

An aerial photograph of a massive pile of waste, likely a landfill or incinerator feedstock. The waste is a dense, multi-colored mass of plastic, paper, and other debris. A large yellow triangle is overlaid on the left side of the image, pointing towards the center. Inside the triangle, a yellow excavator and a green excavator are visible, working on the waste pile. A yellow truck is also visible near the bottom of the triangle.

2020

PITCH DECK

# COMBUSTOR

Mobile utilization units

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Nikolay Chernov  
CEO

The problem of waste disposal around the world is very acute. Our mission is to contribute to its comprehensive solution, change the waste management market and make it profitable for project participants.



We are a team of Russian engineers who have developed and implemented an innovative waste management system called **COMBUSTOR**.

The project development began in 2010, over the course of 10 years it underwent many modifications and improvements, and this helped us to construct the most efficient, non-volatile and waste-free recycling system.

The production of units takes place at own production site in the Moscow region.

A photograph of a large pile of garbage, including plastic bags, paper, and other debris, under a clear sky. In the foreground, several parallel metal tracks, likely for a train or tram, run diagonally across the frame. The image is overlaid with three yellow rectangular boxes containing text.

# COMBUSTOR

description and  
working scheme

# OUR PRODUCT

## Description

Plasma vortex utilization units, **COMBUSTOR**, are made in 2 standard sizes. They are mobile and containerized according to international ISO standards.

**COMBUSTOR** utilizes incoming waste and other carbon-containing material using plasma, which occurs due to the “tornado effect” - the creation of powerful energy sources due to the rotation of air molecules in groups.

The system is capable of utilizing any carbon-containing waste, including plastic, fabrics, rubber and organics. The produced plasma destroys all harmful substances contained in the waste due to the extremely high temperature of disposal and leaves only 6% of the neutral insoluble residue in the form of sand.



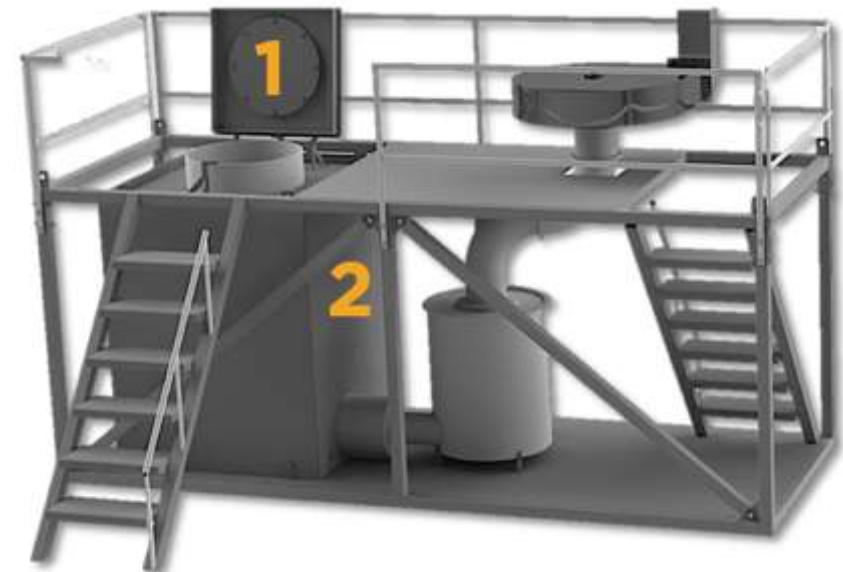
# OUR PRODUCT

Working scheme

Waste is immersed in the upper loading hatch (1) and then goes to the reactor (2).

Complex exothermic chemical reactions take place in the reactor in the high-temperature vortex region, accompanied by the release of a large amount of thermal energy.

In this area, the breakdown of chemical bonds occurs - the decomposition of chemical compounds into elements (C, O<sub>2</sub>, H<sub>2</sub>, etc.), the removal of the gas fraction and the formation of a dry residue.



