

Hempcrete

Innovation (MKG 473)

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Executive Summary

Across the nation, drywall, and other harmful materials are being buried in our landfills or are not being recycled properly. With proper insight and supervision, many of these materials can be reused for generations to come. This will in turn, not only make these products cheaper for contractors and consumers to purchase, but will become much more of a sustainable practice.

There is an emerging market within all of this of sustainable building and sourcing. In this market consumers are looking for more affordable, more sustainable, supplementary products, that meet their needs and in some cases outperform the competition. Up until a few years ago the only materials capable of doing this were wood, and a few adobe type products that were malleable with the hands. These supplements were not only messy to use, but didn't offer the same look and appeal normal, and blank slate drywall gave to the customers. So many chose to stick to what they knew.



Hempcrete is beginning to meet the needs of these customers who are looking for sustainable products. With regulations slowly loosening over the last few years in regards to Hemp type products, it is slowly becoming one of the fastest growing industries. Not only for commercial use but for everything from clothing to concrete additive. As regulations loosen

further and bills are passed to fully free up the Hemp plant as a viable option for materials, this market will be a booming industry due to the fact that it is giving customers everything they want in drywall, without it being actual drywall.

Situation Analysis

Strengths	Weaknesses
<ul style="list-style-type: none"> ● Cost advantage <ul style="list-style-type: none"> ○ Lower costs to produce lead to higher profits ○ Potential to undercut rivals ● Innovative product and culture <ul style="list-style-type: none"> ○ Unique product and more sustainable ● Superior technology to existing products 	<ul style="list-style-type: none"> ● Weak online presence <ul style="list-style-type: none"> ○ Compare to competitors they don't have the online reach yet ● “Hemp” has bad meaning to certain potential customers <ul style="list-style-type: none"> ○ Certain market segment would have to see the products usage ● Brand is not as established
Opportunities	Threats
<ul style="list-style-type: none"> ● New services help hempcrete better meet customers needs. <ul style="list-style-type: none"> ○ Better diversify customer base ● Loosening regulations mean it can better perform in a way that is most advantages ● Emerging sustainable markets 	<ul style="list-style-type: none"> ● Intense competition of existing products that are less sustainable ● Political risks that could affect the production or usage of hemp

Competition:

Non-sustainable:

Drywall- This product is manufacture mainly by the United States Gypsum corporation. They are the largest distributor of wallboard in the U.S. Drywall was as unappealing when it was first invented as it is today. Due to the mass production and cheap cost of the product, it has caught on in the last 50 years as being someone inexpensive that would act as a wall. With little insulative properties and poor water and mildew resistance, it is still a mystery why more alternatives have not been explored until the last 10 years.



Sustainable:

Adobe- Similar to the makeup of Cob except adobe is known for being made into bricks and being stacked to make straight, secure walls. Once stacked, the blocks must be

mortared together. Wood- Tongue and groove is a very popular wall covering that is often overlooked. It is much easier to be disposed of and can be repurposed in numerous ways.

These are 2 of the most popular and sustainable alternatives to drywall with insulative properties. Although they have similar repurposing properties similar to Hempcrete the ease of use and lack of commercial aspect lacks a certain appeal for use in new homes and commercial construction.

5 Forces Analysis:

Supplier Power

(HIGH) A low concentration of suppliers means that bargaining power of suppliers will increase.

Barriers to Entry

(HIGH) High sunk costs make it difficult for competitors to enter new market. Committing money upfront with no guarantee of returns.

Buyer Power

(MODERATE) With few companies offering a similar product and service, buyers are less price sensitive

Threat of Substitutes

(MODERATE) There are not many products with the same attributes as Hempcrete on the market. The main substitute would be normal Drywall.

Competitive Intensity

(MODERATE-HIGH) Few competitors means fewer firms are competing for the same customers and resources.

