



BUSINESS PLAN

Production of equipment for separate waste collection



June, 2023.



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Methodological comments on the business plan

This business plan is a blueprint for the implementation of business operations, actions of the firm, containing information about the firm, the product, its production, markets, marketing, organization of operations and their effectiveness.

The planning period is 2024-2027.

The object and subject of research and business planning

The object of the study is the creation of the production of modules for separate waste collection.

Goals and objectives of the business plan

The purpose of business planning: to assess the cost-effectiveness of the construction of production for the assembly of modules for separate collection of MSW in Kashkadarya region.

The challenges of business planning:

- Assessment of the economic efficiency of the project;
- Assessment of the ecological condition in the Kashkadarya region;
- Justification of investment funds for the implementation of the project;
- Evaluation of the volume, capacity and structure of the market;
- Analysis of consumers and main competitors;
- Assessment of trends and prospects of market development;

Sources of information

- Industry Statistics;
- Data from government agencies;
- Specialized databases of the Global Innovation Trade Agency;
- Ratings;
- Information resources of market participants;
- Industry and specialized information portals;
- Materials of the sites of the subject under study (web-resources of manufacturers and suppliers, electronic trading platforms, bulletin boards, specialized forums, Internet stores);
- Regional media;
- Portals of information disclosure (reporting of public companies);



Distribution of the business plan

The Business Plan materials are not intended for wide distribution or publication. When making the Business Plan available to users, the purpose of the document, the assumptions adopted for its preparation, and any restrictions on its use must be communicated to them.

Scope of analysis

The business plan was prepared on the basis of information obtained from publicly available sources.

Limitation of liability

All opinions, conclusions and estimates contained in this business plan are valid as of the date hereof. The Contractor is not responsible for changes in economic, political, social, or other conditions that may affect the validity of these judgments.

Contractor shall not be liable for any loss or damage suffered by a third party as a result of the use of the information in this business plan.



1. PROJECT SUMMARY

The purpose of this project is to justify the economic efficiency and expediency of the organization of the enterprise for the production of equipment for separate collection of municipal solid waste (MSW).

In order for this project to be cost-effective, the issue must be worked out not only in terms of MSW disposal, but also in terms of MSW collection. This project is aimed at developing the system of MSW collection.

The main goal of this project is to create a modern MSW collection system in the Kamashi area.

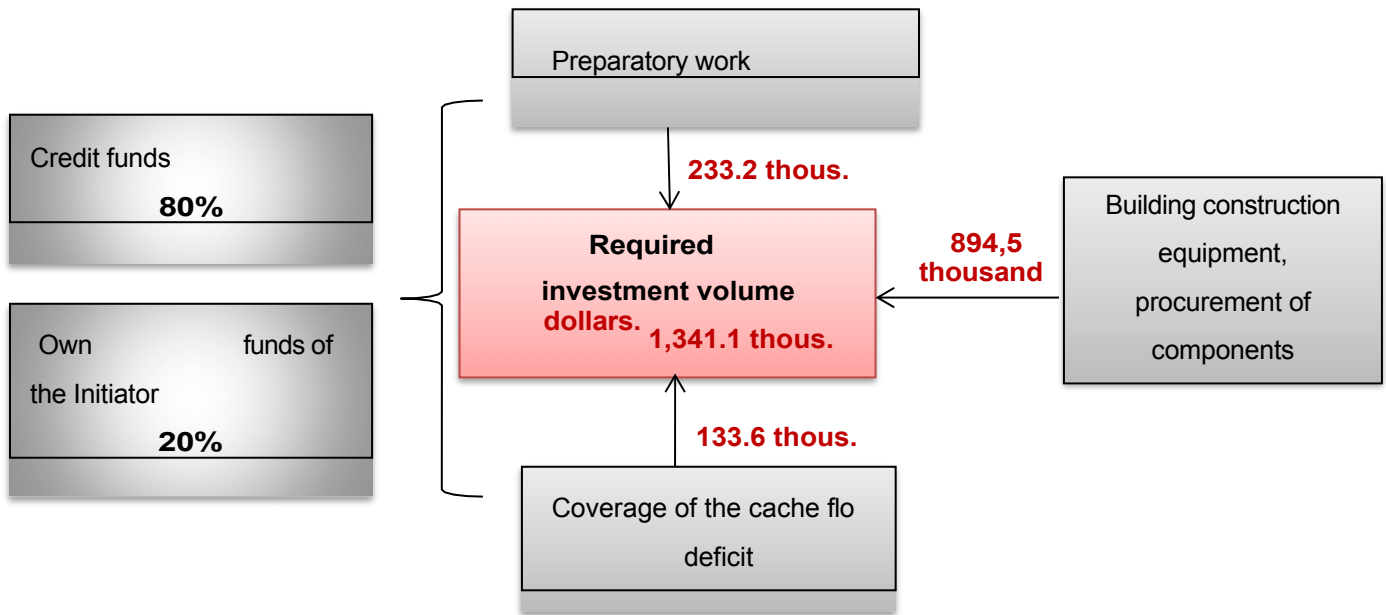
The main characteristics of the project:

- **Nomenclature:** modules for separate collection of MSW (above-ground and underground), maintenance of information systems of modules.
- **Beginning of production:** test run - September - October 2024, from November 2024 to November 2025. - Gradual increase in production, December 2025. - reaching full capacity in December 2025.
- **Personnel:** Over the period under review, the average number of employees is 50 people.
- **Geographic coverage:** The company's products are primarily sold in the Kashkadarya region, in the future there is the possibility of access to other regions of the Republic of Uzbekistan.

