Opportunities for micro-manufacturing of bio-products from industrial hemp fiber

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*Transition Design*

‘...the process that requires a vision, the integration of knowledge, and the need to think and act at different levels of scale, and that is highly contextual – relationships, connections, and place’.

(Irwin, 2015, 238)
- Requires a vision
- Integration of knowledge
- Think and act at different levels of scale
- Highly contextual

(Transition Design, Irwin, 2015)
Industrial Hemp Fibers

- Diversified
- Value added
- Scalable
Hemp bio-fiber opportunities

- Processing
- Material Development
- Manufacturing

Photo credit, Fibershed, 2018
Fiber strains are able to produce upwards of 4,000 pounds per acre of useful textile and cordage fibers.

Bast fiber is 12-20% of the dry weight of the plant. Strong, long fibers converted to textile or high-quality paper.

Remaining woody core (hurd) can be turned into building materials, bio-plastics and mulches.

Fibershed, 2018
Hemp-based Biomaterials

- Automotive Composites
- Fiber Insulation
- Hemp Board
- Hempcrete
- Absorbents
- Textiles
- Paper
- Bio Plastics

Images: Sunstrand Sustainable Materials
Biomaterial Opportunities

- Processing
- Material R&D
- Scaled Manufacturing
- Flexible Production
OPEN SOURCE PLANS
Steel Roller Hemp Break
Created by Rezolana Institute & Growing Warriors
Published by Fibershed and supported by Clif Bar Family Foundation

Processing at Scale
• Individual
• Community
• Industrial
The Fibershed Affiliate Program supports an international grassroots network that promotes the development of regional fiber systems communities, including economic and non-economic growth, in the form of building relationships and new global networks.
• Bastcore.com
• CannaSystems.ca
• Fibershed.com
• Formation-Ag.com
• HempInc.com
• Hemptrade.ca
• SunStrands.com
• 9fiber.com