Hempcrete vs Drywall & Insulation

Hempcrete:

- Affordable
- Environmentally friendly (absorbs large amounts of CO₂)
- Absorbs large amounts of CO₂
- Low Carbon Footprint
- Mold-Resistant
- Mildew-Resistant
- Extremely Windproof
- Natural pest resistance
- Excellent Insulation
- Increased load when used as insulation

Drywall:

- Easily repairable
- Certain types of mold and moisture-resistant
- Recyclable (rarely)
- Extremely fast construction

** 5 – 8 times faster than other construction materials **

Cost by product (per square foot of wall surface area)

- Hempcrete: \$1.10
- Drywall: \$1.50
- Insulation: \$1.19

Carbon footprint by product:

- Hempcrete: -121.4 kgCO₂e
- Drywall: 4.7 kgCO₂e
- Insulation: 21.75 kgCO₂e

Beachhead: Commercial Contractors

Commercial contractors consume the largest amount of building materials, normalizing new products and driving lower costs as production and demand increase. As there is more of a

desire to “build green”, hempcrete and related renewable products become increasingly attractive and sought after. A fully-developed and consistent hempcrete line will serve their quality and production needs while improving their environmental impact. These contractors have a common compelling need but must first be educated on the health benefits and reduced costs associated with hempcrete. We will be able to offer a whole product solution to these forward thinking contractors and benefit from their network in order to enter into adjacent markets.

Market Strategy

Geographic Focus:

California, Oregon, Washington, New York

Using Popular Science’s 2018 list of *America’s Top 50 Green Cities*, these states have the most demand for green building materials and are strategically located in physicality as well as social influence. Focusing in the urban areas of these four states will provide a focused target which, once established, will be an excellent jumping-off point.

Points of Friction:

- Lack of familiarity and education regarding the benefits and necessity of renewable, sustainable resources, specifically hempcrete.
- General lack of awareness in the hempcrete product.
- Perceptions that hempcrete is a lesser product, excessively expensive, or a weak material.
- Stigmatizations associated with counterculture which make the product less accessible to mainstream and corporate customers.
- High switching costs over industry due to client perceptions, new processes and techniques, specialized tools and skills required.
- Lack of availability in consistent materials because of recently resolving legal barriers which inhibited the establishment of hemp industry earlier in history.

Accessing Contractors:

Architects: Commercial construction contractors are highly influenced by client demands and needs. Architecture firms handle clients at the earliest stages of a project, guiding them through building style, design and materials selection. They often play a key role in choosing a contractor to complete the project based on their plans for the client. Architecturalrecord.com maintains a yearly list of the top *300 Architectural Firms in the US*. Focusing on firms in located in our “Geographic Focus” areas, this list garners potent and influential firms to advertise to

through personal relationships and attractive promotional literature. Because architects require continuing education it is likely that better building materials and emerging design trends will be more familiar to them already. Publications such as Architect's Journal, which is already covering "alter materials" in its journalism, are excellent ways to access and become more familiar to this particular group.

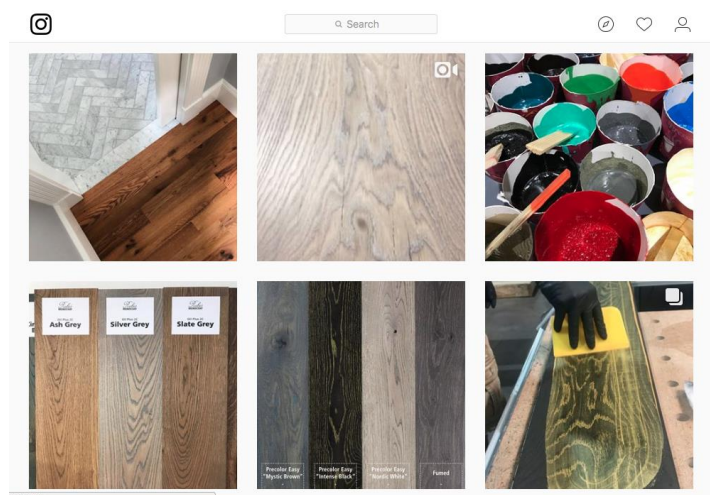
Distributors: Obviously, distributors provide access to materials that contractors need. Creating access to materials through key distributors, such as Parr Lumber, Knez Building Material, and Mutual Materials in the Pacific Northwest, may be the most important lubricant to increasing the use of any material of interest. Providing a consistent and cost-competitive hemp-based line expands distributor inventory in quality ways while allowing them to open a new area of the building market more completely. Through trade shows and direct calls, hempcrete can become a more trusted option for distributors to carry so that they can support their contractor clients' selections and help guide them to necessary product information.