The volume of investment (financing) of the project will be **1 341.1 thousand dollars**. Below we present a scheme of formation of investments of the project.



Figure 1.1. The required amount of investment of the project



Source: Global Innovation Trade calculations

Funding for the project is planned at its own expense, as well as from credit funds.

In the calculation of the business plan calculations of economic indicators with a planning horizon of 2024-2027 were made and the following results were obtained, which are presented in the table below.

Table 1.1. Indicators of investment efficiency

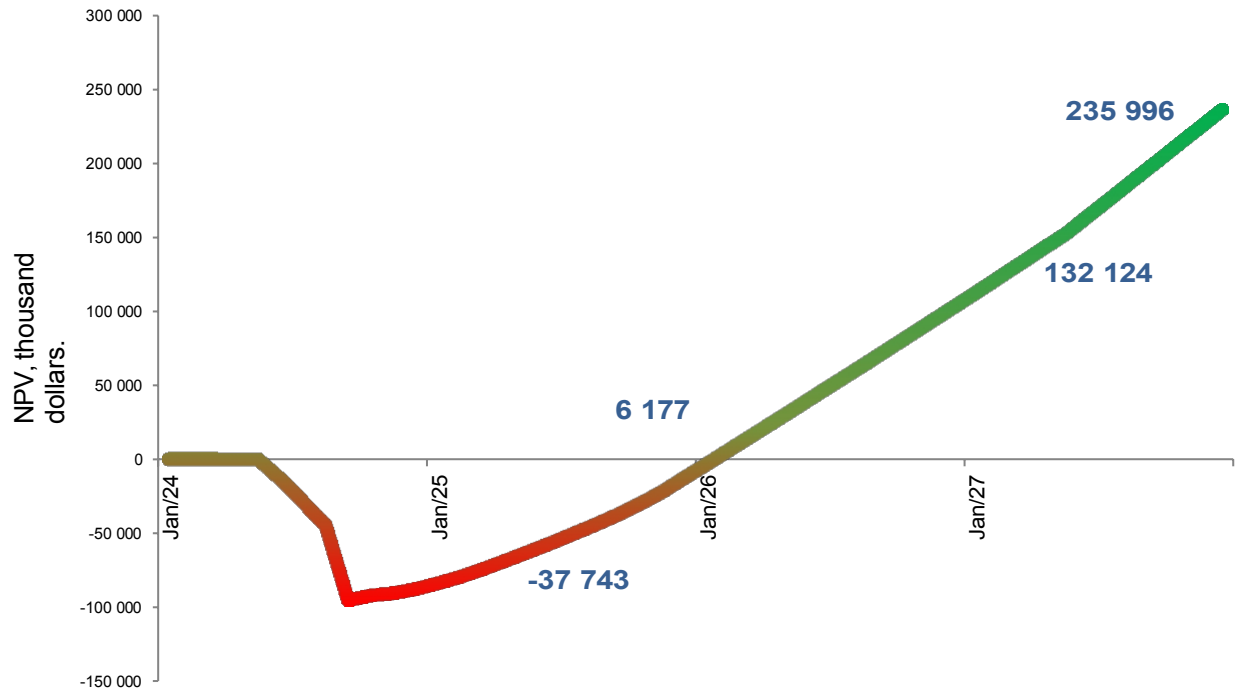
Investment performance indicators	
Calculation period (planning horizon), months.	46
Net income (NV), thousand dollars.	354 751
Net discounted income (NPV), thousand dollars.	235 996
Internal rate of return (IRR), % per year	129%
Profitability index (PI), units.	3,11
Payback period (PB), months.	22,3
Discounted payback period (DPB), months.	23,3
Investments in the project, thousand dollars.	111 759
Average return on sales for the project, %	9%
Net income (cumulative), thousand dollars.	290 494
Discount rate, %	13,55%

Source: Global Innovation Trade calculations



The figure below shows the NPV of the project by years of its implementation. In the NPV graph we can see the increase of the net present value of the project by years:

Figure 1.2. Graph NPV of the project



Source: Global Innovation Trade calculations

As can be seen from the graph NPV project for almost the entire study period has a positive trend.



