

LEPL2211 - INTRODUCTION TO BUSINESS ISSUES

Executive summary : Isohemp



Group K :

BIERLAIRE Noé	3567-19-00
BORZEE Martin	1307-18-00
GUSBIN Cyril	1473-18-00
SARTENAER Louis	4682-18-00

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Teachers : V. REUTER
B. GAILLY

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1 Introduction

In the framework of the course LEPL2211: Introduction to Business Issues, we decided to analyse the company Isohemp, an industrial manufacturer of sustainable products for the construction and renovation sector. Isohemp is a leading manufacturer of sustainable products for the construction and renovation sector, offering its customers durable, high-performance insulating envelope solutions for all new construction and renovation projects.

Founded in 2011 by Olivier Beghin and Jean-Baptiste de Mahieu, engineers by training, working mainly on the design of a range of products made from lime and hemp. Today, after many important investments, Isohemp employs about twenty people and is expanding throughout Belgium and abroad.

2 What were the triggers of the launch of this business? Which were the key steps and the key stakeholders involved in that process?

2.1 What are the main motivations behind this business ?

For a long time, the techniques for using hemp concrete in the building industry remained artisanal: either by mixing the components on site and applying them in formwork, or by using a spraying machine requiring highly skilled labour. IsoHemp's response to these difficulties was to launch a product that could be used by all professionals. IsoHemp thus offers a global and efficient solution for sustainable insulation.

As Olivier said : *"The development of this company comes from a real desire to make things happen, to create jobs and to develop a project on an industrial scale, which is a real passion for us."* In developing the industrial production chain, IsoHemp wanted to respect its values (**Expertise, Reliability, Ecology, Proximity and Healthy housing**) through 3 fundamental development axes : **the short circuit, natural raw materials and an environmentally friendly factory.**

2.2 What were the opportunities and sources of inspiration ?

The opportunity to enter a growing market was a godsend for the founders of Isohemp, conscious of the desire and need to make things happen and convinced that *"The addition of the small initiatives of each person, in their daily life, will make things happen and this is what gives me confidence in the future.* This change of mentality that pushes us to act differently than we would have done in the past. With the hope that by changing things from below, the whole business world, politics etc. will follow suit.

As the company was created and developed, investments had to be made, in particular with the support of the Walloon region through various aids, whether for the development of products or the installation of the factory.

The key dates in the development of Isohemp are listed below:

- **2011** : Foundation of Isohemp and development of a range of products made of lime and hemp
- **2013** : The transition from a small-scale production phase to industrial production, with large production capacities equivalent to the construction of several houses per day.
- **2014** : An investment of more than one million euros was made to inaugurate a new industrial production plant in the Namur region.
- **2019** : 5 million investment to expand its production site and boost its production tool.

2.3 What are the resources and what is the value created ?

The objectives, in addition to creating materials to build houses, are to be consistent with a low environmental impact culture, to be at the forefront of technology and to be part of a sustainable development logic.

The raw materials (hemp (80%), lime and water) are 100% natural products with a low environmental impact. In addition, in order to minimise the transport footprint, the company mainly uses local suppliers. Hemp requires no pesticides and very little fertiliser, each hectare of this plant stores up to 3 tons of carbon dioxide. The objectives of low consumption and sustainable development are justified by the following points:

- The factory is **fully automated**.
- **No chemicals are used**: the blocks are made entirely of natural, local and ecological products.
- The entire site consumes the **energy equivalent of only 10 washing machines**.
- All production waste/bus is recyclable and can be re-injected into the manufacturing process, **so virtually no waste is emitted**.
- A **cleaning water recovery and recycling system** is in place, ensuring that not a single drop is discharged into the sewer.

From a more technical point of view, hemp blocks are used by professionals for both new constructions and renovations. It is used for the construction of envelopes, partition walls and insulating partitions. Due to its water vapour permeability and moisture buffering properties, it is also used as interior insulation for old walls.

3 What are the target needs and the key competitors/alternatives vs those needs? What are the key sources of competitive advantages?

The firm responds to two principal needs, the use of sustainable products for construction and renovation. The proposed products include: hempcrete blocks and PCS Interior Coating made from natural plaster, lime and sand. The strength of Isohemp is the sustainability of their products, so for the competitors and the alternatives let's focus on the sustainable ones.

3.1 Competitors and alternatives

There are a few firms producing sustainable building materials let's talk about some.

- ecomat is a Belgian enterprise using timber frame for construction and they offer "insulation by insufflation" that consists of pressurizing wood or cellulose fibres in a closed box, such as floors, walls, crawlers and roofs. Plus, they propose too hempbased products.
- isoproc is a Belgian firm too, in their case they have products made from cellulose for insulation
- Recticel is a Belgian company that offers a range of products for thermal and acoustic insulation, such as polyurethane foam and rock wool insulation panels
- Wienerberger is a Belgian company specialized in the production of clay bricks and tiles for construction. It also offers a range of thermal insulation products, such as insulating bricks and expanded clay insulation boards.
- and so on.