# OUR PRODUCT

Photos of a demo unit



# OUR PRODUCT

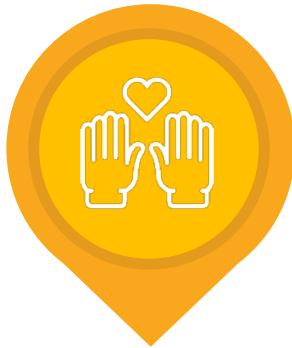
Application



MSW landfills



Medical institutions



Production companies



State



CONSUMERS



Meat processing plants



Poultry farms



Retail chains

# Current achievements

Development

2010

Start 01/01/2010  
End 05/07/2017

Start of development of a  
plasma utilization project.  
Production of several  
samples

Start 05/07/2017  
End 31/12/2017

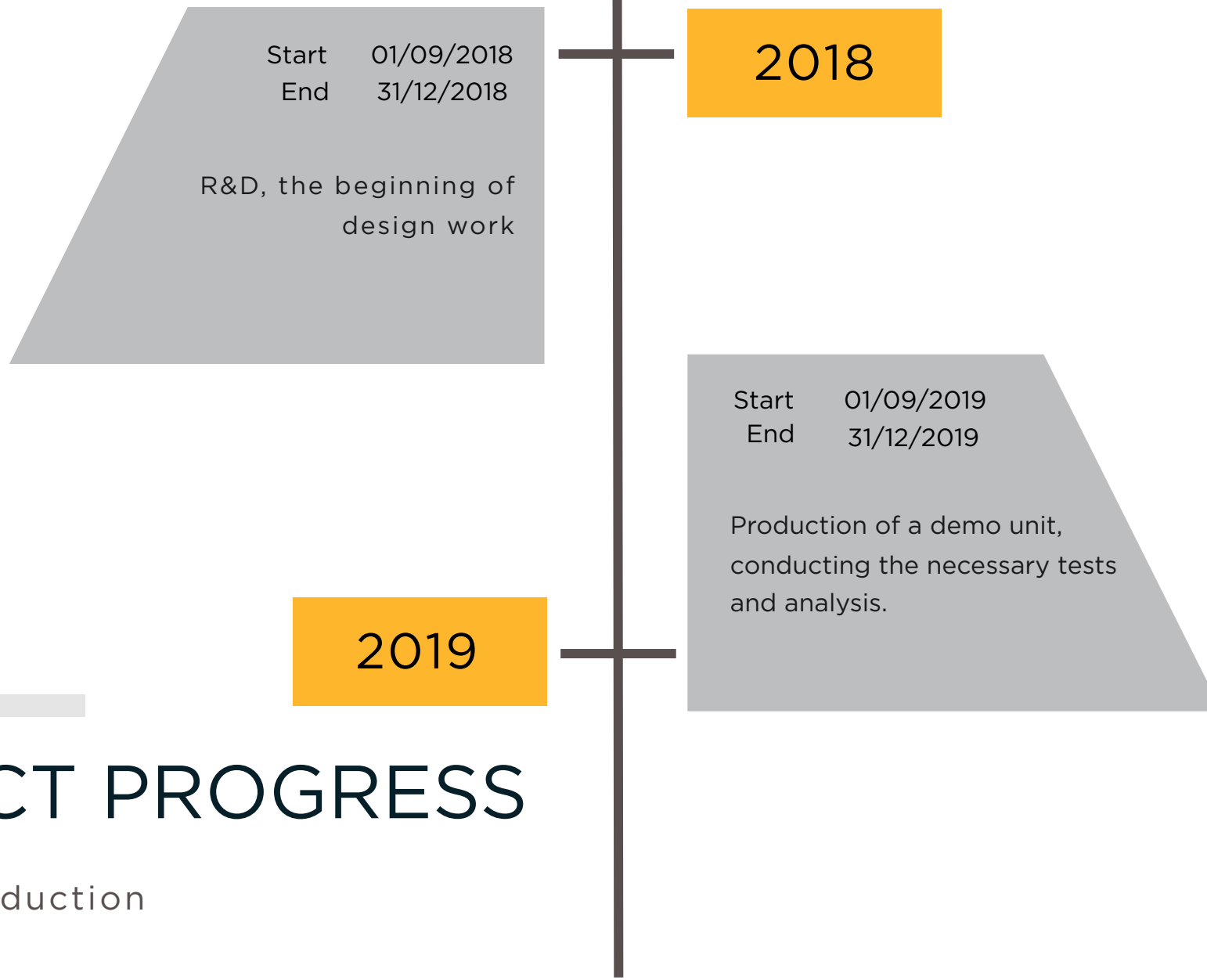
Foundation of the legal entity  
for the project - LLC  
"PROMBIOGAZ"