2. ESSENCE OF THE PROPOSED PROJECT

2.1 General description of the project

2.1.1 Description of the project concept

The project involves setting up the design, sale, assembly and installation of modules for separate waste collection. The main income of the company will be formed from two sources:

- Sale, assembly and installation of the module for separate waste collection to management companies and municipal services. The use of separate waste collection modules will help increase the volume of MSW, which will be sent for recycling;
- maintenance of the commissioned modules for separate waste collection.

The main market that the company will focus on is in the Kamashi area, which is experiencing difficulties in recycling MSW.

When production reaches full capacity, the company will be able to supply its products to the entire market of Uzbekistan.

2.1.2 Description of the IT platform of the project

During the preparatory phase, programmers will develop an IT platform with the following principle of operation:

- Each potential user will be given a card, by activating which it will be possible to use the module for separate waste collection. With the help of this system, it is planned to monitor the sorting of waste and the
If a violation is detected, the offender will be blocked. As part of the project, it is planned to create an Internet portal and an application for mobile devices. This service will allow the user to keep track of how much time is left for the incentive gift and how many violations have been recorded by the modules;
- The system monitors the filling of the tanks and collects statistics on the amount of waste thrown away, so the company responsible for the collection of MSW can optimize the movement of its vehicles, i.e. determine the time when it is necessary to pick up trash from the filled containers;



- information portal is aimed at forming the culture of separate waste collection among citizens of Uzbekistan - this is the main goal of the project. The portal contains information articles, actions aimed at promoting the MSO qualification, as well as communities in which users of the system can actively participate in the life of the project.
- In order to popularize this method of waste collection among the population, as well as to explain to future users the principle of the module for separate waste collection, information videos will be placed on the portal.

2.1.3 Interaction with customers

The main customers of the company will be the following business entities:

- management companies;
- homeowners' associations;
- urban municipalities;
- regional authorities;
- companies engaged in the collection of solid waste;
- recycling companies.

A purchase and sale agreement will be signed with each customer, where the main aspects of cooperation between the initiator of the project and the customer of the equipment will be spelled out. Another direction will be maintenance of the information system of the module for separate waste collection, cooperation in this direction will be on a contractual basis.

2.1.4 Interaction with counterparties

Properly built a system of relationships with counterparties is key to the full and continuous operation of the enterprise for several reasons:

- the company plans to assemble modules for separate waste collection from prefabricated structures, which are produced at different industrial enterprises. Therefore, productivity directly depends on timely deliveries of quality components;
- relationship with auxiliary companies that are involved in the installation of modules for separate waste collection. Basically, these are companies that are engaged in transportation, but in the case of the installation of underground modules for separate waste collection, it is important to have a contractor who can to prepare the site for the installation of an underground module for separate waste collection, as well as to remove the ground.



2.2 Description of products and services provided

In the initial version, the module for separate waste collection will have 9 compartments:

- **glass bottle;**



- **packaging (packaging for juices, dairy products);**



- **paper waste;**





- plastic (PET);



- bags (low-pressure polyethylene (HDPE));



- aluminum can;





- metal can;



- canisters (LDPE);



- sections for collecting special waste (batteries, light bulbs).





Figure 2.1. Module for separate collection of ground type waste



Source: Global Innovation Trudet

Receiving stations of above-ground and underground types have the following components:

- metal frame, which is clad with clad metal;
- baling system, which helps to reduce the volume of removed MSW from each module;
- system for identifying and controlling the opening of the waste discharge sections;

Working principle: the card is attached, the user is identified, and then the user opens the necessary container for him.

- a system for weighing discarded MSW;

Principle of operation: first, with the help of special sensors the dumped waste is weighed, then the data are sent to the server, at the same time the bonus points are accrued to the user of the container. In addition, the module for separate waste collection has a system of user identification (when dumping waste that does not meet the function of the section, the user is identified and blocked).

▪ information system, where each user can track his or her status, and waste collection companies can build optimal routes for waste collection.

According to preliminary calculations, one module for separate waste collection can serve about 1,200 apartments.



