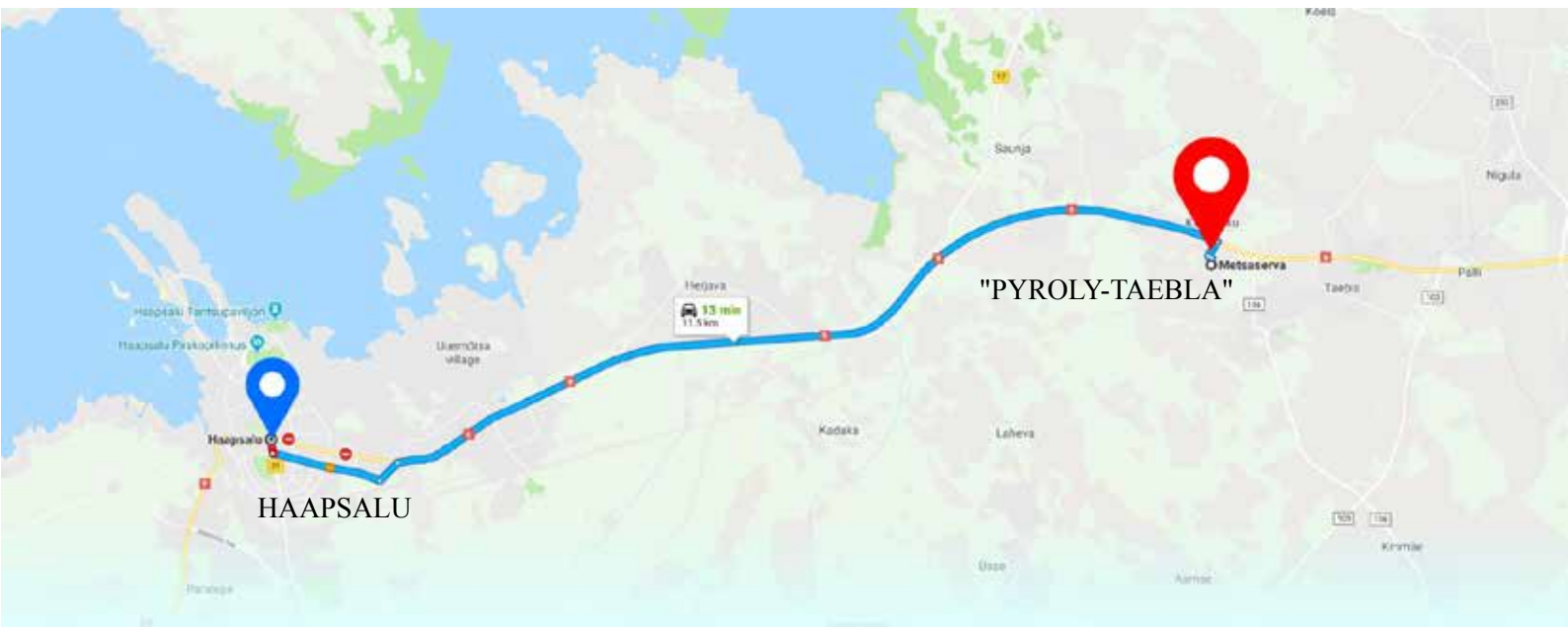


OÜ «CATALANA»

BUSINESS PLAN

Construction and commissioning
of the infrastructure project "PYROLY-TAEBLA".



SHREDDING PLANT

JOB

PYROLYSIS PLANT

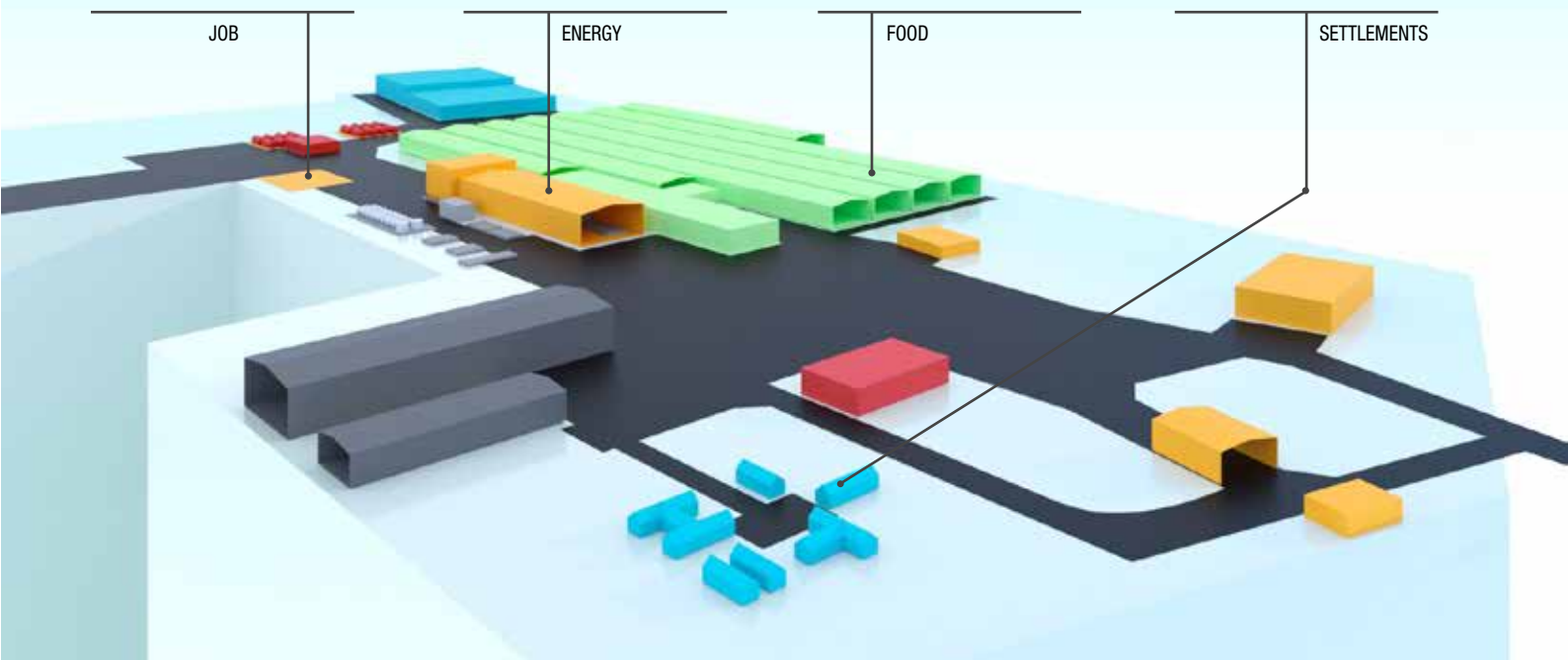
ENERGY

GREENHOUSES

FOOD

PINHOUSE PROJECT

SETTLEMENTS



01.01.2019

TALLINN

1. Project brief.

The purpose of this project is to create mutually consistent Ecological production complexes on the territory of METSALAO, KADARPIKU KÜLA, LÄÄNE-NIGULA VALD:

- **Complex "Hammel -750"** for the processing of rubber (car tires) and polymers for the purpose of receiving the crushed material for further processing.
It is planned to place two Hammel -750 units, one with an electric motor and one with a diesel engine, on the territory of the project development. The presence of two plants will allow to process from 25 000 to 50 000 tons of supplied waste tires, other rubber and plastic per year.
- **Complex "ECOPIR"** processing of the crushed material that has a consistent combination of existing technologies (provided by certified equipment, not requiring the development approved) that will allow you to obtain the maximum output electric power, heat, petroleum product and other combustible materials from the processing of rubber and plastic. In addition to the received oil products, the complex provides the entire project with electricity and heat. The Complex "ECOPIR" is 100% eco-friendly, the complex has no release into the atmosphere of fumes, vapors and emissions of any harmful substances into the environment. Technologically, everything happens in a closed cycle to obtain a useful economic product.
- **Greenhouse complex "Green 5"**, using heat and electricity obtained from the complex "ECOPIR", provides a 1 m² 100 kg tomato, 130 kg of cucumbers per year. On the territory of the project, it is planned to specialize 1.5 hectares for growing tomatoes and 1.5 hectares for growing cucumbers. Industrial Agrocomplex "GREEN 5" is a greenhouse of the 5th generation, developed in conjunction with the installation "ECOPIR", the activity of which allows you to bring the cost price of the final product to the lowest possible.
- **Complex "Pinsector"** Is a production program for the production of ecological houses (A class of thermal conductivity), using the latest technology in the construction and use of building materials with low energy cost and high market value. Examines the participation in projects with the use of our innovative construction technologies in combination with systems "ECOPIR" that allows all human wastes to use as raw materials for producing electric energy and heat in order to ensure "Eco settlements" and social objects located in their territories with the necessary volume of energy resources.

