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TEAM BELGIUM - UNIVERSITY

COLZ'ISO
BUSINESS PLAN

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ENTREPRISES

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1) Project elaboration

a) Analysis of the situation - Issues

Nowadays, there are two main issues to address:

1°) Rapeseed cultivation is particularly spread throughout Belgium (in the Condroz, notably). Politics have been encouraging its implementation because it entails a peculiar interest in the scope of energetic transition, notably in the fabrication of biofuel made from the oil contained in its seed. However, its straw is considered as a waste that is absolutely not valorised, preventing the farmer from a potential income much-needed in this particularly hard economic crisis experienced by the sector.

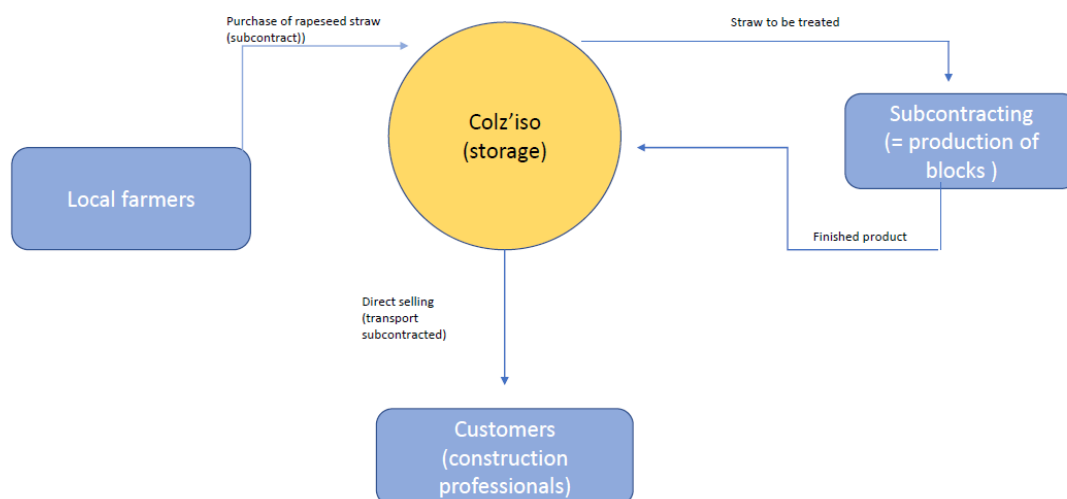
2°) Given the soaring price of energy, it has become more and more crucial to increase building insulation. Premiums for insulation are granted by the Belgian State. However, more and more people have obviously shown interest in healthy, breathing, and natural insulating material that is produced locally with a reduced carbon footprint.

THE SOLUTION: COLZ'ISO

Colz'Iso answers both issues valorising rapeseed straw – while guaranteeing complementary incomes to famers – to produce a biosourced insulating block that is natural, healthy, and local.

b) Business/Service general description

- 1° Purchase of rapeseed straw directly to farmers.
- 2° Storage of straw in Colz'Iso's warehouse.
- 3° Manufacturing of insulating blocks in a subcontractor factory.
- 4° Sale of insulating blocks directly to clients and professionals of the construction sector.



2) Organisation of the company.

a) Corporate name

« Colz'iso »

- Colz = abbreviation of « Colza » (Rapeseed in French) – our raw material
- Iso : abbreviation of « Isolant » (Insulator in French) – our product








b) Legal form

Colz'Iso is an LLC with a base capital of 50.000€ equally shared by each of the five associates, all active in the company.

c) Organisation

Colz'Iso is composed of five engineers, three in Agronomy and two in Environment. Each associate is equally and wholeheartedly involved in the project. As the amount of work will not require a full-time commitment at the beginning, each one of the associates will work a 2/5 time at first.

| | | | | |
|---|---|---|--|---|
|  |  |  |  |  |
| Production | Financing | Selling | Logistics | Marketing and Human resources |
| DONNAY Alexandre | MINSIER Marvin | CLARENNE Arthur | GERTS Arthur | HUBERT Lucas |

d) Perspectives

- Producing insulators by ourselves
- Research and Development to keep on improving technical performance of the blocks (size, weight/insulation)
- Providing the different transports by ourselves.

→ Objective: increasing margins and reaching full time working in the company for each associate.