2.3 Production location

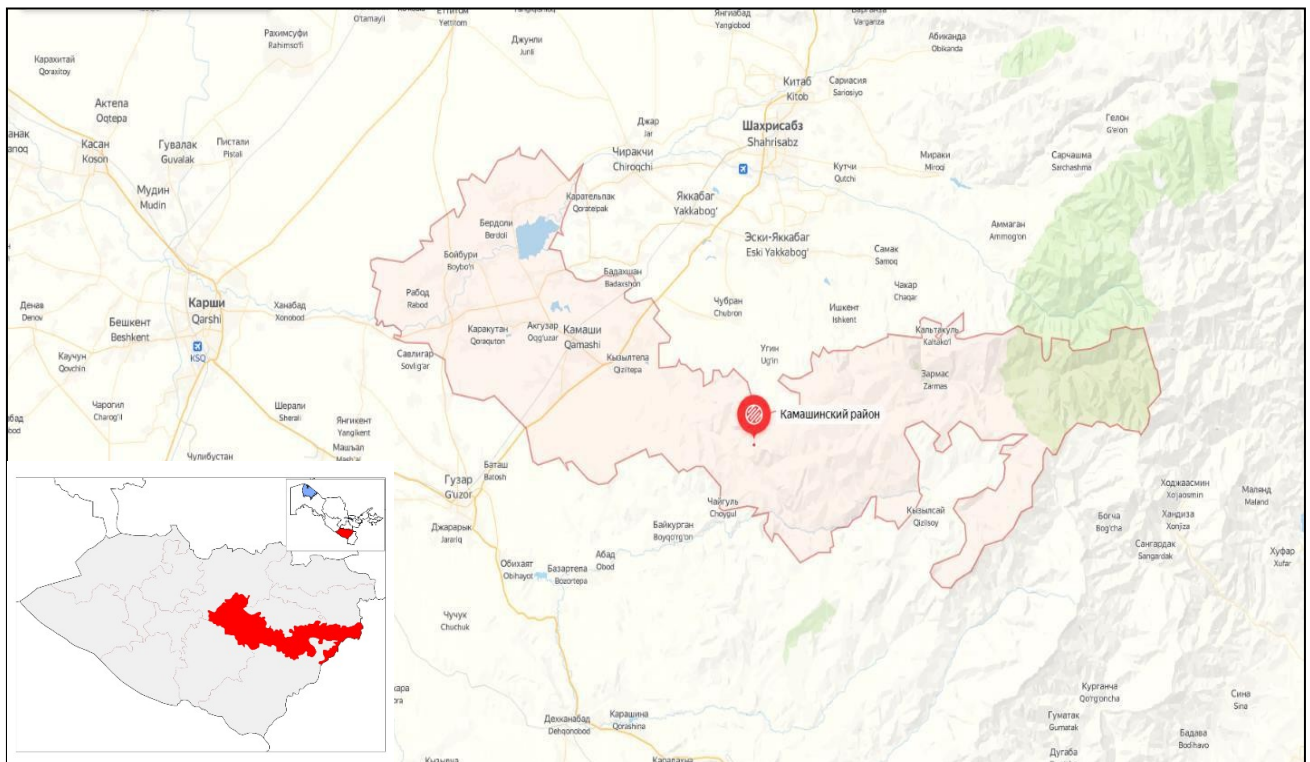
The production site is located in Kashkadarya region, Kamashi district at the following address: Oinakuл village.

The district occupies an area of more than 2.66 thousand square kilometers. It is located 60 kilometers from Karshi city and 485 kilometers from Tashkent.

The district is connected to Karshi city by a road1.

The population of the Kashkadarya region as of 2023 is 3.5 million people, and the population of the Kamashi district itself is 286,000.