The project is aimed at economic and environmental improvement of the territories of the Republic of Estonia and European countries.

The company OÜ Catalana (registry code 10651017) was founded on 14.03.2000 with the authorized capital of 145 488 euros, is the initiator and operator of the project and the official representative of NGO "Domestic Technologies" (ITN 5047210651), on the territory of the European Union, which is the developer of the project for industrial processing of industrial waste, solid waste, RTI, polymers, agricultural waste, wood, peat, oil sludge, tar, etc., into commercial products, oil products, energy and heat.

- Manufacturer of 60% of the equipment complex "EKOPIR" is OÜ "Vergine" (registry code 11096090);
- The supplier of raw material is company OÜ Baltic Trade Partner (registry code 12376733);
- The operator of the production site is OÜ Anatoly Invest (registry code 14073675);
- The consumer and the buyer of the manufactured products is Võru Naftabass OÜ (registry code 10573286), the main activity of which is the sale of petroleum products.

Work on this project is planned to start in the initial stage and implemented in Hapsula County after the procedure of purchase of the land plot by OÜ "CATALANA", which in the long term can be issued as a pledge, to secure credit obligations.

The project is supported at the level of the city Administration and the region, the possibility of providing tax benefits is considered.

1.1. Projectstructure.

Legal form.

The enterprise OÜ Catalana (registrycode 10651017).

Organizational structure of the enterprise

Planned linear organizational structure.

Information on key decision makers:

- | | |
|---|------------------------------|
| – General director – JuriŠantšuk | born on 08th of March 1968. |
| – Financial director– YuriiDidukh | born on 18th of August 1960. |
| – Technical director – VetseslavMaltsikov | born on 31st of July 1971. |
| – Development director – ArtemEkimyan | born on 27th of July 1956. |
| – Director for production- Ruslan Väli | born on 18thof August1968 . |
| – Sales Director - DmitriSemjonov | born on 23rd of June1971 . |

1.2. The financing structure of the project.

- The required amount for the execution of the project is 30 million euros excluding currency and technical risks. Financing of the project is expected to be carried out mainly from borrowed and credit funds secured by existing real estate and partially own funds.
- Financing is expected to be attracted by obtaining a loan, approximately at 2 % per annum in euros.
- Available real estate (land plots), purchased equipment, signed contracts, lease rights are pledged.
- Interest payments on the loan are made after the launch of the complex and will be covered from the current cash flows in accordance with the agreed schedule.

A personal guarantee of the heads of the parent companies is possible.

1.3. The project development plan and the schedule of funding.

1.3.1. OÜ Catalana until 25 February 2019 to carry out the purchase of land and buildings located on it.
Amount of expenses - 500.000 EURO.

Information in (Appendix No. 1 - the contract of purchase and sale of the site and the plan of territories).

1.3.2. OÜ Catalanatill 05th of March 2019 carry out the redemption of the necessary equipment and give in rent to operatora production base lease land and complex "Hammel -750", that will allow starting from 10 th March 2019 proceed to the acceptance of raw materials supplied by OÜ Baltic Trade Partner according to the agreed scheduleand its processing at the production plant

Processing volume - from 25.000 up to 50.000 tons/year
Amount of expenses - 1 000 000 EURO.

Information in (Appendix No. 2-Hammel presentation with economic calculations)

1.3.3. OÜ Catalana until 1st of December 2019, will make payment in fulfillment of contracts for the production of technical equipment, will start operation and will give on lease to the operator of production base under the lease agreement the production complex "ECOPIR", that will allow to start processing of the prepared raw materials lease industrial complex, which will proceed to the processing of prepared raw material.

Processing volume - 200m³ / day or 130 tons of crushed raw materials.
Amount of expenses - 13 500 000 EURO.

Information in (Appendix No. 3-calculations for the installation "ECOPIR" with the possibility of processing 200m³ / day)

1.3.4. OÜ Catalana until 1st of March 2020, will produce, will start operation and will give on lease to the operator of production base lease complex "GREEN 5", that will allow to start cultivation with the subsequent realization of tomatoes, cucumbers and greens.

Volume of finished products averaged 3 000 000 kg / year
Amount of expenses- 6 000 000 EURO.

Information in (Appendix No 4 - presentation on 21 hectares, with a brief economic overview of the greenhouse complex with a capacity of 3 hectares)

1.3.5. OÜ Catalana until 1st of March 2020, will produce, will start operation and will give on lease to the operator of production base under the lease agreement the production complex "PINSECTOR", that will allow to start production and realization of houses.

Volume of produced area- 5500m².
Amount of expenses- 4 300 000 EURO.

Information in (Appendix No 5 - presentation "PINSECTOR")

1.3.6. OÜ Catalana until 1st of November 2019, will complete all construction and installation works and with completion of the production area with the necessary equipment and facilities and will complete fitting the production area with the necessary equipment and facilities.

Amount of expenses- 4 700 000 EURO.

Information in (Appendix No 6- Specification)

IN TOTAL TOTAL FUNDING – 30.000.000 €

2.1. Sales of finished products.

Main consumer groups.

2.1.1. Light and dark fractions of oil products, carbon black -**Võru Naftabass OÜ** (registry code 10573286) , partner and direct participant of the project responsible for the implementation of the above products.

2.1.2. The production of Greenhouse complex «**GREEN 5**» -internal and external trade networks in the European market, the possibility of dumping due to the low cost, makes it possible to assert convincingly that there are no problems with the sale of vegetables.

2.1.3. The goods of production complex «**PINSECTOR**» - provision of produced houses, projects in Russia, Ukraine, Norway, Finland, Sweden, England.

Terms of payment for the products-in fact, pickup from the warehouse of finished products.

3. Market analysis.

3.1. Competitors.

Currently, there are no such processing systems on the world market that allow that allow to process raw materials using different temperature modes and with reception of light and dark oil products. There fore, in the at least next five years a competition is not expected, enterprises operating in the market today are not able to offer technological and financial indicators that could compete with the production complexes of "ECOPIR".

3.2. Production of competitors in comparison with production of the enterprise.

In the proposed market of production and sales there is no such process with the final output in the form of petroleum products. Due to the lack of competitors specialized equipment, which allows to bring the secondary raw materials to the required form-combustible substance, the enterprise has before them a significant advantage and before the enterprises-suppliers of oil products in the cost of the offered goods.

4. Risks evaluation.

The project corresponds to the projects on environmental protection and industrial production, so the risk profile is quite complex.

4.1 Technological risks.

All technologies used in the complex, tested and guaranteed, the overall composition of the equipment is not unique – the risk of loss of time and effort in order to balance and optimize the operation of the complex is practically reduced to zero.

5. Raw material deficit risks.

Work of the enterprise is directed, first of all, on already signed contracts, which guarantee annual supply of raw materials not less than 50,000 tons a year, within 5 years. Taking into account the ratio of operating various complexes to the already accumulated volumes of RTI and plastic, in the next 50 years, the shortage of raw materials is not predicted, even if 100 plants are produced annually with a processing volume of 10,000 tons/day each.

5.1 The risk in sales

All volume of production as combustible substances have steady demand both in Europe, and in the world market as a whole. Gradually, the enterprise plans to sell raw materials directly to consumers in the form of organizations, which will increase profitability.

6. Main conclusions.

6.1 The proposed compound in the investment project of well-known and proven technologies in a single technological chain allows for the efficient and complete use of waste energy to extract heat from other products contained in waste products that become raw materials for the production of alternative energy sources.

6.2 Known and proven technologies in to a single technological chain allows effective and full use of the substance, energy and past work, concluded in waste, which becomes the raw material for the production of alternativ energy sources.

- 6.3** Rational integrated use of advanced technologies solves the problem of neutralization, concentration, isolation and neutralization of toxic components and harmful emissions, including dioxins and salts of heavy metals and thus minimize the impact on the environment.
- 6.4** The proposed set of equipment and the correct proportions of the use of various technologies provide highly profitable production of secondary raw materials and commercial products, which allows not to increase the cost of the city budget for sanitary cleaning and waste disposal.
- 6.5** The project allows the city authorities, enterprises and organizations, entrepreneurs and the public in a short time modern methods to solve the problem of waste, environmentally improve the area around the complex and provide tangible prerequisites for social and economic development of the city.
- 6.6** This project solves environmental problems as well as the employment of people and welfare, living in an energy-low-cost house and having a stable income.