3.2 sources of competitive advantages

Let's analyse what could be the sources of competitive advantages of Isohemp. First their hempblocks reunite many advantages in one brick, among the biosourced insulations. Their 100 percents natural solution, derived from local channels, offers a very positive carbon balance. But above all, it offers excellent thermal regulation (its strong inertia guarantees comfort in all seasons) and water (this buffer ensures a healthy and constant indoor climate), as well as good sound insulation (it naturally reduces external and ambient noise) and a nice reaction to fire (it resists up to more than 2 hours, depending on the finishes and the thickness

of the block used). Plus, they use what they call the hempro system, that consists in two types of hemp blocks of 30 or 36cm thick: solid blocks and machined blocks (drilled blocks and U-blocks). Arranged in the housing envelope, the machined blocks will serve as lost casing insulating the structural structure of reinforced concrete that will be poured there. The drilled blocks will serve as formwork for the posts and the U-blocks will allow the beams to be cast on which the beams and the roof will be installed. Finally as the implementation of a new construction with the Hempro system is very fast, the performance/price ratio is excellent.

4 What is the main product/market positioning of the firm? How does it differs from its main competitors/alternatives?

IsoHemp is known for its hempblocks, mainly used in the construction sector. The hempblocks are used to isolate new constructions but also in older buildings in need of a renovation. Both isolating in a thermal way but also from the sound and humidity. The hempblocks are also knoww to be fire resistant.

4.1 Hempblocks

"The IsoHemp hemp block is a non-load-bearing glued masonry product designed for the production of healthy and natural insulating envelopes, partition walls and counter-partitions. Very versatile, it is highly appreciated by professionals for both new construction and renovations, whether they are single-family, collective or tertiary projects."

4.1.1 Advantages and inovation

- **Environmental impact**

The Hemp blocks are manufactured in a very low consuming way. All the materials used are natural and local. Moreover, the hempblocks stores carbon dioxyde.

- **Thermal regulation**

The hempblocks have the ability to capture and diffuse heat. Thanks to these properties, a house constructed with this product keep the heat in the winter and cool it during the hottest months in summer.

To sum up, it allows the constuction to maintain a constant indoor temperature.

- **Acoustic insulation**

The sound made on the other side of a wall will be significantly reduced thanks to the acoustic properties of the material. Therefor, protecting from noise pollution.

- **Humidity regulation**

Hempblocks are laid like all the traditional cross-jointed masonry. They are bounded with IsoHemp adhesive mortar which is specially adapted.

-

The Hempblocks are not structural elements of a construction. However, it has the ability to create a wall (which doesn't support any charges) where there isn't one. For instance, a construction made out of beams (supporting charges) can have walls with isolating hempblocks.

4.2 Competitors and alternatives

4.2.1 The traditionnal way

4.3 The construction market

The constuction and isolation market is very competitive as there are several alternatives.

- 5 What is the value chain positioning of the firm? Who are the key suppliers and customers?**
- 6 What are the key elements of the organization and governance of the firm? Which are the key partners and support mechanisms involved?**
- 7 What are the key elements of the financial structure of the firm? What are its prospects and main sources of funding?**

Informations on the company's repartition of revenue:

- "The company, which has doubled its revenue each year in previous years, also wants to meet the growing international demand for its product. Today, 60% of sales are made in Belgium, and 40% abroad."
- "IsoHemp's project, which generates 75% of its revenue in renovation and 25% in new construction, is part of the context of sustainability, reducing CO2 emissions in the building sector, short circuits..."

Definition of a financial structure :

The financial structure of a firm refers to how the company finances its operations and investments. Key elements of the financial structure of a firm include:

- **Capital structure:** This refers to the mix of debt and equity financing used by the company. The company must decide on the optimal balance between debt and equity financing to minimize the cost of capital and maximize shareholder value.
- **Cash flow management:** The company must manage its cash flow effectively to ensure that it has sufficient funds to meet its operating expenses, debt obligations, and investments.
- **Financial statements:** The company must prepare accurate and timely financial statements, including income statements, balance sheets, and cash flow statements, to provide a clear picture of its financial performance and position.
- **Credit rating:** The company's credit rating is an important factor in its ability to access financing on favorable terms. A good credit rating can help the company secure low-cost financing and attract investors.
- **Working capital management:** This involves managing the company's short-term assets and liabilities, such as accounts receivable, accounts payable, and inventory, to ensure that it has sufficient liquidity to meet its operating needs.
- **Risk management:** The company must identify and manage financial risks, such as interest rate risk, currency risk, and credit risk, to protect itself from potential losses.
- **Dividend policy:** The company must decide on its dividend policy, including the frequency and amount of dividend payments, to balance the needs of shareholders and the company's financial objectives.

Overall, the financial structure of a firm is critical to its ability to finance its operations and investments, and the company must ensure that it has a sound financial structure that is aligned with its strategic goals and objectives.

8 What are the main ethical and/or sustainability challenges faced by the firm? How is it dealing with those challenges?

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