Figure 1: Project location



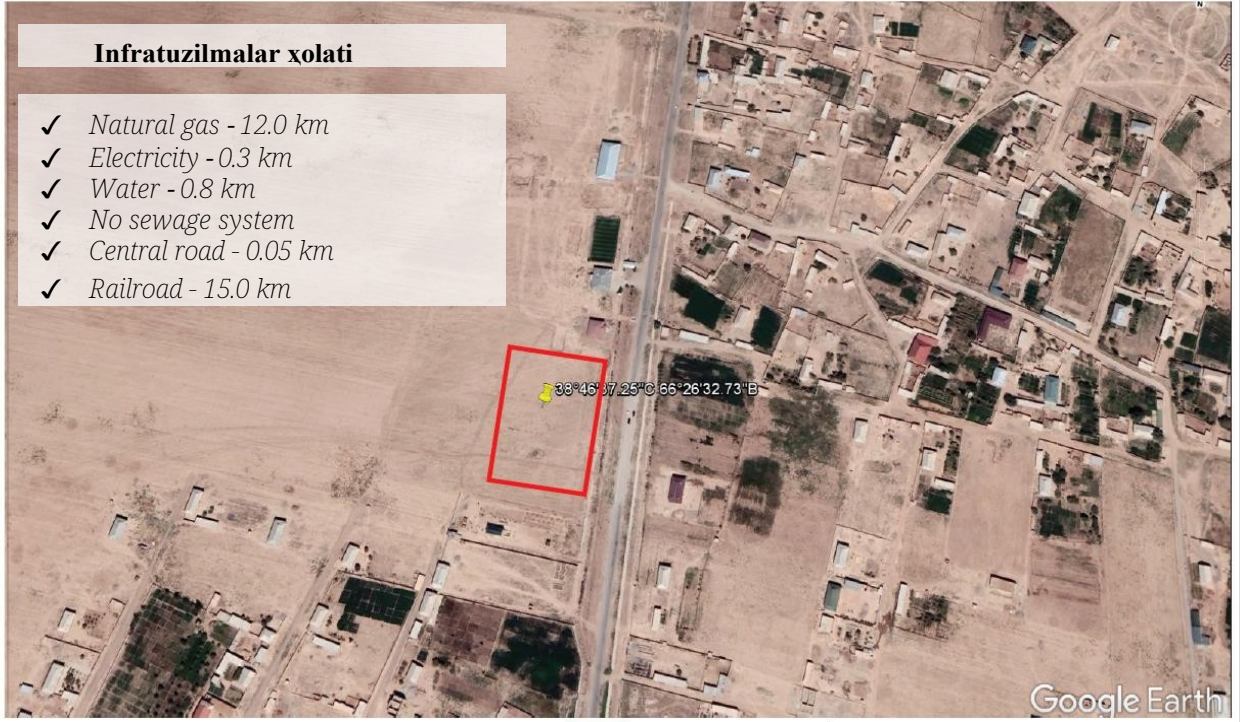


Production area

Қамаши туманида қиймати 100 млн долл.дан баланд булган 40 та лойихалар таклифининг жойлашув харитаси чизмаси
Қамаши тумани Ойнакул МФЙ худуди

Infratuzilmalar xolati

- ✓ *Natural gas* - 12.0 km
- ✓ *Electricity* - 0.3 km
- ✓ *Water* - 0.8 km
- ✓ *No sewage system*
- ✓ *Central road* - 0.05 km
- ✓ *Railroad* - 15.0 km

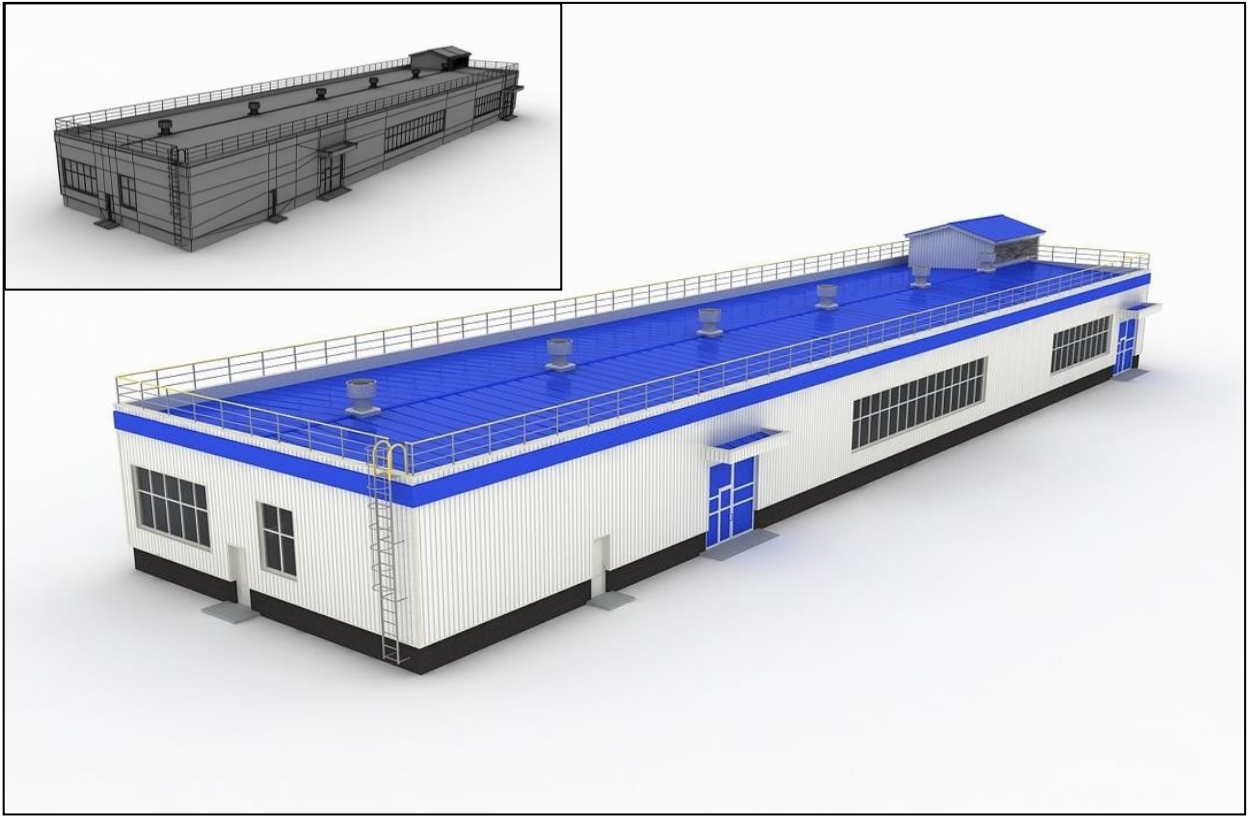


Майдони : 0.80 гектар
Жой координатаси: 38°46'37.23\"C 66°26'32.73\"B

— танланаётган жой

Ак
Чт









3. MARKETING PLAN

3.1 Level of waste collection and recycling

The level of collection and processing of domestic waste in Uzbekistan is low. This, in turn, poses a threat to the ecology of the area.