2017



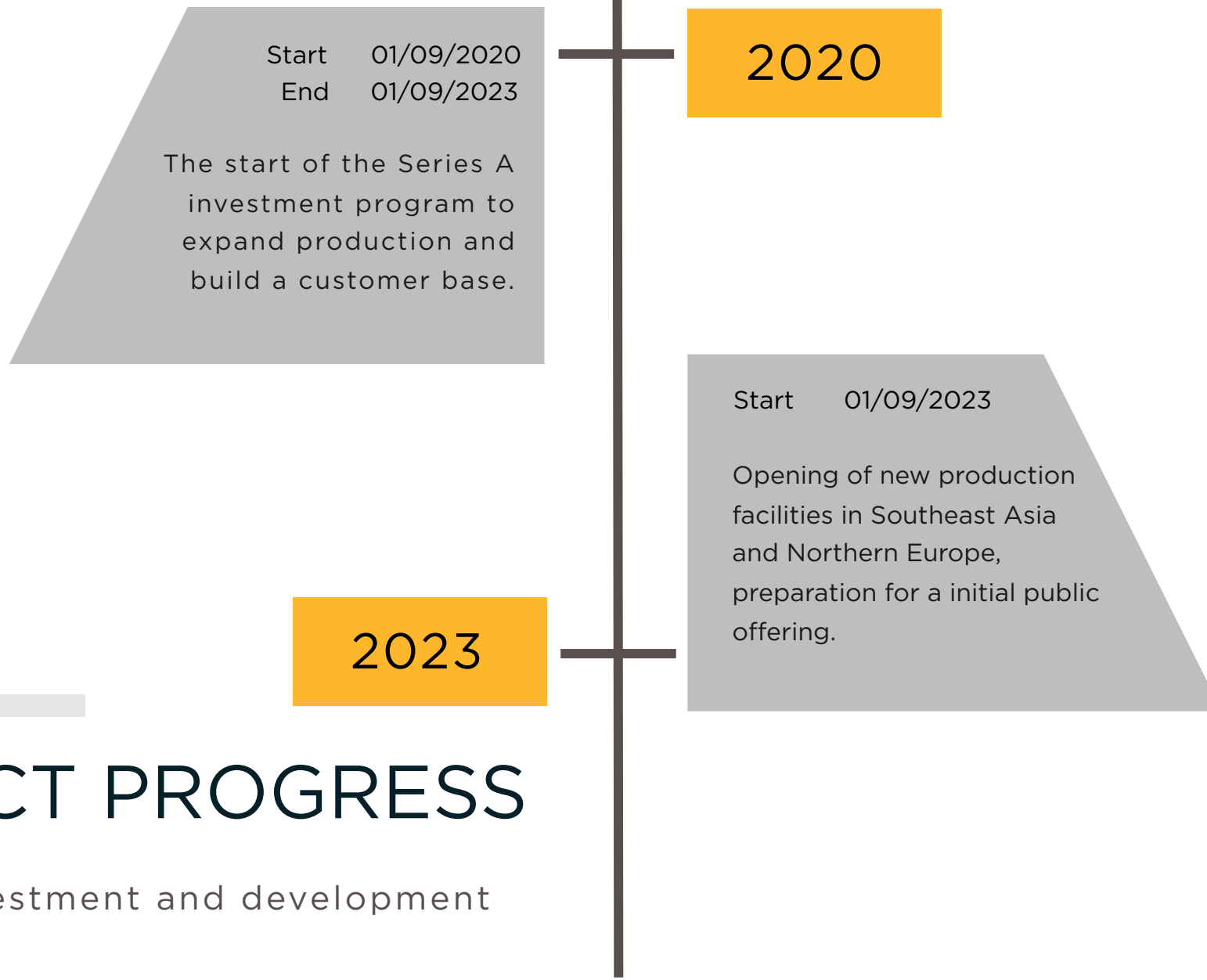
# PROJECT PROGRESS

Demo-unit production



# PROJECT PROGRESS

Attracting investment and development



# Waste management market



# Main market problems

(in Russia)

1

A huge amount of waste accumulation - annually in the Russian Federation about 65 million tons of MSW are generated only from the population, which is 10% of the total volume.