3) Product and market

a) Product:

Name: « Colz'ibloc »

Composition: finely chopped rapeseed straw + water + lime → Moulding of the mixture → Pressing → Outdoor air hardening and drying. Dimension: 30 cm thick with lengths and widths of 60 cm and 30 cm (see photo of a product prototype in the appendix).

Technical characteristics:

- Self-supporting masonry element with no structural role.
- Thermal and hydric regulation thanks to **Colz'ibloc** ability to manage water and phase changes generated by outdoor and indoor air.
- Sound regulation.
- Can be used in new construction, renovation, inside or outside alike → Used as masonry infill, building envelopes or partition walls or floor insulation.

b) Market study:

Survey for individuals: numbers of exploitable answers: 240

→ **Conclusions:** 90% of respondents are interested in the insulator's eco-friendly and local qualities.
42% of respondents prefer insulation in blocks.

Survey for rapeseed producers and farmers: number of exploitable answers: 44

→ **Conclusions:** 90% of farmers do not use their straw → large quantity available
97% of farmers are ready to valorise straw in return for financial compensation of 60,00€/tonne

4) Operating strategy – Marketing plan

a) Target customers

- Building sector professionals for construction and renovation of habitation. This target will not only allow us to sell in bigger quantity, but it will also create solid and long-lasting relations with construction companies.
- Individuals, decided to insulate their habitation by themselves.

b) Location of the company – Geographic situation

The company is as close as possible to our straw suppliers to minimize transportation costs.

c) Position on the market compared to competition

| Materials | Conductivity (W/m.K) | Thickness (m) for *R = 4,16 | Ideal carbon balance | Effects on health | Valorisation of vegetal co-product | Primes | Local production | Cost-effectiveness |
|------------------------------------|----------------------|-----------------------------|----------------------|-------------------|------------------------------------|----------|------------------|--------------------|
| Colz'ibloc | 0,09 | 37 cm | V | V | V | V | V | X |
| Hemp block | 0,081 | 34 cm | V | V | X | V | V | X |
| Glass wool | 0,033 | 14 cm | X | X | X | X | X | V |
| Synthetic insulation (polystyrene) | 0,038 | 16 cm | X | X | X | X | X | V |

→ Product advantages and commercial objectives

- Bio-sourced product, respectful of human health.
- No polluting components.
- Renewable raw material that does not emit harmful fine particles.
- Raw material produced by local vegetal biomass for local construction sites.
- Rapeseed blocks are carbon-neutral in production as rapeseed plants consume CO2 when they grow. The CO2 absorbed by rapeseed plants balances the CO2 emitted in the production chain.
- Raw material produced by a culture by-product that is otherwise non-valuated.

- Our products qualify for premiums granting conditions in the scope of renovation and construction.
- *Colz'Ibloc* meets the required standards to receive additional premium for bio-sourced materials.

d) Sales strategy

Means to highlight the product's assets

- Participation in fairs.
- Visits of previous sites to showcase the qualitative characteristics of Colz'Iso blocks.
- Building a relationship of trust with customers.
- Create an Internet community of Colz'Iso users.
- Creating a website highlighting our insulator's qualities notably via the item *Thermal and insulating characteristics* and raising awareness on the importance of eco-responsible insulation in Belgium. → Video showing harmful effects of insulating materials that are not bio-sourced on health and environment.
- Possibility to ask for online quotation.
- Storytelling of the company's creation on the website.

Distribution channels

Direct selling to working site manager.

Pricing policy

- Unit price of the block: €11,00 VAT Excl. → Same price as other bio-sourced insulation, but by 6 to 10 % higher than synthetic insulation (regarding market studies).
- Premiums for insulation and additional premiums granted by the Belgian State allocated to customers.
- Free delivery within 50 kilometers. Beyond, customers will have the choice of picking up their goods by themselves or having them delivered at a rate of €1 per kilometer beyond the free zone.

Communication and promotion

- Exhibition fairs and phone contacts.
- Entrepreneurship based of team spirit and proximity to customers → Communication on the company's philosophy to build trust with customers.
- Marketing manager in charge of direct contact with customers.
- Virtual communication thanks to our website and mailing.
- Explanatory videos of our product.
- Customer feedback available on our website.
- Advertising sent to architects.

e) Production means

Fixed assets (cf investment budget)

Employees

5 x 2/5th time.