BACKGROUND INFORMATION ON THE COMPLEX «ECOPIR-200» :

- 1.** The installation allows to process any types of solid waste, oil sludge, RTI, plastics, organics, medical waste, agricultural waste and others except glass and metal.
- 2.** The temperature conditions of the reactor are regulated from 350° to 1150°, which allows operating in the low-temperature mode from 350° to 850° and high-temperature pyrolysis from 850° to 1150°.
- 3.** The ability to vary the temperature regimes allows in a short period of time to transfer the work of the reactor to the production of heat and electricity (in addition, it is necessary to add the price of gas turbine unit, gas piston installation).
- 4.** The equipment has a unique environmental friendliness (there is no pipe for exhaust gases) and versatility for input raw materials, as well as an unparalleled system for obtaining light fractions of oil (gasoline, diesel) from mixed waste corresponding to GOST/state standard.
- 5.** The manufactured equipment can process from 10 to 100.000 and more m³ per day, the volume of daily processing is determined by the customer.
- 6.** The prices indicated in the calculations are preliminary and are adjusted for each project individually.
- 7.** The economic efficiency of the project as a whole is determined by the net profit in the amount of
11 000 000 EURO per year.

The set of indicators reflecting the effectiveness of the investment project indicates the need to adopt this project for implementation.

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Identifier	77601:001:0565
Address	Metsalao
Settlement unit	Kadarpiku küla
Municipality	Lääne-Nigula vald
County	Lääne maakond
Registration date	05. mai 2008. a.
Registration date change	21. detsember 2018. a.
Intended use 1	Production land 100%
Intended use 2	-
Intended use 3	-
Area	7.73 ha
Agricultural area	
Natural grassland	
Forest	3.16 ha
Courtyard	4.16 ha
Other area	0.41 ha
Register part	3229550
Land registry area	Tartu Maakohtu kinnistusosakond
Surveying date	01. aprill 2008. a.
Surveyor	HAAPSALU MAAMÕÖDUBÜROO OÜ
Evaluation zone	H0776003
Fertility zone	V0776002

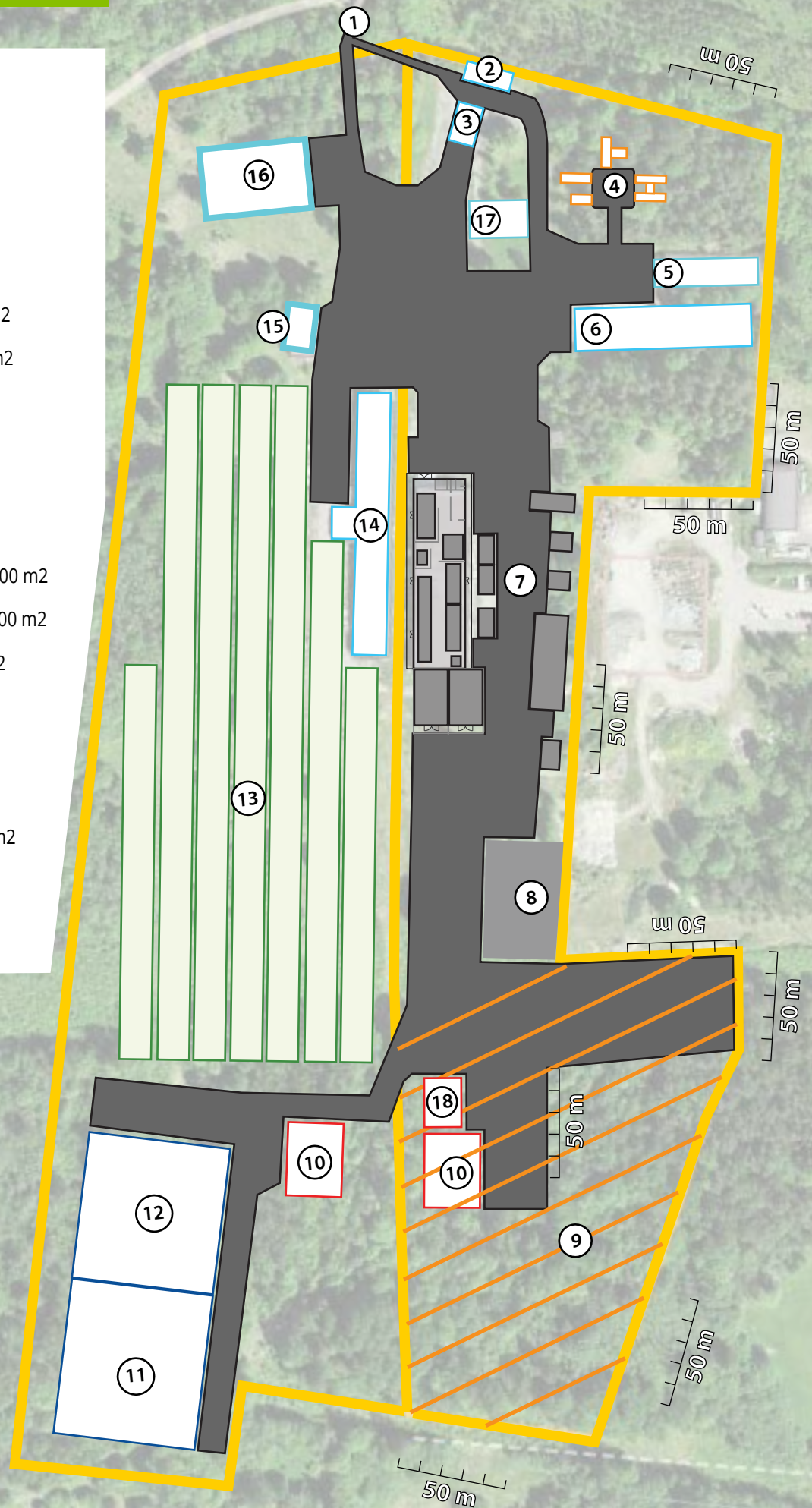


Identifier	77601:001:0566
Address	Metsaserva
Settlement unit	Kadarpiku küla
Municipality	Lääne-Nigula vald
County	Lääne maakond
Registration date	05. mai 2008. a.
Registration date change	21. detsember 2018. a.
Intended use 1	Production land 100%
Intended use 2	-
Intended use 3	-
Area	9.79 ha
Agricultural area	
Natural grassland	0.99 ha
Forest	4.54 ha
Courtyard	3.23 ha
Other area	1.03 ha
Register part	2275832
Land registry area	Tartu Maakohtu kinnistusosakond
Surveying date	01. aprill 2008. a.
Surveyor	HAAPSALU MAAMÕÖDUBÜROO OÜ
Evaluation zone	H0776003
Fertility zone	V0776002



Project objects plan

1. Entry into the territory
2. Security room - 40 m²
3. Weight room- 60 m²
4. Pinsector Demo area
5. Equipment warehouse - 650 m²
6. Assembly / Repair shop - 1200 m²
7. The complex Ecopir 200 - 3000 m²
8. Warehouse of finished raw materials - 680 m²
9. Raw material warehouse
10. Fire water tanks
11. Assembly shop Pinsektor-1 - 1800 m²
12. Pinsektor-2 assembly shop - 1800 m²
13. Greenhouses - 3 Ha / 30 000 m²
14. Warehouse of finished products - 1700 m²
15. Office - 400 m²
16. ECOPIR assembly shop - 3000 m²
17. Fire equipment - 80 m²
18. Fire pump - 40 m²



Brief economic information.**1. Supplied raw materials under contract OÜ BalticTradePartneruntil the end of 2019:**

Production complex «Hammel- 750»

- First shipment 10.000 tons, at 120 euros per ton of raw materials unloaded at the production site.
- Second shipment 10.000 tons, at 120 euros per ton of raw materials unloaded at the production site.
- Second shipment 10.000 tons, at 120 euros per ton of raw materials unloaded at the production site.
- Second shipment 20.000 tons, at 120 euros per ton of raw materials unloaded at the production site.

TOTAL: turnover 6.000.000 EURO

2. Expenses:

- Salary
- Tax
- Electricity (before the launch of the complex «ECOPIR»)
- Payback of equipment and its maintenance.

45% of turnover, which will be 2.700.000 EURO per year.

The expenditure part includes transport, depreciation of equipment, Salary, Electricity, taxes and unforeseen expenses.

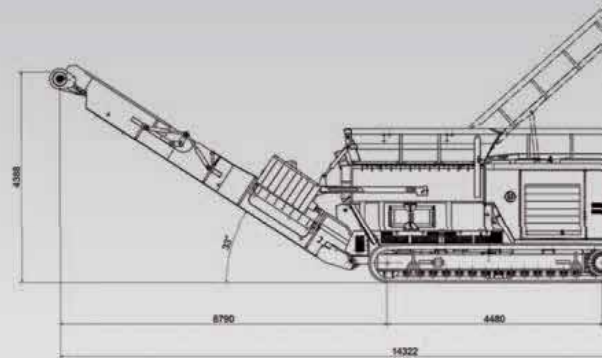
TOTAL: Net. profit from the reception of raw materials will be 3 300 000 EURO per year.