Today, 7 million tons of household waste is generated annually in the republic. Only 1.8 million tons or 26% of them are recycled by 307 recycling enterprises. From waste 1,400 tons of products are produced. By the end of the year, there is no way to increase recycling to fifty percent.

Also following the results of the meeting chaired by Shavkat Mirziyoyev on February 2, 2022 the draft decree "On additional measures on the organization of sanitary cleaning and ensuring sanitary condition of the territories" for 2022-2025 to increase household waste collection to 95% and recycling to 40% was adopted. The draft was developed, agreed with relevant ministries and departments and submitted to the Cabinet of Ministers.

On this basis in 2022-2025 it is assumed:

- reconstruction of 29 landfills;
- construction of 437 garbage collection sites;
- Construction and equipment of 26 landfills for construction waste and garbage;
- the purchase of 18,867 containers;
- Construction of 60 medical sites and providing them with technical facilities;
- Construction of 38 reloading stations with 164 units of special equipment and 181 large-sized containers;
- installation of 40 waste-sorting facilities.

As a result of these measures, we have set the goal of increasing [household waste recycling] to 40 percent. We can do this work after the president signs this document.



3.2 Entrepreneurs who collect and recycle waste

ASP SELTA LTD.

71 276 2288

Country code: +998

Faxes: 71 2762288

E-mail: mika-tsh@mail.ru

Legal name: ASP SELTA LLC

Brand name: ASPSELTA LLC

Address: Uzbekistan, 100097, Tashkent, Chilanzar District, 42 Bunyodkor Ave.

ECO PARTNER LTD.

97 440 4067

Country code: +998

E-mail: ecopartner2019@mail.ru

Legal name: ECO PARTNER LLC

Brand name: ECO PARTNER LLC

Address: Uzbekistan, Tashkent, Yashnabad district, 108, Mukhtar Ashrafi str.

ECO-SERVICE.

99 404 5346

Country code: +998

E-mail: eco_utilization_service@mail.ru

Legal name: ECO UTILIZATION-SERVICE

Brand name: ECO UTILIZATION-SERVICE

Address: Uzbekistan, Tashkent, Uchtepa district, Bogobod street

EKO MODERN SERVIS LLC

97 752 7557

Country code: +998

Faxes: 71 2776724

E-mail: petina@mail.ru

Legal name: EKO MODERN SERVIS LLC

Brand name: EKO MODERN SERVIS LLC

Address: Uzbekistan, 100043, Tashkent, Mirabad district, 1, Mirabad street



INFOSISTEMA LTD.

71 234 4341

Country code: +998

Faxes: 71 2355327

E-mail: infosistems@inbox.ru

Legal name: INFOSISTEMA LLC

Brand name: INFOSISTEMA Ltd.

Address: Uzbekistan, 100084, Tashkent, Yunusabad district, 7 A Bogishamol str.

INFOSISTEMA LTD.

98 270 2207

Country code: +998

E-mail: k.utkirbek1@mail.ru

Legal name: RESURS UTIL PE

Brand name: UTILIZATSIYA.UZ

Address: Uzbekistan, Tashkent, Chilanzar district, Chilanzar-1, 6

3.3 World experience of separate waste collection

USA

In the USA there is no sorting of waste by fractions. The main attribute of cleanliness in the U.S. has become a large plastic bag, which makes it easier to sort MSW at industrial facilities, rather than dumping all waste into one container.

In the U.S., there is a widespread network of recycling plants that separate the useful fractions and send the rest to landfills.

The MSW is collected individually at stores, colleges, schools, and government offices, and the already sorted garbage is sent for recycling.

Japan

With the high population density, the problem of waste management is very acute. Since the early 1990s, Japanese government agencies have been combating the excessive generation of MSW.

At various levels authorities introducing bills, which obligate people to sort their waste in different ways. Some municipalities ask citizens to sort their waste



to nine different kinds! Although the culture of waste management was very difficult for the population, but thanks to widespread agitation, a large number of modules for separate waste collection, a system of punishments and incentives, the authorities managed to achieve a high level of sorting.

In Japan, there is a multi-level system for sorting waste. First, citizens sort the waste at home, and then the waste goes to sorting stations.

Brazil

More than 50% of MSW in Brazil is recycled. This is high for a developing country. The city of Curitiba recycles more than 80% of its waste, the best rate of any city in the world, but this is more a consequence of poverty. The city has a program where a family can exchange six bags of garbage for a bag of food. In addition, there is an active work with the young population of the city, who learn to sort their own garbage, and also teach the older generations to sort their own garbage.

Germany

Germany is a federal country with separate states with their own legislation. Therefore there are different levels of waste sorting depending on where you live. But it is important that waste sorting exists all over the country and has become almost a way of life.