Supply

- Our straw suppliers are local farmers. We are deeply committed to be as close as possible to our suppliers to guarantee a fair deal for the sale of the raw material. Price of straw around €60 VAT excl. per tonne of straw.
- The straw transport will be subcontracted to a transport company. Payment to the transporter will be made at the end of the straw harvest season according to the contract.
- Block manufacturing company: depending on the contract, price per block.
- Block transport subcontracted to a transport company.

f) S.W.O.T analysis

| Strength | Weakness |
|--|--|
| <ul style="list-style-type: none"> - Unique product, not existing on the market - Local company - Staff close to customers and suppliers - Located strategically near the E411 highway - Carbon neutral - Lower price than other bio-sourced materials (hemp) - Founders qualified in agricultural sciences | <ul style="list-style-type: none"> - Dependent on rapeseed culture - High thermal conductivity coefficient - Production the blocks by subcontractors |
| Opportunity | Threat |
| <ul style="list-style-type: none"> - There is no rapeseed-sourced insulation market, so the company can stand out from the competition. - The Walloon region pushes to insulate habitations - There are premiums for insulation with bio-sourced insulators. - Particularly encouraged in renovations. - Increasing prices of energy. | <ul style="list-style-type: none"> - Arrival of competitors making insulating materials based on rapeseed. - No hindsight on the product. - Higher price than insulators that are not bio-sourced → loss of customers. - A decrease in rapeseed culture would lead to a decrease of our raw material. - Additional research and development needed. |

5) Business plan

a) Investment budget – Financing plan

| Investment budget | | |
|-------------------------------|--------|-----------|
| Item | Amount | Total |
| Preliminary expenses | | 1.452 |
| Intangible assets | | 53.899 |
| Website & logo | 3.899 | |
| Research and development | 50.000 | |
| Tangible assets | | 70.300 |
| Car | 25.000 | |
| Telescopic | 40.000 | |
| Telephone | 2.500 | |
| Computer | 1.800 | |
| Tools | 500 | |
| Office equipment | 500 | |
| Financial investment | | 5.000 |
| Rent guarantee | 5.000 | |
| Stocks and pending order | | 26.798 |
| Stock of raw material (straw) | 6.180 | |
| Stock of raw material (lime) | 20.618 | |
| Cash flow | | 64.368 |
| Working capital | 64.368 | |
| TOTAL | | 221.867 € |

| Financing plan of the company | |
|-------------------------------|-----------|
| Equity capital | 50.000 € |
| Bank loan | 131.867 € |
| Subsidies | 40.000 € |
| TOTAL | 221.867 € |

b) Market and revenue budget

| Average number of construction permit in Wallonia on 5 years | |
|--|-------|
| 2017 | 4.063 |
| 2018 | 3.982 |
| 2019 | 3.850 |
| 2020 | 3.863 |
| 2021 | 4.786 |
| Average | 4.109 |

| Addressable market | |
|---|---------|
| Average floor surface | 112 |
| Average insulator surface | 200 |
| Available market | 821.760 |
| Market of bio-sourced insulator | 82.176 |
| Market of rapeseed insulation new habitation (m²) | 2.465 |
| Renovation of habitation and retail (m²) | 740 |
| Total sales (m²) | 3.205 |

⇒ The number of customers in the first year represents 3% of the 10% of the insulation market dedicated to bio-sourced materials.

⇒ In order not to overestimate our results, we have taken very low market assumptions.

Our block is 0,18m² (0,6 x 0,3) → 3204,9/ 0,18 = 17805 blocks sold the year 1.

| Revenue budget | | | | | | | | | | |
|-------------------|-------------------------------|-------------------|------------------|---------------|-------------------|------------------|---------------|-------------------|------------------|---------------|
| Clients | Unit price VAT Excl. (€/bloc) | Year 1 | | | Year 2 | | | Year 3 | | |
| | | Number of clients | Number of blocks | TOTAL revenue | Number of clients | Number of blocks | TOTAL revenue | Number of clients | Number of blocks | TOTAL revenue |
| New constructions | 11 | 12 | 13.696 | 150.656 | 18 | 20.544 | 225.984 | 28 | 30.816 | 338.976 |
| Renovations | 11 | 4 | 4.109 | 45.197 | 6 | 6.163 | 67.795 | 8 | 9.245 | 101.693 |
| TOTAL | | 16 | 17.805 | 195.853 | 24 | 26.707 | 293.779 | 36 | 40.061 | 440.669 |