HAMMEL[®]
RECYCLINGTECHNIK

Shredder *Diesel / Elektro*

Typ 450 / 650 / 750 / 850 / 950 / 1500



www.hammel.de



Reden Sie mit uns, bevor Sie im Müll ersticken!

Zu Beginn der 90er Jahre wurde der HAMMEL-Zerkleinerer an die Anforderungen der Müllzerkleinerung angepasst und hat sich seitdem erfolgreich als ein marktführendes Produkt zur Zerkleinerung verschiedenster Müllarten etabliert.

Durch eine vielseitige Werkzeugkonfiguration ist es möglich, dass diverse Ausgangsmaterialien auf die gewünschte Endkorngröße vorzerkleinert werden. Unsere HAMMEL-Zerkleinerer finden ihren Einsatz in Verbrennungsanlagen, in der Aufbereitung von Ersatzbrennstoffen, als Vorzerkleinerung vor Sortierlinien oder zur Volumenreduzierung. Durch das „2-Wellen-Prinzip“ wird das Material zu einem homogenen Endkorn vorzerkleinert und für den weiteren Einsatz optimal aufbereitet.

EINSATZGEBIETE

- Hausmüll
- Industrie- und Gewerbemüll
- Sperrmüll
- Baumischabfälle
- Papierrollen
- Papier
- Altreifen





Leistungsdaten*

Material	450	650	750	850	950	1500
Hausmüll	10 t/h	20 t/h	50 t/h	100 t/h	200 t/h	250 t/h
Industriemüll	8 t/h	15 t/h	45 t/h	80 t/h	150 t/h	200 t/h
Sperrmüll	8 t/h	15 t/h	30 t/h	50 t/h	110 t/h	160 t/h
Baumischabfälle	8 t/h	15 t/h	35 t/h	80 t/h	150 t/h	200 t/h
Papier	5 t/h	10 t/h	20 t/h	45 t/h	70 t/h	120 t/h
Papierrollen	5 t/h	8 t/h	15 t/h	30 t/h	60 t/h	100 t/h
Altreifen	5 t/h	8 t/h	20 t/h	30 t/h	50 t/h	80 t/h

* Die angegebenen Leistungsdaten sind ca. Angaben, ohne Gewähr und von der entsprechenden Ausstattung des Vorbrechers, der Wellenkonfiguration sowie der optimalen Materialaufgabe abhängig.

Pyrolysis plant with capacity up to 200 m3 a day for the processing of rubber and plastic.

The cost of a new set of equipment will be **13 500 000 EURO**.

The cost of the kit includes a special purpose refinery, installation supervision and commissioning.

FOR THE OPERATION OF THE EQUIPMENT DOES NOT REQUIRE CONNECTION TO ANY EXTERNAL NETWORKS (ELECTRICITY, WATER, GAS, ETC.).

The cost of the complex includes equipment, which improves the quality of carbon black and the cost of project works. European certification, transport and customs costs are not included in the price.



Capital expenditure

№	Name	TOTAL	1 month	2 months	3 months	4 months	5 months	6 months
1.	Expenses:	13 500 000	6 750 000	0	3 375 000	3 375 000	0	0
1-1	Equipment	13 500 000	6 750 000		3 375 000	3 375 000		
1-2	Enterprise registration	0						
1-3	Site creation	0						
1-4	Rental of the production site	0						
1-5	Wage fund (temporary for the installation and the startup)	0						
1-6	Computers and office equipment	0						
1-7	Obtaining a waste disposal license	0						
1-8	Documentation and certification (except for SEE)	0						
1-9	State Ecological Expertise (SEE)	0						
1-10	Industrial safety	0						
1-11	Capital construction (Administrative and household complex)	0						
1-12	Capital construction (foundation for the equipment) 1,5%	0						
1-13	Capital construction (hangars of sandwich panels) 2,0%	0						
1-14	Design and survey works (7%)	0						
1-15	Freight transport	0						
1-16	Autoloader	0						
1-17	Tools	0						
1-18	Business trips	0						
1-19	Other (3%)	0						

ECONOMIC INDICATORS OF THE COMPLEX.

The reactor is designed for processing of crushed raw materials with a volume of 200 m³ per day, we obtain the following indicators based on the weight of **1 m³ / 650 kg = 130 tons / day**.

When processing waste with a moisture content of 20%, we obtain the following result:

1. Pyrolysis liquid - up to 50%.
2. Technical carbon (ash content up to 7%) - up to 25%.
3. Gas (propane-butane-ethane), ash residue - up to 25%.
4. Technical water - up to 3 %.
5. Metal cord - up to 5 %.

Pyrolysis products for 1 day/**30 days**:

- Pyrolysis liquid (density of 1 liter = 0.89 kg) = **65/1950 tons.**
- Technical carbon = **26/780 tons.**
- Combustible gas = **24/720 tons,**
(*the entire volume is used to maintain the operation of the plant.*)
- Technical water (*used in the production process.*) = **1,5/45 tons,**

Consumption of the pyrolysis reactor on the gas - 600 m³/hour.

When fractionating pyrolysis liquid, we have the following result:

- Gasoline AI-92 25 – 30 %. DENSITY AT 20° C, g/cm³ = 0,71-0,76
- DT Euro-5 45 – 50 %. DENSITY AT 20° C, g/cm³ = 0,80-0,85
- Masut M-100 12 – 15 %. DENSITY AT 20° C, g/cm³ = 0,92-0,99
- Propane-butane-ethane gas 15 - 20 %. 50% used in production
- The heavy tar 5 – 8 % DENSITY AT 20° C, g/cm³ = 1,2-1,5

The calculation of the amount of fuel produced by the minimum % values and the lowest possible prices.

Light and dark fractions, for 1 day/ **30 days**.

Gasoline AI-92 =	16,25/ 487,5 tons	x 350 €/ton	= 5 688€/	170 640 €
Diesel Euro-5 =	29,25/ 877,5 tons	x 350 €/ton	= 10 238€/	307 140 €
MasutM-100 =	7,8/ 234 tons	x 160 €/ton	= 1 248€/	37 440 €

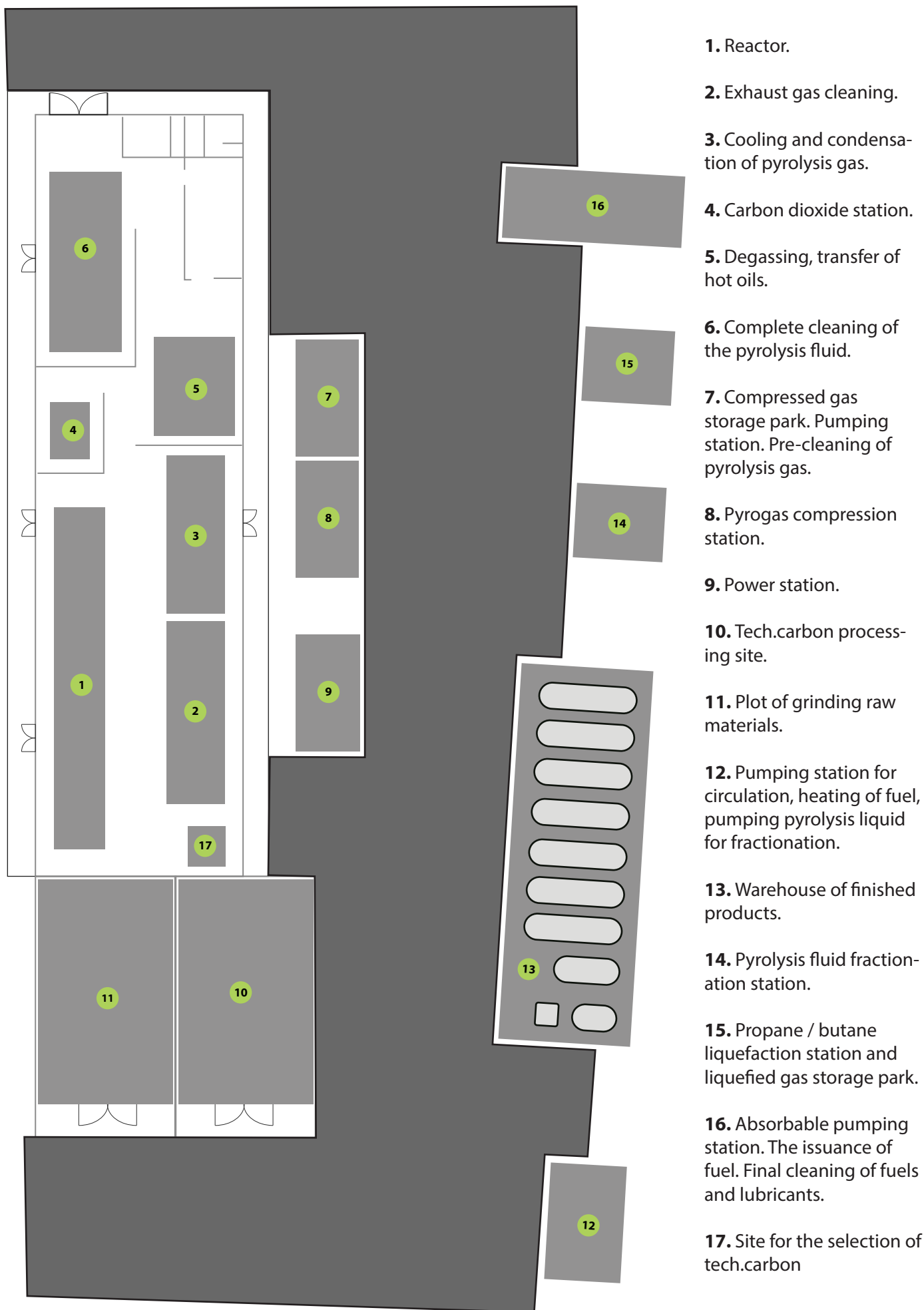
Propane-butane-ethane gas =	9,75/ 292 tons	x140 €/ton	=	1365€/	40 950 €
The heavy tar =	3/ 90 tons	x 100 €/tons	=	300 € /	9 000 €