But it is worth noting that even for a nation as pedantic as the Germans, it took about 20 years to learn.

France

In the French capital, Paris, solid municipal waste is sorted into three types: for glass, for paper, for everything else. It is also worth noting that the movement of garbage trucks is coordinated depending on the occupancy of the containers, which is recorded by a system of chips.



4. ORGANIZATIONAL PLAN

4.1 Personnel plan

In the calculation part of the project was created tab "Personnel", which reflects the cost of the enterprise's payroll. In drawing up the staffing table were provided for employees for the following structures of the enterprise:

- Administrative and management personnel (top management, sales service, design department, programming department, office staff);
- Production staff (2 shifts);
- Additional employees.

The following table shows the average monthly number of employees and the amount of payroll during the calculation period from 2024 to 2027.

Table 4.1. Formation of the company's payroll

No	Job title	Number of employees	Salary of one employee, thousand dollars/month.	Total payroll, thousand dollars.
1	Administrative and management personnel	21	0	12,883
1.1	CEO	1	1,440	1,440
1.2	Accountant	1	0,600	0,600
1.3	Material and technical specialist	4	0,480	2,100
1.4	Equipment Sales Manager	5	0,480	2,316
1.5	Senior Programmer	1	0,900	0,900
1.6	Programmer	6	0,600	3,357
1.7	Head of the Design Department	1	0,900	0,900
1.8	Design Engineer	2	0,600	1,270
1.9	Promoter	3	0,300	0,900
2	Production personnel	22	0,000	11,680
2.1	Master Installer	7	0,600	4,492
2.2	Equipment installer	15	0,480	7,188
3	Attendants	7	0,000	1,656
3.1	Loader	4	0,240	0,948
3.2	Security Guard	3	0,240	0,708
	Total	50	0	26,219

Source: Global Innovation Trade analysis and calculations



It is worth noting that during the implementation of the project the number of staff will change.

The average payroll is \$522.0. per month.

The average wage for the Kamashin area is \$250.0 per month. The average manufacturing wage is \$350.0 per month, which is higher than the average wage for the district as a whole.

Production is planned to run in two shifts.

4.2 Work schedule for the project

The stages of the project are shown in the table below:

Table 4.2 Project implementation schedule

Project Stage	Beginning of work	Duration, days	End of job
Rationale for the effectiveness of the project	17.03.2024	75	31.05.2024
Project works	01.06.2024	121	30.09.2024
Development of an information system	01.07.2024	91	30.09.2024
Trial run of production	01.10.2024	60	30.11.2024
Start of production	01.12.2024		

Source: Global Innovation Trade analysis and calculations

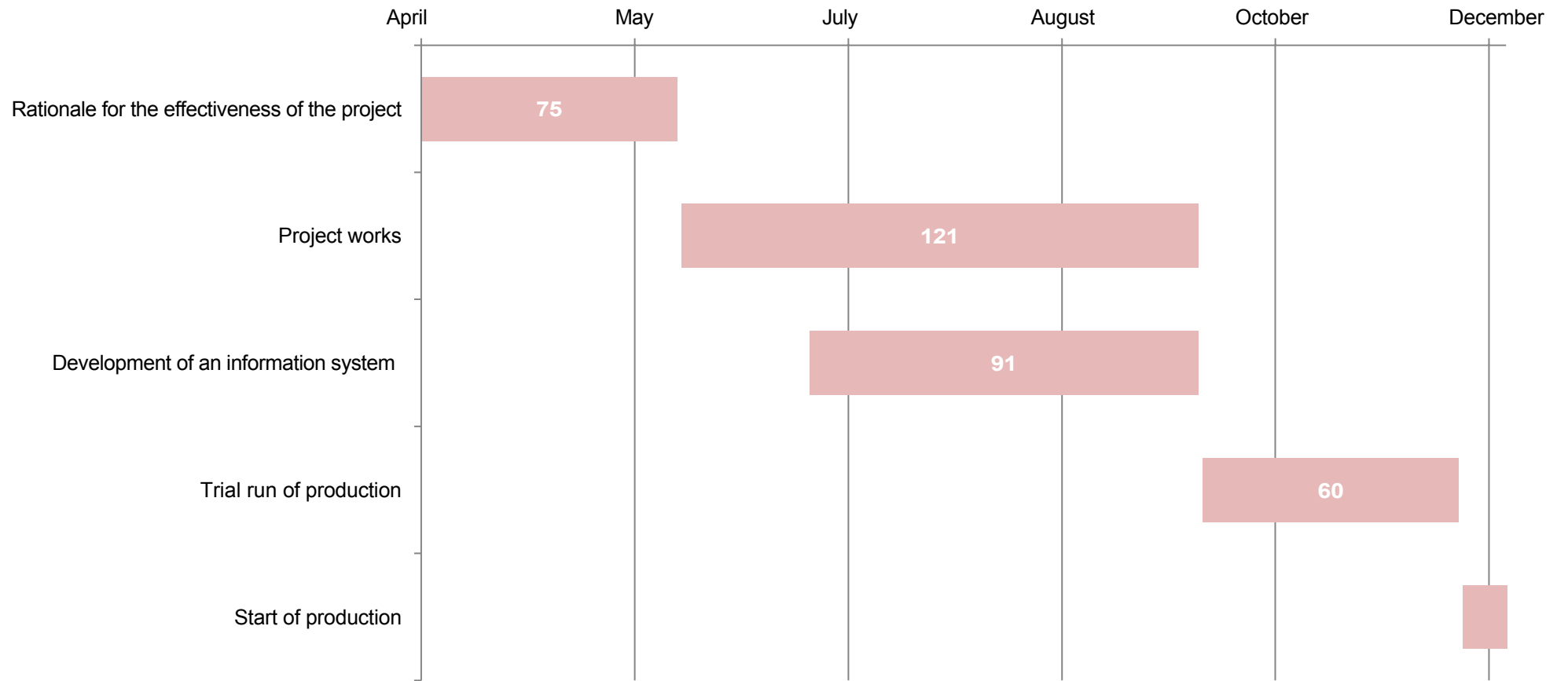
Preparatory work will take place from March to May 2024, including a feasibility study, design work, and development of an information system.