c) Budget of expenses

| Budget of expenses | | | | | | |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | Year 1 | | Year 2 | | Year 3 | |
| | Fixed expenses | Variable costs | Fixed expenses | Variable costs | Fixed expenses | Variable costs |
| TRANSPORTATION COSTS | | | | | | |
| Truck defrayal (€1/km) | | 4.800 | | 7.200 | | 9.000 |
| Car leasing | 1.000 | | 1.000 | | 1.000 | |
| TOTAL | 1.000 | 4.800 | 1.000 | 7.200 | 1.000 | 9.000 |
| RAW MATERIALS COSTS | | | | | | |
| Price of rapeseed straw (€60/T) | | 6.180 | | 9.270 | | 13.905 |
| Price of lime (€100/T) | | 20.618 | | 30.927 | | 46.390 |
| TOTAL | 0 | 26.798 | 0 | 40.197 | 0 | 60.295 |
| RUNNING COSTS | | | | | | |
| Hangar renting (€2500/month) | 30.000 | | 30.000 | | 30.000 | |
| RC exploitation | 895 | | 895 | | 895 | |
| Fire insurance | 1.823 | | 1.823 | | 1.823 | |
| Accident insurance | 1.534 | | 1.534 | | 1.534 | |
| Legal protection | 942 | | 942 | | 942 | |
| Car fuel (€1.6/L) | | 3.840 | | 5.760 | | 8.640 |
| Power consumption | | 2.000 | | 2.000 | | 2.000 |
| Telephone subscription | 1.200 | | 1.200 | | 1.200 | |
| Loan interest | 198 | | 198 | | 198 | |
| Accounting costs (€205/month) | 2.460 | | 2.460 | | 2.460 | |
| Water consumption | | 200 | | 200 | | 200 |
| TOTAL | 39.053 | 6.040 | 39.053 | 7.960 | 39.053 | 10.840 |
| ADVERTISING COSTS | | | | | | |
| Exhibition fairs | 7.000 | | 7.000 | | 7.000 | |
| PERSONNEL COSTS | | | | | | |
| Gross salary: (2/5)X 5 | 75.000 | | 90.000 | | 105.000 | |
| Contributions ONSS (40%) | 30.000 | | 36.000 | | 42.000 | |
| TOTAL | 105.000 | 0 | 126.000 | 0 | 147.000 | 0 |
| EQUIPMENT COSTS | | | | | | |
| Clothing | 1.000 | | 0 | | 0 | |
| Office equipment | 500 | | 0 | | 0 | |
| Tools | 500 | | 100 | | 100 | |
| TOTAL | 2.000 | 0 | 100 | 0 | 100 | 0 |
| PRODUCTION COSTS | | | | | | |
| Manufacturing (€2/block) | | 35.610 | | 53.414 | | 80.122 |
| DEPRECIATION COSTS | | | | | | |
| Website | 1.300 | | 1.300 | | 0 | |
| Constitution costs | 1.452 | | 0 | | 0 | |
| Mobile phones | 833 | | 833 | | 833 | |
| Portable computer | 600 | | 600 | | 600 | |
| Telescopic (5years) | 8.000 | | 8.000 | | 8.000 | |
| Long-term loan (10 years) | 13.187 | | 13.187 | | 13.187 | |
| TOTAL | 25.372 | 0 | 23.919 | 0 | 22.620 | 0 |
| TOTAL OF EXPENSES | 179.424 | 73.248 | 197.072 | 108.771 | 216.772 | 160.257 |

d) Break-even point

| Break-even point | | | |
|--------------------------------------|----------------|----------------|----------------|
| | Year 1 | Year 2 | Year 3 |
| Sales revenue | 195.853 | 293.779 | 440.669 |
| Fixed costs | 179.424 | 197.072 | 216.772 |
| Variable costs | 73.248 | 108.771 | 160.257 |
| Margin of variable costs | 122.605 | 185.008 | 280.412 |
| Profit margin on variable costs | 0,63 | 0,63 | 0,64 |
| Break-even point | 286.617 | 312.936 | 340.659 |
| Number of blocks to sell/year | 26.056 | 28.449 | 30.969 |
| Pourcentage of profitability | -22% | -4% | 17% |