In addition when processing rubber and plastic:

- Technical carbon = 30/**900 tons** x 200 €/t = 6 000€/ **180 000 €**
- Metal cord = 7/**182 tons** x 40 €/t = 280€/ **7 280 €**
- Liquid carbon dioxide = 28/**840 tons** x 130 €/ton = 3 640€/ **109 200 €**

Total amount for 1 day/ 30 days:	28 759 €/	861 650 €
Wage fund costs-1 day/30 days:	1500 €/	45 000 €

THE PAYBACK PERIOD OF THE PROJECT (PESSIMISTIC) – 36 MONTHS FROM THE DATE OF START-UP. THE PERIOD OF MANUFACTURING, INSTALLATION AND COMMISSIONING – 10 MONTHS. DESIGN AND REFERENCE TO THE AREA - 3 MONTHS.

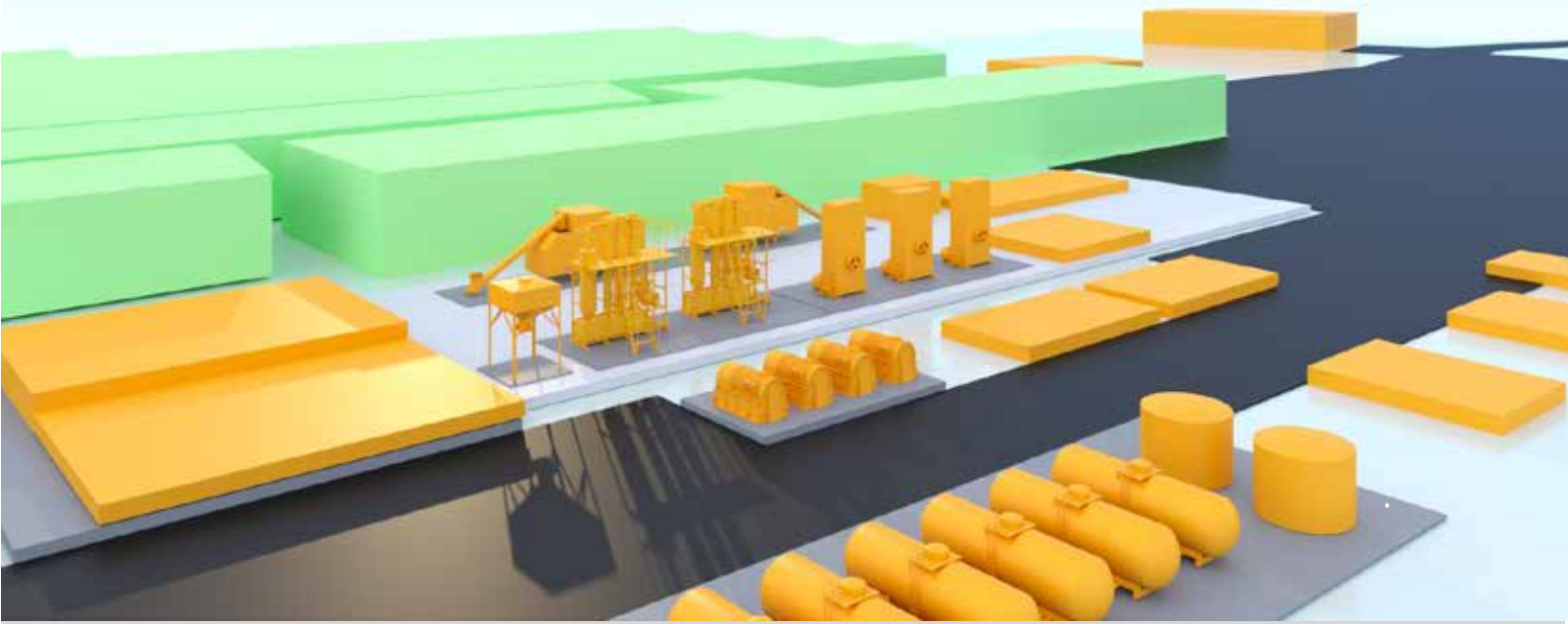


- 1. Reactor.
- 2. Exhaust gas cleaning.
- 3. Cooling and condensation of pyrolysis gas.
- 4. Carbon dioxide station.
- 5. Degassing, transfer of hot oils.
- 6. Complete cleaning of the pyrolysis fluid.
- 7. Compressed gas storage park. Pumping station. Pre-cleaning of pyrolysis gas.
- 8. Pyrogas compression station.
- 9. Power station.
- 10. Tech.carbon processing site.
- 11. Plot of grinding raw materials.
- 12. Pumping station for circulation, heating of fuel, pumping pyrolysis liquid for fractionation.
- 13. Warehouse of finished products.
- 14. Pyrolysis fluid fractionation station.
- 15. Propane / butane liquefaction station and liquefied gas storage park.
- 16. Absorbable pumping station. The issuance of fuel. Final cleaning of fuels and lubricants.
- 17. Site for the selection of tech.carbon

NEW GENERATION OF WASTE AND FUEL PROCESSING UNITS

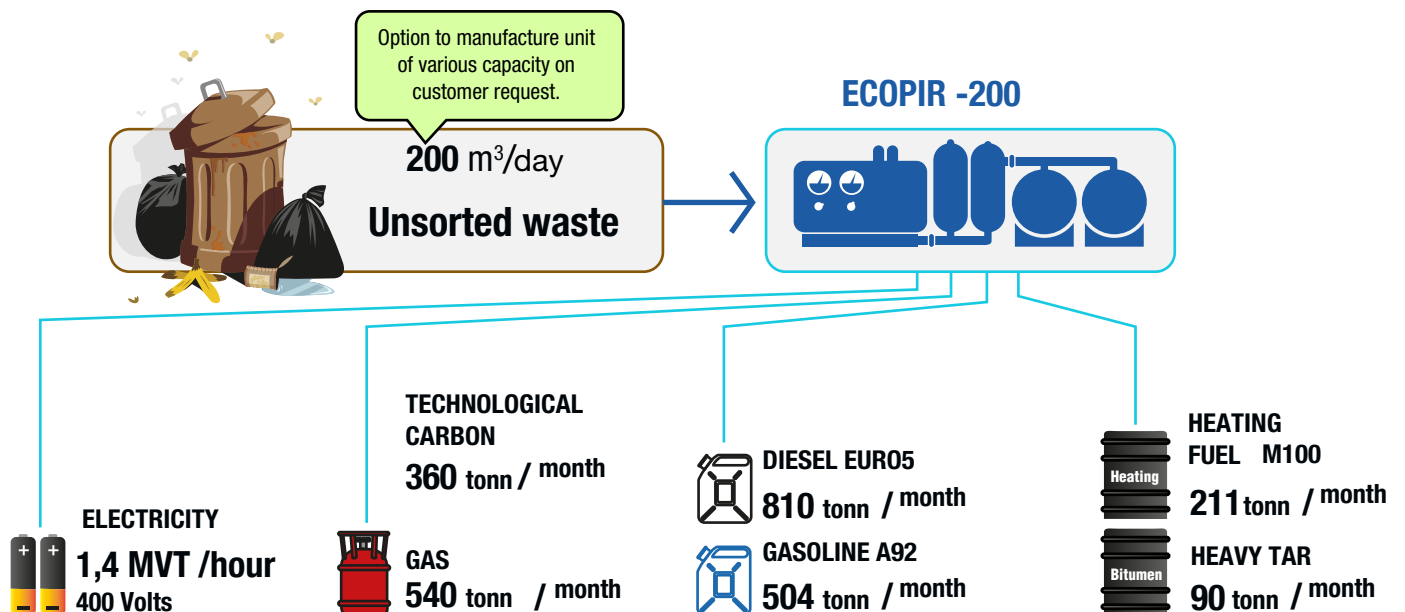
ECOPIR-200

Fuel production unit
recycling unsorted hard and bio waste



- ✓ No need for waste sorting.
- ✓ Recycling of any type of waste
- ✓ Recycling without the atmosphere pollution.
- ✓ No waste after recycling.