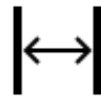
2

High penalties for improper disposal at each inspection by the relevant authorities and misunderstanding of the general disposal system.

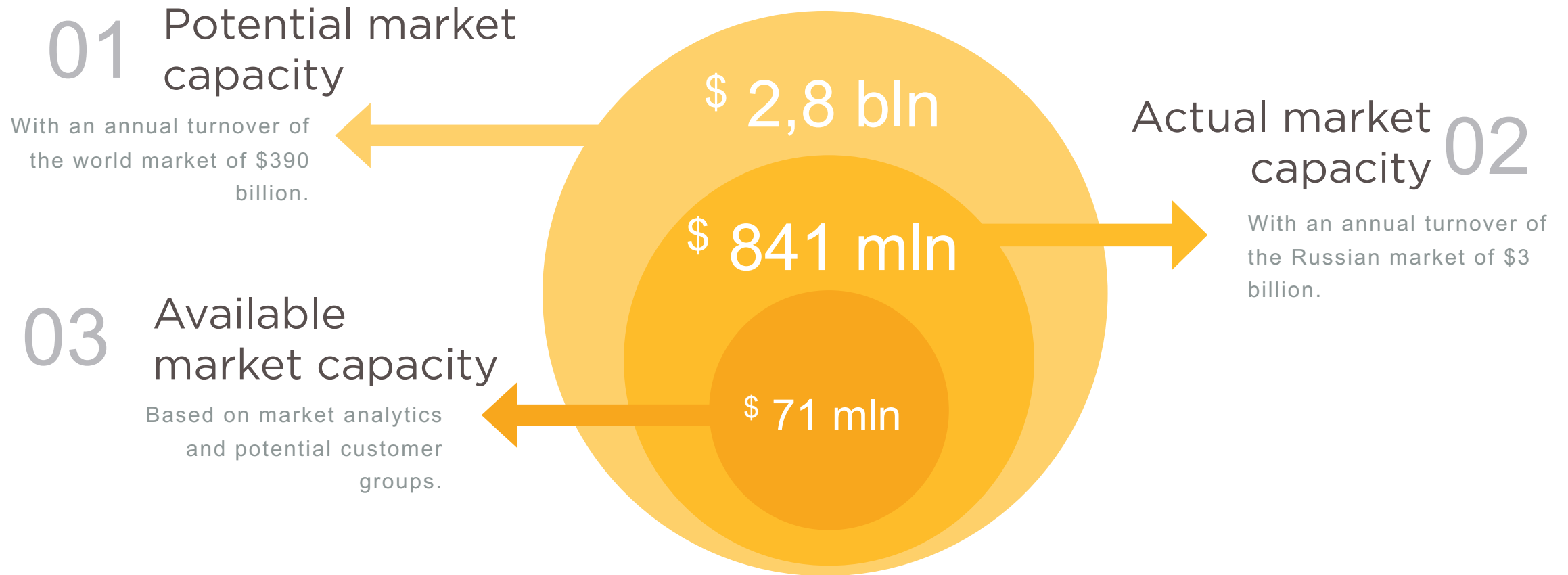


3

Remoteness of objects of accumulation and depositing of waste from settlements and industrial complexes.