e) Profit and loss account

| Profit and loss account | | | |
|---|----------------|----------------|----------------|
| | Year 1 | Year 2 | Year 3 |
| Sales revenue | 195.853 | 293.779 | 440.669 |
| Variable costs | 73.248 | 108.771 | 160.257 |
| Added value | 122.605 | 185.008 | 280.412 |
| Personnel costs | 105.000 | 126.000 | 147.000 |
| Equipment costs | 2.000 | 100 | 100 |
| Transportation costs | 1.000 | 1.000 | 1.000 |
| Running costs | 39.053 | 39.053 | 39.053 |
| Advertising costs | 7.000 | 7.000 | 7.000 |
| Depreciation costs | 25.372 | 23.919 | 22.620 |
| Net result before taxes | -56.819 | -12.064 | 63.639 |
| Net reported result before taxes | / | -68.883 | -5.244 |
| Taxes (20.4% if RN<100000) | 0 | 0 | 0 |
| Net result after taxes | -56.819 | -68.883 | -5.244 |
| Cash-flow | -31.447 | -44.964 | 17.376 |

f) Final balance sheets of the 3 first years

| SUCCESSIVE BALANCE SHEETS | | | |
|---------------------------|----------------|----------------|----------------|
| ASSET | Year 1 | Year 2 | Year 3 |
| Intangible assets | 42.599 | 31.300 | 20.000 |
| Financial investment | 5.000 | 5.000 | 5.000 |
| Tangible assets | 54.867 | 40.433 | 26.000 |
| Customer receivables | 48.963 | 73.445 | 110.167 |
| Cash flow | 33.437 | 3.216 | 42.794 |
| TOTAL | 184.866 | 153.394 | 203.961 |
| LIABILITIES | Année 1 | Année 2 | Année 3 |
| Long-term capital | | | |
| Capital | 50.000 | 50.000 | 50.000 |
| Subsidies | 30.000 | 20.000 | 10.000 |
| Long-term loan | 133.680 | 115.494 | 95.129 |
| Reported result | (-56.819) | (-68.883) | (-5.244) |
| Short-term capital | | | |
| DLTEA | 5.000 | 5.000 | 5.000 |
| Short-term debts | 23.005 | 31.783 | 44.076 |
| TOTAL | 184.866 | 153.394 | 203.961 |

g) Business Model Canveas

| | | | | |
|--|--|--|---|---|
| <p>Key partners Who are your most important partners? Which key resources do you acquire from partners? Which key activities do your partners perform?</p> <p>Partners:</p> <ul style="list-style-type: none"> - Construction professionals - Production manufacturing <p>Suppliers:</p> <ul style="list-style-type: none"> - Farmers - Lime producers <p>Resources:</p> <ul style="list-style-type: none"> - Insulating finished products <p>Partner activities:</p> <ul style="list-style-type: none"> - Manufacturing and insulator installation | <p>Key activities What are the activities you perform every day to create & deliver your value proposition?</p> <ul style="list-style-type: none"> - Contacting and signing contracts with transport company, factories, individuals, construction professionals. - Taking part in construction fairs <p>Key resources What are the resources you need to create & deliver your value proposition?</p> <p>Raw materials: Rapeseed straw / Lime / Binder</p> <p>Financial resources:</p> <p>Subsidies / Loans</p> <p>Expertise: Manufacturing / Insulation installation</p> <p>Research & Development</p> | <p>Value propositions What is the value you deliver to your customer? Which of your customer's problems are you helping to solve? What is the customer need that your value proposition addresses? What is your promise to your customer? What are the products and services you create for your customers?</p> <ul style="list-style-type: none"> - Decrease in energy bill - Local and ecological insulator - Hazard-free insulator - Partnering with local farmers | <p>Customer relationships What relationship does each customer segment expect you to establish and maintain?</p> <ul style="list-style-type: none"> - Exhibitions - Online activity via website - Insulating delivery on potential working sites <p>Channels How does your value proposition reach your customer? Where can your customer buy or use your products or services?</p> <ul style="list-style-type: none"> - Exhibition fairs - Phone calls - Mailing - Facebook - Website - Selling manager | <p>Customer segments For whom are you creating value? What are the customer segments that either pay, receive or decide on your value proposition?</p> <ul style="list-style-type: none"> - Individuals - Construction professionals |
| <p>Cost structure What are the important costs you make to create & deliver your value proposition?</p> <p>Purchase of raw materials</p> <ul style="list-style-type: none"> - Transport costs - Storage costs (straw + insulator), warehouse renting - Insulator production costs - Marketing budget: exhibition + website - Research & Development costs | <p>Revenue streams How do customers reward you for the value you provide to them? What are the different revenue models?</p> <ul style="list-style-type: none"> - Subsidies - Insulator selling - Billing - Account transfer - Fixed prices | | | |