PRODUCTION FIGURES



ECOPIR-200 AT GLANCE

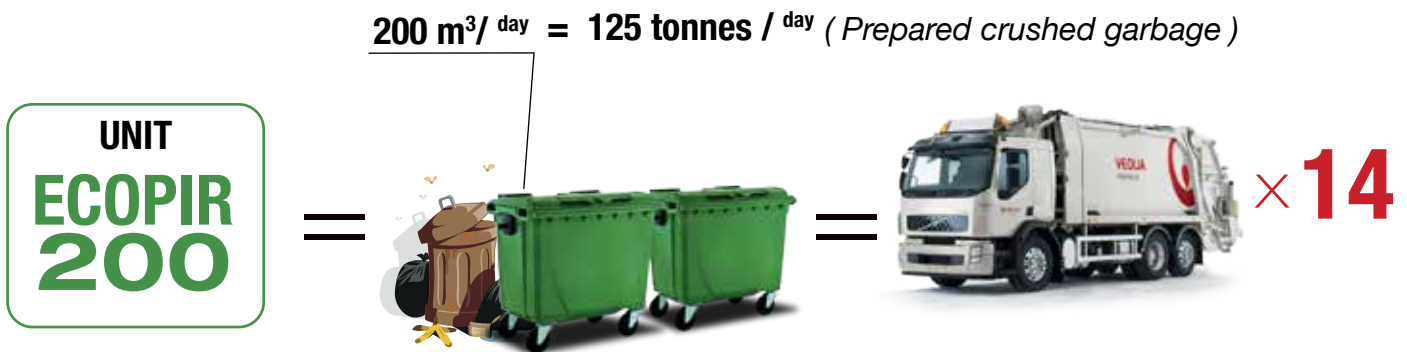
FAKTS AND STATS

Example Country: Estonia
Population: 1 300 000
Resources: in general resource-poor

The average annual temperature: 5.2 °C (41.4 °F)
Annual sunshine duration: 88 days / 2130 hours (2015 y.)
Mining of oil and gas: missing

Target: Fuel and vegeable export.
Logistics and Transportation leader.

Question: HOW?



PRODUCTION FIGURES (FUEL ONLY)



DIESEL EURO5
810 tonn / month



GASOLINE A92
504 tonn / month



DIESEL EURO-5

810 tonnes/ month



PETROL '92

504 tonnes/ month

mean total:



LIGHT FUEL

1451 tonnes/ month

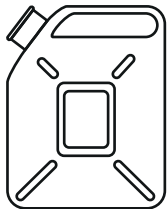
Litres = (tonnes / 0,769) x 1000 litres.

LIGHT FUEL



1 886 866 litres / month

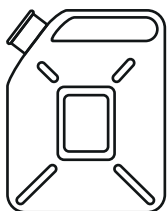
LIGHT FUEL



1 886 866 litres / month

× **11** months

LIGHT FUEL



20 755 526 litres / year

15 961 tonnes/ year



Annually recycling volume
by ECOPIR-200 unit



42 500 tonnes/ year
340 days



LIGHT FUEL

15 961 tonnes/ year

× **470 times**

× **40 times**

ESTONIA

Eesti Statistika
www.stat.ee



Annual waste producing in Estonia
20 000 000 tonnes/ year

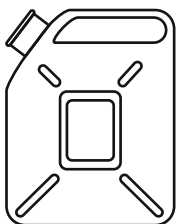


Annually diesel
consumption
of Estonia

647 000 tonnes/ year

Estonia needs 40 pc. ECOPIR-200 units
to fully provide itself with diesel fuel.

From waste, which Estonia produces annually,
it is possible to produce fuel
up to 10 times its own annual consumption.