# Market volume



# Competitors

The waste management market is quite large. The main market advantage of the company is the non-waste MSW recycling industry in Russia, which is practically not occupied, because there are no domestic and foreign technologies with which 100% processing can be achieved.

All analogues cannot offer a single, non-step solution. Competitors of the company can be grouped by recycling methods and be analyzed by their activities. These are mechanical and biological treatment and sorting of waste and its further disposal at landfills (MBT plants), incineration in combustion plants and incinerators, as well as pyrolysis plants.

Characteristics	COMBUSTOR	Combustion plants	Incinerators	Pyrolysis plants	MBT plants
No waste	✓				
No emissions	✓			✓	
High power consumption		✓	✓	✓	✓
High price		✓			✓
Mobility	✓		✓	✓	
Performance	✓	✓			
The need to sort the waste		✓	✓	✓	✓



# Our decision

We offer an effective solution for the disposal of industrial and household waste to our customers without high cost and hiring of additional staff.

**COMBUSTOR** is intended for those companies who are thinking about optimizing the recycling process itself.

We are ready to offer:



Adequate price without mark-up per brand



Mobility to minimize transport costs



The minimum amount of complementary products



Easy to use to minimize staff costs



Energy efficiency equipment to minimize energy consumption



# Competitive advantages

COMBUSTOR system

## PRICE

- Low cost
- Low operating costs (no need to dry and sort the waste)
- Nearly zero energy costs

## SUSTAINABILITY

- No pollutant emissions
- No need for chemicals
- Non-waste - formation of 6% neutral solids after utilization

## APPLICATION

- Mobility (according to ISO standards)
- Generation of thermal energy for household needs
- All components are locally manufactured equipment



Business model

Financial model

Investment

proposal

# BUSINESS MODEL

Income channels

01

## Industrial waste utilization

Arrangement of a special site for the reception and disposal of industrial and household waste.

25% of profit

02

## Medical waste utilization

Arrangement of a separate special site for the disposal of medical waste in accordance with accepted tariffs.

35% of profit

03

## Sell of units

Production and sale of units to customers under pre-concluded contracts.

40% of profit

The background image shows a vast pile of unsorted waste, including plastic bottles, bags, and debris, under a cloudy sky. In the distance, a large industrial structure, the combustor, is visible. Three orange geometric shapes are overlaid on the image: a large trapezoid at the top, a rectangle in the center, and a triangle on the left side.

# TEAM

## COMBUSTOR



# Project team



**NIKOLAY CHERNOV**  
Executive director

Initiator of the project. Expert in international trade relations between Russia and Southeast Asia. He has extensive experience in conducting business in the commercial and industrial sectors in Southeast Asia. He has rich experience in interacting with the business community of Southeast Asia. Implemented more than 10 international joint projects.



**IGOR NOVIKOV**  
Scientific director

Ph.D. Senior Researcher, Department of Physics of Laser Thermonuclear Fusion (69) / Institute of Laser and Plasma Technologies. Expert of a number of councils for scientific and innovative activities (NRNU MEPhI, ANO MNTF Technopark in Moskvorechye, FFMPP). Provided a theoretical justification for the project.



**ALEXANDER MIRONOS**  
Technical director

Ph.D. in quantum radio physics, has more than 90 scientific papers. Senior Researcher, Department of Solid State Physics, NRNU MEPhI. In recent years, he worked in the field of LENR (low-energy nuclear reactions), including in a vortex vapor-gas medium.



**IRINA VINOGRADOVA**  
Commercial director

Expert in public relations and external communications with foreign partners. She has extensive experience in working with the media and representatives of the state apparatus. A large number of realized PR actions and events.

# THANK YOU FOR ATTENTION

Nikolay Chernov

107122, Russia, Moscow,  
Sirenevy boulevard, 1-1/38

+7 495 178 0591

+7 906 735 7360

[nik@prombiogaz.ru](mailto:nik@prombiogaz.ru)  
<http://www.combustor.ru/>