An Ancient Material to Solve Contemporary Problems.

Bob and Alex Escher.
Green Construction.
Hemp Fiber

Jackets (Patagonia)

2. https://www.innsbruck.info/emobilder/x/16429/Bobfahrer.jpg

Olympic Luge (2022)
Benefits of Hemp Construction Material.
SICK BUILDING SYNDROME

VOCs are a large group of carbon based toxins that are invisible and often have no odour. They are found in a number of everyday household products and furnishings including synthetic carpets and cannot be eradicated by traditional cleaning methods. VOCs are responsible for sick building syndrome and have a number of negative effects on our health, causing skin allergies including eczema, respiratory problems and even cancer.

**XYLENE**
- Nausea
- Headache
- Liver damage

**METHYLENE CHLORIDE**
- Memory loss
- Headache
- Nervous system damage

**TOUENE**
- Dry cracked skin
- Nervous system damage

**ACETONE**
- Dizziness
- Respiratory tract irritation
- Eye irritation

**FORMALDEHYDE**
- Burning sensation in eyes/skin
- Nausea
- Cancer

**ETHYLENE GLYCOL**
- Depression
- Vomiting
- Respiratory failure

**BENZENE**
- Headaches
- Nausea
- Heart attack
- Unconsciousness

**PERCHLOROETHYLENE**
- Muscle weakness
- Changes in co-ordination
- Eye irritation

Wool is the only fibre able to naturally absorb VOCs and reduce their presence in the home, eradicating the risks to health and boosting wellness. These effects are observed just through the presence of wool bedding or carpets in the home. Not only does wool neutralise contaminants more quickly and completely than synthetic fibres, wool does not re-emit them, even when heated. Wool beds, bedding, mattresses and 100% wool carpets can continue to purify the air for up to 30 years.
The Road Ahead
Multiscale Decortication

One Site (HempLogic)

Macro (HempFlax)

Source 2: https://www.hempflax.com/en/equipment/
Dual Crop Harvesting
Multi Use Processing Facilities

Source: http://henryshempharvester.de/images/Processing-Line.jpg
Increased Standardization of Fiber (SmartFiber)
The Big Picture.

Mainstream Fiber Market

Integrated Hemp Market

Duel Crop Harvesting.

Regional Processing

Increased Standardization.
Meeting contemporary needs without compromising the future.

Contemporary Problems – Ancient Solution.
Hempcrete
How is Hempcrete made?

**Hemp Hurd**

**Lime**
- Attributes -

- Fire Resistant -

- Water Resistant -

- Pest Resistant

- Hygroscopic -
Healthy Living
What is Hempcrete?
Application: Walls
Application: Plasters
Application: Roof Insulation
Sugarhouse

- Front Elevation
- Side Elevation
- Side Elevation
- Rear Elevation

A Vermont Post & Beam Hempcrete Sugar House

Robert A. Escher AIA
Denver Art Deco House
Exterior
Interior: Kitchen
Hemp Homes Abroad: Tel Aviv Israel
Downstream Bottlenecks.
The industry is evolving on a national and global level. The technology, investment interest, and sourcing of the raw material has progressed substantially in the past few months. This bodes well for the future of building with hemp.