Publications: A friend of mine who works in the construction industry referred to "the old standbys" during a conversation recently. He was referencing long-standing and highly-reputable publications such as *The Journal of Light Construction* and *Fine Homebuilding*. Both of these publications are available digitally and in print. These are standard and assumed resources for information specific to the construction industry featuring trending news, building tips, industry law, product information and so on. Advertising here opens direct access to contractors. Without contact the companies to request pricing, I don't have specific reference points for cost. However, since these are widely-accessed yet still confined to a specific limited group, I'd expect advertising to range anywhere between \$500 to \$2000 depending on the size of an ad. Having an article written about our company provides a deeply-trusted reference for our product and gives hemp-based materials validation in an industry that operates on reputation and a sense of standardization. Journalistic reporting not only serves to create excellent public references which can be included in promotional materials and our feature website, but is free press! *CNBC* and *New York Times* have recently run articles on the development of hemp building materials, accessing a wider segmentation thus normalizing these types of products.

Trade Shows: Trade shows are the place where tradespersons network and discover or learn about materials of interest. There are many and some are bound by location. Build Expo USA is one of the largest expos in the States and an excellent setting to position and expose new products for the purpose of gaining clients as well as educating the industry in general. Arriving on the scene at the forefront of a commercial, scaled and consistent hemp-based market could potentially gain us long-lasting share through reputation and early trust relationships. Greenbuild International Conference & Expo specifically targets construction industry segments interested in renewable and sustainable materials and building techniques. This is one of the largest green building events occurring in the USA and opens potential networking opportunities with international companies that likely have more advance products and markets because of

America's history with hemp illegality and legislation. A 10'x10' booth here would run about \$4200 for non-members which does not include staffing.

Online: Social Media like Facebook and Instagram are excellent purveyors of new product to industry folks that favor high-craft and attractive outcomes while allowing a way to present exciting and engaging content. A craftsman I know is mesmerized by Rubio Monocoat's Instagram feed (inset) and engages with their products solely because of this presence. For the right employee or affiliate, platforms like Instagram and Flickr are fun and effective ways to get a brand's product and information out to users. Facebook can be a great way to provide more in-depth and versatile messages and videos. Since hempcrete is a new product, there is an education curve. Creating content for a well-branded YouTube channel and allowing videos to be embedded into blogs and websites can give much easier access to the product and lessen hesitation when approaching the idea of switching to this newer material. This is an excellent opportunity to align with a well-respected contractor or craftsman. The more relevant content programmed into a good SEO campaign, the more effective and visible the company will be. Clearly, a well-designed company website is key in this type of advertising area.



Focus on Blogs: There are numerous blogs in the construction sector and the sustainability sector. Affiliating with choice bloggers who can feature hempcrete product, do cool stunts with the materials, or even review several hempcrete companies and give a landscape of the industry, would support a positive reputation and normalize the material. Successful bloggers have followers and use a variety of channels to expose their content.