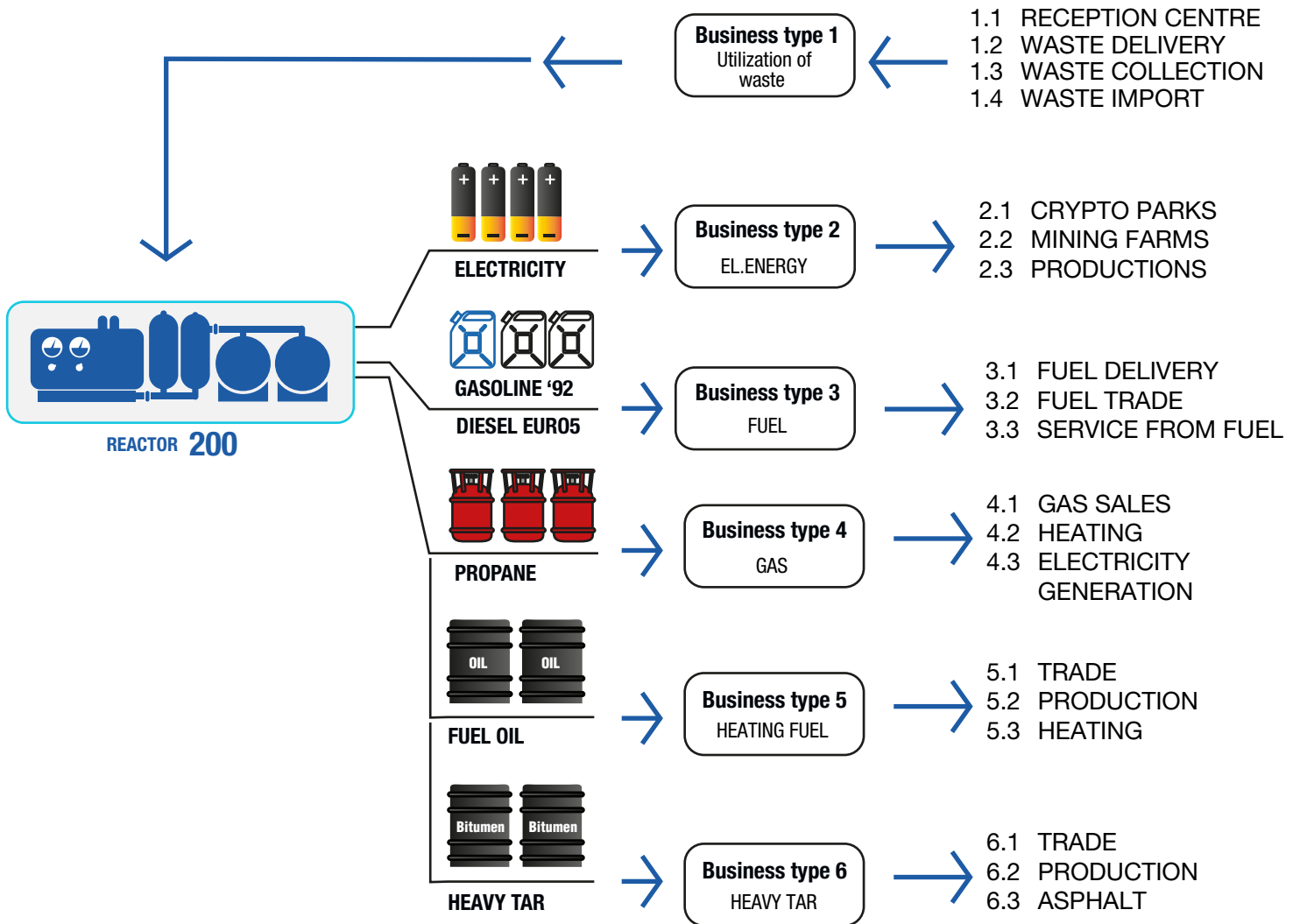


DIESEL EURO-5

1 liter = **3 kg.**



TYPES OF BUSINESS ACTIVITIES BASED ON PRODUCED PRODUCTS



List of equipment

№	Name	Power consumption (Kw/H)	Unit price EURO	quantity	Cost
1	THE SITE OF PREPARATION OF RAW MATERIALS				
1-1	Shredder VB 750E HAMMEL	220	500 000	1	500 000
1-2	The silo 50 м3	2	30 000	1	30 000
1-3	The silo 100 м3	6	60 000	1	60 000
1-4	Screw conveyor/Bucket elevator 620*8*16000	7	65 000	1	65 000
1-5	Screw conveyor 620*8*8000	5	45 000	2	90 000
1-6					0
	Total by section:	240			745 000
2	FUEL PLOT				
2-1	The tank for the transient pyrolysis liquid 20 м3		10 000	1	10 000
2-2	Mini refinery 100 куб.м./сутки	50	2 750 000	1	2 750 000
2-3	The tank for the pyrolysis liquid 100м3		25 000	3	75 000
2-4	Absorbent pump station	15	125 000	1	125 000
2-5	Equipment for cleaning of fuel for the results	10	63 000	1	63 000
2-6	Equipment for top loading of fuels and lubricants	5	38 000	1	38 000
2-7	Fuels and lubricants storage tanks 80 м3		15 000	4	60 000
	Total by section:	80			3 121 000
3	REACTOR PLOT				
3-1	Pyrolysis reactor 200 tons 14*1220*60-hour	60	4 268 000	1	4 268 000
3-2	Cooling and condensation unit	20	270 000	1	270 000
3-3	Station of purification of the synthesis gas	10	215 000	1	215 000
3-4	Flue gas treatment plant	10	128 000	1	128 000
3-5	Desulfurization and degassing station	20	110 000	1	110 000
3-6	Pyrolysis oil treatment plant 50 м3	20	70 000	1	70 000
	Total by section:	140			5 061 000
4	ELECTRIC POWER STATION				
4-1	Cryo-gas-pyrolysis plant – 720 kW/400w		420 000	2	840 000
4-2	Diesel-gas plant - 500 kW/380 АД 500-T400		105 000	1	105 000
					945 000
5	GAS COMPRESSOR SITE				
5-1	Station of compression of the synthesis gas	100	390 000	1	390 000
5-2	Station of filtration of the synthesis gas	10	38 000	1	38 000
5-3	Propane/ethane/butane cleaning station	20	39 000	1	39 000
5-4	Propane/ethane/butane compression station	60	182 000	1	182 000
5-5	Capacity 250 bar for compressed propane / ethane / butane 2000 l		100 000	1	100 000
5-6	Propane/ethane/butane liquefaction station	110	970 000	1	970 000
5-7	Cryo-gas tank for liquefied petroleum gas ground 50 м3		45 000	1	45 000
5-8	Liquefaction station CO2 220 kg/h	280	75 000	4	300 000
5-9	Tanks for CO2 chemical reagent dosing unit 50-2.0 50m3	20	45 000	4	180 000
5-10	Capacity 250 bar for compressed gas synthesis 2000 l		100 000	1	100 000
	Total by section:	600			2 344 000
6	PUMPING PLOT				
6-1	Pump station maintenance fuel and Park	20	65 000	1	65 000
6-2	Main pump station	20	37 000	1	37 000
6-3	Sewerage treatment plant is 4.3 м3/day	10	12 000	1	12 000
6-4	Pump station for industrial wastewater treatment	17	87 000	1	87 000
6-5	Pumping station of hot oil 1*8 pieces	15	33 000	1	33 000
6-6	Water treatment plant 5 м3 / day	5	28 000	1	28 000
6-7	Water well 4.5 м3 / day	8	13 000	1	13 000
	Total by section:	95			275 000
7	SITE OF FIRESTATION				
7-1	Foam fire extinguishing station	15	85 000	1	85 000
7-2	Fire water tank of 100 м3		15 000	1	15 000
7-3	Gas fire extinguishing station	10	87 000	1	87 000
	Total by section:	25			187 000
8	COMMUNICATIONS				
8-1	Communications, pipelines, automation	2	67 000	1	67 000
	Total by section:	2			67 000
9	AUTOMATIZATION				
9-1	Automated process control system, control room	5	107 000	1	107 000
	Total by section:	5			107 000
10	SITE EQUIPMENT				
10-1	Loader excavator, lobed		180 000	1	180 000
10-2	Front loader		118 000	1	118 000
10-3	Loader Bobcat S650		50 000	1	50 000
	Total by section:	0			348 000
11	ADDITIONAL EQUIPMENT				
11-1	Grinding complex with aspiration system included, Помолочный комплекс с системой аспирации	95	300 000	1	300 000
					0
	Total by section:	95			300 000
	Total for all sections:	1282			13 500 000

Staff list

No	Name	Quantity per shift	Total amount	Salary	Monthly salary
1	General director	1	1	2 500	2 500
2	Technical director	1	1		0
3	Financial director			2 500	2 500
4	Director of Administrative and household complex			2 000	2 000
5	Chief accountant	1	1		0
6	Accountant calculator	1	1		0
7	Production engineer	1	2	1 500	3 000
8	Power engineer	1	1		0
9	Engineer of technical control Department	1	3		0
10	The engineer on operation of buildings and structures				0
11	Health and safety engineer	1	1		0
12	Engineer-ecologist	1	1		0
13	Human Resources (HR) engineer				0
14	Raw material supply Manager	1	1		0
15	Sales Manager	1	1		0
16	Deputy Director of Administrative and household complex				0
17	Phase master	1	3	1 500	4 500
18	Reactor site operator	1	3	1 500	4 500
19	Operator of technical control Department	1	4	1 500	6 000
20	Electrician of technical control Department	1	2	1 000	2 000
21	Locksmith of technical control Department	1	4	600	2 400
22	Machinist of a stationary loader				0
23	Machinist of a self-propelled loader				0
24	Machinist of front-end loader				0
25	Machinist of mini loader				0
26	Machinist of electrostation	1	2	1 500	3 000
27	Machinist of gas compressor stations	1	2	1 500	3 000
28	Machinist of shredders	1	2	1 500	3 000
29	Manager on the panel of the Automated process control system				0
30	Storekeeper	1	3		0
31	Laboratory technician	1	3		0
32	Paramedic	1	3		0
33	Ancillary worker	2	6	1 100	6 600
34	Head of economy				0
35	The head of the dining room				0
36	Warehouseman				0
37	Cook catering				0
38	Kitchen worker				0
39	Worker on the building				0
40	Disinfector				0
41	Janitor				0
42	Cleaner of industrial and office premises				0
	TOTAL				45 000 EUR

Products received

No	Name	% output	tons per day	tons per month (27 days)	tons per year (340 days)	cost per ton	Cost per day	Cost per month	Cost per year
1	Tariff for input raw materials (tires, plastic)	100	130	3 640	44 200	120	15 600	436 800	5 304 000
2	Pyrolysis liquid	50	65	1 820	22 100	0	0	0	0
3	Carbon black (ash content up to 7%)	20-25	26	728	8 840	200	5 200	145 600	1 768 000
4	Gas (propane-butane-ethane)	15-20	20	546	6 630	140	2 730	76 440	928 200
5	Metal cord	5	7	182	2 210	40	260	7 280	88 400
6	Gasoline AI-92	25-28	16	455	5 525	350	5 688	159 250	1 933 750
7	Euro 6 Diesel Fuel	45-47	29	819	9 945	350	10 238	286 650	3 480 750
8	Masut M100	10-12	7	182	2 210	160	1 040	29 120	353 600
9	The heavy tar	5-8	3	91	1 105	106	345	9 646	117 130
10	Liquid CO2		28	784	9 520	133	3 724	104 272	1 266 160
11	Recyclable materials	10	13	364	4 420	133	1 729	48 412	587 860
	TOTAL						44 824	1 255 058	15 239 990



BRIEF ECONOMIC INFORMATION.

Supplied raw materials under the company's contract **Võru NaftabassOÜ**:

Monthly turnover on sales of products received from the complex «**ECOPIR**» **861 650 €**, that in year respectively accounts for **10 339 800 EURO**.

With the cost part of 45% of the turnover, it will be **4 652 910 EURO**.

The expenditure part includes transport, depreciation of equipment, salary, taxes and unforeseen expenses.

TOTAL: NET PROFIT 5 686 890 EURO PER YEAR.

**NOW, WHEN WE HAVE OWN
FREE HEAT AND ELECTRICITY,
WE CAN USE IT IN NEXT PROJECTS:**

- GREENHOUSES**
- AND SETTLEMENTS**



1. $15\,000\text{ m}^2 \times 100\text{ kg} \times 0,50\text{ cent} = 750.000\text{ EURO}$
2. $15\,000\text{ m}^2 \times 130\text{ kg} \times 0,50\text{ cent} = 975.000\text{ EURO}$

TOTAL: 1 725 000 EURO, TURNOVER PER YEAR.

The expenditure part in the amount of 45% will be **776 250 EURO**.

The expenditure part includes packaging materials, transport, depreciation of equipment, Salary, electricity, water, heat, taxes and unforeseen expenses.

