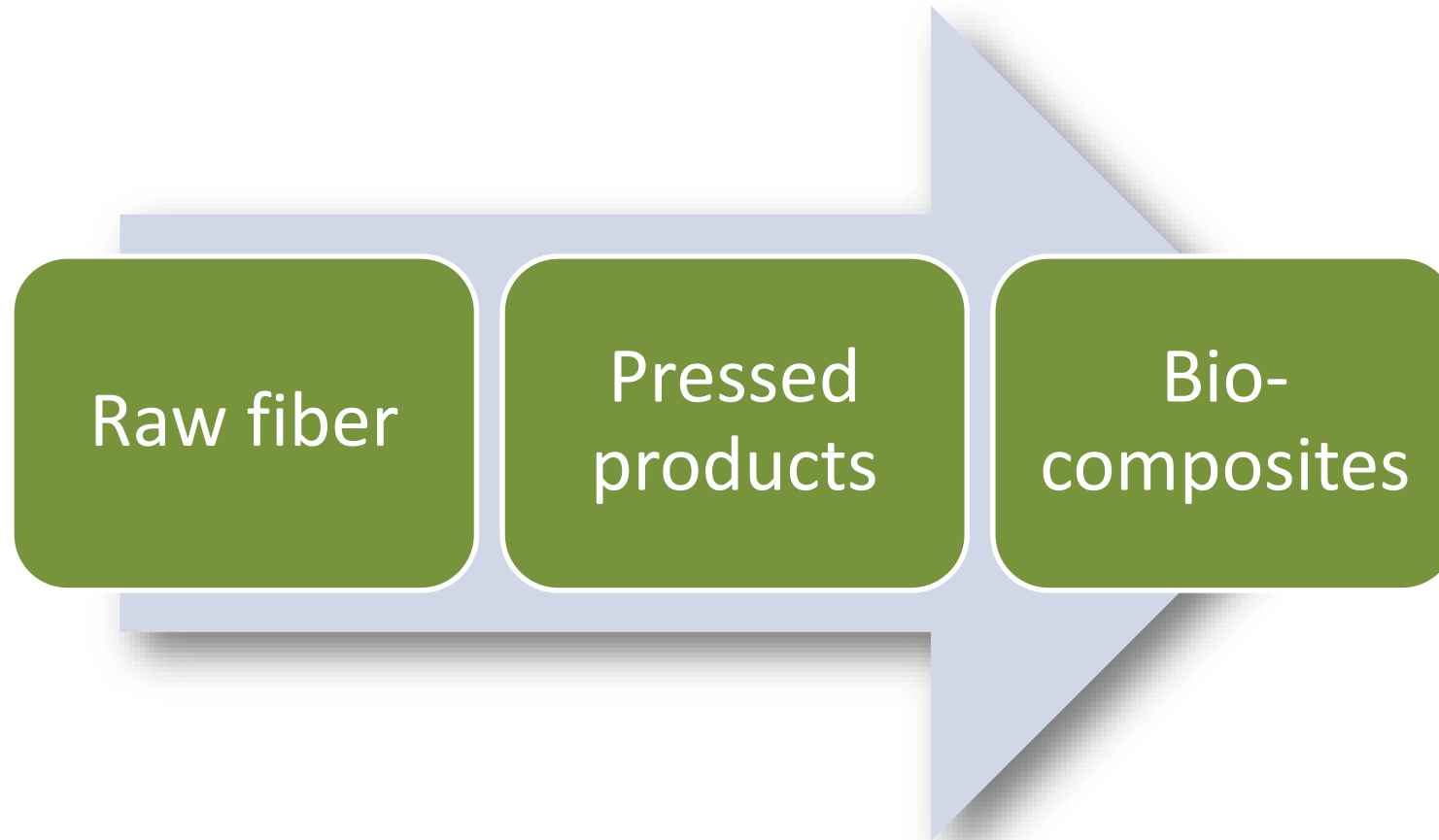
Sustainable

- Captures 5X more carbon than a like-sized wood forest
- Requires little water, no synthetic fertilizer or pesticides

Versatile

- Lightweight with the tensile strength of steel
- Superior mechanical properties
- Used in industrial products and integrated into plastics and carbon fiber

3-Pronged Market Approach





Industry Problems

- © Limited old growth wood fiber
- © Toxins
- © Carbon
- © Waste



Bamboo Solutions

- ✓ Products properly engineered and manufactured replicate old growth wood fiber
- ✓ No creosote or toxic preservatives required
- ✓ Bamboo & its products can durably sequester carbon
- ✓ Bamboo fiber displaces petroleum-based fibers in plastics, carbon fiber & polymers
- ✓ No waste. Cradle-to-cradle manufacturing; also used in biocomposites

Resource Fiber In-Field Bamboo Nursery

- Located in Alabama
- 100 acre in-field nursery
- Largest commercial-scale bamboo nursery in U.S.