TV: My friend Michael Murphy builds high-craft tree houses, typically serving an upper-crust clientele with a taste for the exceptional and whimsical. In the last several years, alternative building shows like *Treehouse Masters* have been appearing on mainstream channels such as the HGTV Network. When Murphy's *Barefoot Builders* appears on these shows, they experience a boost in project requests that they simply cannot serve entirely and are able to cherry-pick their favorite projects at premium price-points. They also have excellent content to share online and through word-of-mouth. Accessing a television personality that is interested in hempcrete production and building would give the product - and hopefully our specific brand - incredible exposure in a large, wide-spread segment, educating the public and making the product more engaging and less-stigmatized as a high-cost and potentially lower-quality product. This would remove some barriers to choosing hempcrete likely present for both

contractors and the architects who influence them as their mutual clients become more interested in alter materials.

Contractors themselves: Contractors are our beachhead and who we are attempting to reduce client friction around and encourage to buy through lubricated and simple channels. Winning this segment over is vital and the resulting scaling up will enable more efficiency in production and cost. Word-of-mouth is a powerful resource - particularly in the construction trade. Gaining the trust of reputable and active contractors through affiliate relationships will expose more people to the hempcrete products and prove the product as it is used and familiarized. Creating a feedback loop where contractors can participate in product improvement is an effective way to satisfy needs better while saving on R&D costs in the long-run. Contractors require licenses, so the Construction Contractors Board kept by the states of focus are useful lists in researching active and licensed contractors that may be of interest. Branding to meet the lifestyle and attitudes of this segment is an essential aspect to forging a long-lasting and loyal relationship with us in the position of the industry leader.

Networking to build the market: The hempcrete market is tiny. Most of the available options are small startups, Kickstarter campaigns with unclear launch dates, and DIY resources providing information on building your own blocks and materials to do so. Partnering with established and well-run companies that carry other sustainable building materials - particularly materials that support hempcrete-based builds - would expand customer base, product quality and product capability. Specifically partnering with compatible companies and organizations that already have substantial footholds in the construction sector would boost our access and support our accreditation. Likewise, creating a referral network with other hempcrete suppliers and builders at a variety of scales and locations would boost accessibility for clients in a wider geographic area and in a variety of building categories from small geometric kits to the large commercial projects we aim to supply. These are mutually beneficial relationships and vital to form in these early stages of market growth and product development which ensure positive customer experience for contractors and their clients alike - a boon to the entire industry.

The Future of Hempcrete:

It's no secret that climate change is becoming more of an apparent issue globally. It is occurring as we speak, and it will be occurring in the future. And with the risks of improper waste management and overall use of environmentally unsafe products, such as drywall, there is more of a current need to rethink the construction of homes. Using Hempcrete as an alternative to drywall will significantly decrease the negative impact in regards to waste management.

Because of this apparent issue and crucial demand for a product like this, we see the future of Hempcrete exponentially increasing in demand globally. Although we will be targeting the local area first, every single person in the world needs a home or some type of structure to live in. Though we understand “If you target to *everyone*, you target to *no one*,” so we foresee this demand occurring among those that have a strong desire to use sustainable products in order to save the environment and reduce their overall contribution to climate change. Which makes Bellingham a great place to begin such a movement due to its progressiveness and overall push for sustainability practices.

Once we have a solid foundation locally and nationally, we want to target other progressive countries that think in similarly to the US (pre-trump of course). For example, targeting countries that are a part of *The Paris Agreement*, in which dictate specific regulations and guided principles to promote sustainable practices. Among those countries, there are most likely segments that would want to choose alternative materials for housing developments due to their progressive residencies. However, there will have to be further market research done to narrow down specific segments because there will often be outliers among regions like that. For example, there may be audiences that don't necessarily believe in climate change, so they would not be among the targeted group in that area.

Furthermore, the Senate passed legislation on Thursday, June 6th of this year that would legalize the production of hemp as an agriculture commodity. This was significant from a political standpoint because it seems as though there has been such a detrimental road block in the past when it comes to hemp and hemp-related products. Having this bill pass removed the federal hurdles and essentially gave power to the US

to be the national leader in the productive of hemp. We can take advantage of this authority to ensure proper regulation of production and effective use of hemp products that will benefit not only the US, but the world.

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