TOTAL: NET PROFIT 948 750 EURO PER YEAR.



What to Grow?

The choice of crop is a crucial factor for the economical feasibility and success of a commercial greenhouse operation. The revenue of cultivated crop is responsible for returning on the investment of the greenhouse and its operational costs. Crop varieties, suitable for greenhouse cultivation, therefore differentiate themselves from open-field varieties.

In greenhouse cultivation, crops are categorized into Vegetables, Flowers, Potted plants, Herbs & Leafy Greens and in Soft Fruits. This categorization is based on the crop characteristics but also on the applied cultivation method.

Tomato is the single most popular crop to be cultivated in greenhouses and comes in numerous varieties. Choices between truss- cocktail- and cherry tomatoes can be made to target niche markets. The same applies for all ornamental crops, where the variety is the result of decades of selective breeding.

Local to Local

Tapping into local market demand is in many cases the easiest way to start off with a greenhouse operation. By producing a crop or crop variety that is not yet available in local supermarket chains, off-take could be ensured when promoted well. Due to minimal transportation costs, the potential is there to be able to compete with imported crops.

Vegetables, flowers and ornamentals grown in a Dutch greenhouse are cultivated in a safe and environmental friendly way. This characteristic is used with great on the global market to differentiate greenhouse-cultivated crops from open field produce. Products with “biologically grown” label have earned a premium place in the supermarkets.

Monoculture or Multiple Crops

Monoculture is the practice of specializing in one specific crop rather than cultivating multiple crops. This very principal has helped the Westland Region to become that what it is today. Growers had made the choice to specialize in one crop, where neighbors chose for a different crop. Monoculture ensured for an increase in production quantity and quality whilst lowering production costs.

The desire, however, to grow multiple crops in one greenhouse is not uncommon. This desire is especially strong for entrepreneurs in greenhouses who want to test the marketplace and do not want to bet on one horse with a crop. Because the handling of ornamentals and vegetables are worlds apart, it is advised to stay within the “vegetable range” or “ornamental range” when considering multiple crops. To benefit of the economies of scale, the number of cultivated crops is to stay as low as possible.

Venlo Greenhouses

Venlo Greenhouse

The steel structure of a Dutch Venlo greenhouse consists out of the following primary construction elements: columns, trusses, beams, purlins and braces. Together, these elements deal with the forces applied to them by means of the weight of the greenhouse, wind, snow, the crop and the installation loads.

Due to the importance of light in the greenhouse, all steel structural elements are carried out as light as possible whilst complying with the constructual regulations.

Columns

The columns of the greenhouses are put under pressure in three different ways. Firstly, they carry the weight of the glass and the aluminium roof system and the installations within the greenhouse. Secondly, the greenhouse columns are subjected to an upward vertical load, under influence of wind- suction. Lastly, the steel columns are pressured by horizontal forces; they are pulled on by the trusses and are subjected to wind pressure.

Columns determine the height of the greenhouse, the post height. The optimal height of the greenhouse is dependent of the type of crop and cultivation method applied within. Also, if grow lights are installed, the greenhouse is often carried out higher.



Steel Trusses

Together with the columns, the trusses form the skeleton of the Venlo greenhouse and have the important duty to transfer all loads to the foundation. The steel trusses don't only fulfill this duty, they also take care of the suspension of all technical installations. The ventilation mechanism, screening system, hanging gutters, heating systems, crop wires and more, dependent of the type of crop cultivated within the greenhouse. The trusses themselves consist out of four elements; the top and bottom box-profile, the diagonals and the end-plates.

Braces and Beams

With only columns and trusses, the greenhouse structure is strong enough to tackle loads at a 90 degrees angle. To ensure the strength of the steel structure for forces applied from any other angle, braces are applied. The main function of cross braces is to transfer the horizontal loads in the gutter direction to the foundation. To prevent the foundation from tilting, a bridging beam is mounted to the prefabricated dollies and also to the columns.

White Coating

All steel elements are always galvanized to prevent oxidation. This gives the steel structure a grey exterior. To improve the light characteristics of the greenhouse, the columns and tellis are often coated white for less light absorbance within the greenhouse.



1. Model A 28	700 m ² ×	900 €/ m ² =	630.000	EURO
2. Model A 48	1200 m ² ×	900 €/ m ² =	1080.000	EURO
3. Model M60	600 m ² ×	900 €/ m ² =	540.000	EURO
4. Model T 76	1520 m ² ×	850 €/ m ² =	1292.000	EURO
5. Model H124	1240 m ² ×	800 €/ m ² =	992.000	EURO
6. Model H152	760 m ² ×	800 €/ m ² =	608.000	EURO

TOTAL: 6020 M2 = 5142 000 EURO, TURNOVER PER YEAR.

The expenditure part in the amount of 65% will be 3 342 300 EURO.

The expenditure part includes the construction of materials, transport, depreciation of equipment and tools, electricity, heat, wages, taxes and unforeseen expenses.

TOTAL: NET PROFIT 1 799 700 EURO PER YEAR.

PINHOUSES

HOUSE MODULES

PINSECTOR.COM

House-module

- movable, turnkey house to live.



READY FOR USE



INSULATION



LEGAL



MOVABLE



BUDGET

In our supplied homes performed all interior kits, wiring and exterior finish, the utilities are installed.

Bathrooms are equipped with the necessary sanitary ware: toilet, shower, sink, water heater Ariston / Thermex, AQUAVERSO and mixers as GROHE and TEKA.

For settlement You can only connect to the central or local communications (electricity, sewerage, well or central water supply).

Ready house is transported on a standard platform trucks. In the carriage house does not require a special permit from the road services. House can be transported from one to another place.

In most countries, does not require a permit for the installation, due to the small footprint.

The warmest in its class. Thermal insulation of walls, floors and ceilings mineral wool with a thickness of 250 to 350 mm. The supply of any home includes infra-red heating equipment HEAT PLUS from the leader in this field.

The design of the house allows to increase the area of the house and combine individual modules into a single finished complex, until the construction of the second floor.

For all its merits, it is the most affordable and flexible solution for the price of rapid construction of individual, family and commercial property, with the possibility of extension and movement.

The design of classical home made of materials such as metal, wood and composite materials based on cement. It does not contain toxic materials.

PINHOUSE MODEL A28



PINHOUSE MODEL A48



PINHOUSE MODEL M60



PINHOUSE MODEL T76



PINHOUSE MODEL H124



PINHOUSE MODEL H154



ANNUAL FINANCIAL SUMMARY TABLE

№	Complex	Annual profit	Annual profit double reduced	Annual turnover	Amount of investment
1.	HAMMEL	3 300 000	1 650 000	6 000 000	1 500 000 €
2.	ECOPIR	5 686 890	2 843 445	10 339 800	13 500 000 €
3.	GREEN 5	948 750	474 375	1 725 000	6 000 000 €
4.	PINSECTOR	1 799 700	899 850	3 342 300	4 300 000 €
5.	Construction work and production machinery				4 700 000 €
TOTAL		11 735 340	5 867 670	21 407 100	30 000 000 €

This table, taking into account the amount of financing in the amount of 30.000.000 euros, makes it clear that with a decrease in net profit twice, the return of investment funds is carried out for 5 years.

ATTACHED RESEARCH RESULTS AND DOCUMENTS

Business-Plan-tables-(lang. Eng).xlsx
Business-Plan-text-(lang. Eng).docx



Folder / Additional Information

Ecopyr-eng-stats OPEX.pdf
HAMMEL 750-Recycling Shredder-(lang. Germ).pdf
PINHOUSE Exterior Finish- ENG.pdf
PINHOUSE Interior Finish- ENG.pdf
PINHOUSE-Models-A4-ENG.pdf
PINHOUSE-Plans- ENG.pdf
Russian-Federal-Waste-type-codes (lang RUS).docx
Turbulen Pyrolise Reactor main info (lang RUS).pdf
VENLO-Greenhouses-21Ha- Active Climate Offer (lang RUS).pdf
Waste-Garbage-Plants-Itilization Project (lang RUS).doc
World Ecology Stats-(lang RUS).docx



Folder / Agreements

Catalana-Anatoly-Operation-Agreement (lang RUS).pdf
Municipal-Waste-Supplier-Agreement-(RUS).pdf
Production-Agreement.PDF
Production-Vergine.pdf
Realise-Protocol-Võru-Nafta-Base.pdf
Scitech-Catalana-Agreement (RUS).pdf
Used-Tyre-Supply-Agreement (lang RUS).pdf
Waste-Supply-Agreement (lang RUS).pdf



Folder / Research Docs (RUS)

Gov-test-results (lang RUS)-1.pdf
Gov-test-results (lang RUS)-2.pdf

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