Bamboo Farms

- Resource Fiber-owned farms
- Preferred Farmer Program
 - ✓ U.S.
 - ✓ International
- Companion plants for soil nutrition



International Supply Relationships

- Developing pre-processing facilities globally to export bamboo mats to U.S.
- Goal to manufacture & sell bamboo products regionally
- Support local communities by developing local bamboo resources and creating jobs
- Help existing native bamboo forests become more productive

Bamboo region



- Increase carbon sequestration through Resource Fiber's managed bamboo forest initiative

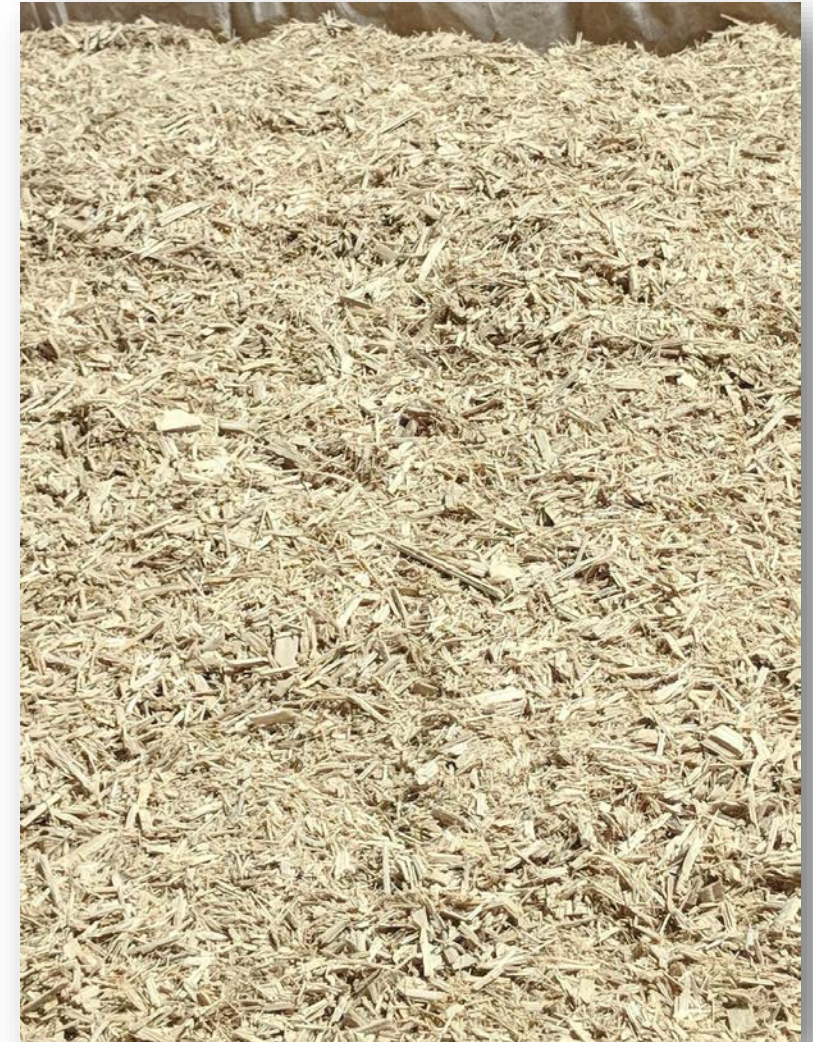
Built to Scale



- Manufacturing process designed to replicate
- Replicate in U.S. & other countries
- Manufacturing located within bamboo regions
- Wide variety of products utilizing same manufacturing process
- Start with pre-processing facility for bamboo mat export, expand into finished products

Raw Bamboo Fiber

- Off-fall from manufacturing process
- Biomass bamboo farms in U.S.
- Bio-composites
 - ✓ Plastics
 - ✓ Carbon fiber
 - ✓ Polymer for additive manufacturing (3-D printing)
- Mechanical properties superior to hemp, jute & other plants



Additive Manufacturing (3-D Printing)



- World record for largest 3-D project
- Oak Ridge National Laboratory
- Utilized Resource Fiber bamboo fiber



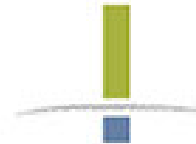
- Printed Cobra (no bamboo)
- Future of manufacturing

Attracting Major Corporate Customers

- Large industrial customers
 - Four Berkshire Hathaway companies
 - Largest tall building form contractor in U.S.
 - Several railroads
 - Top tier furniture manufacturer
 - Others in U.S. transportation sector



Supported by Major Strategics



Department of Energy Grant Funding for Bamboo Biocomposites



- Awarded \$80,000
 - ✓ Research & Development

- Awarded \$551,000
 - ✓ Transportation product
 - ✓ Light weighting
 - ✓ Reduction in supply chain energy use
 - ✓ Cradle-to-cradle
 - ✓ Competitively priced

Carbon Positive Strategy

Carbon Positive is the state at which an entity is removing/absorbing more GHG than it is emitting.

*William McDonough, FAIA, William McDonough + Partners Architects
Co-creator of the Cradle-to-Cradle®
products program*

Operate with 100%
Renewable Energy

Develop Bamboo
Carbon Offset
Program

Monetize Bamboo
Carbon Offsets

Summary

- U.S. Demand
 - ✓ Industrial demand increasing
 - ✓ Some companies require domestic U.S. supply
 - ✓ Sustainability increasingly important
 - ✓ Carbon offsets important
 - ✓ U.S. industries embracing bamboo now
 - Transportation
 - Construction





Thank you

David Knight
Co-Founder, President/CEO

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