An important stage is the trial run of production, during which the design and basic control systems of the module for separate waste collection will be tested.

Since December 2024 it is planned to start production of modules for separate waste collection. Within a year (until December 2025) the production should reach its design capacity.

The project implementation schedule is shown graphically in the figure below:

Figure 4.1 Project implementation schedule



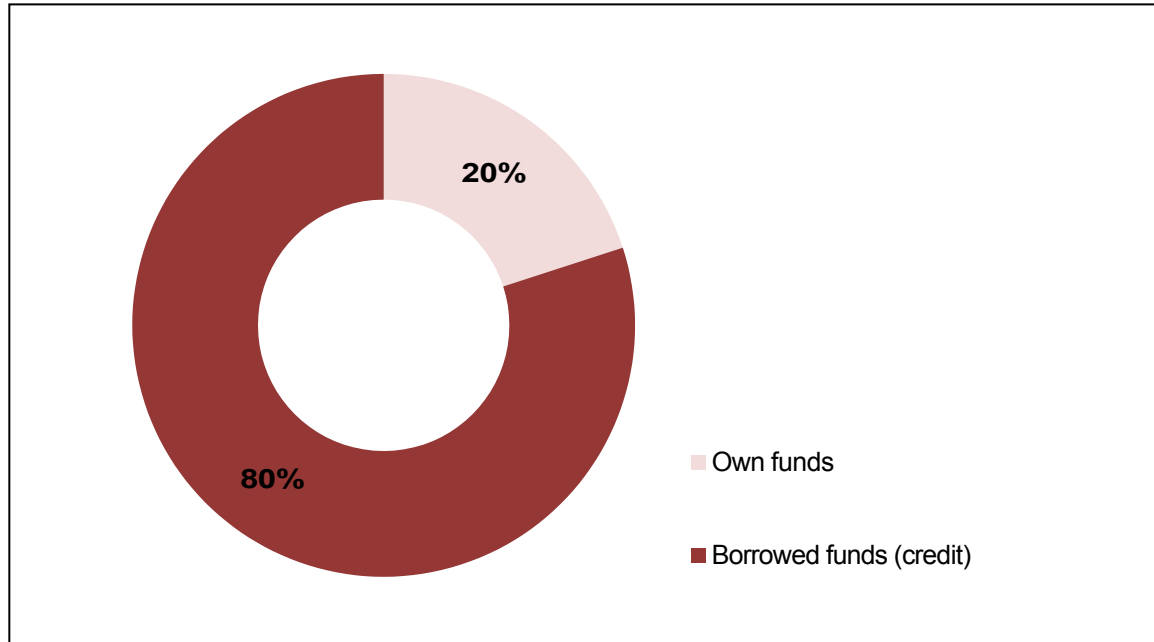
Source: Global Innovation Trade analysis and calculations



4.3 Sources, forms and conditions of financing

The total investment amount of the project is 1 341.1 thousand dollars. The share of the Customer's own investments will be 20% of investments or \$268.2 thousand.

Figure 4.2. Structure of investment project financing



Source: Global Innovation Trade analytics

The interest rate on the loan from the bank is 16%. Borrowed funds are a loan for a period of 3 years. Terms and parameters of the project credit are presented in the Table below.

Table 4.3. Lending terms and conditions

Loan Terms	Unit of measure	Values
Loan rate per year, %	%	16,0%
Loan repayment term	months.	36
Starting payments on the loan	months.	July 2024
Loan amount	thousand dollars.	1 072,9

Source: Global Innovation Trade analysis and calculations

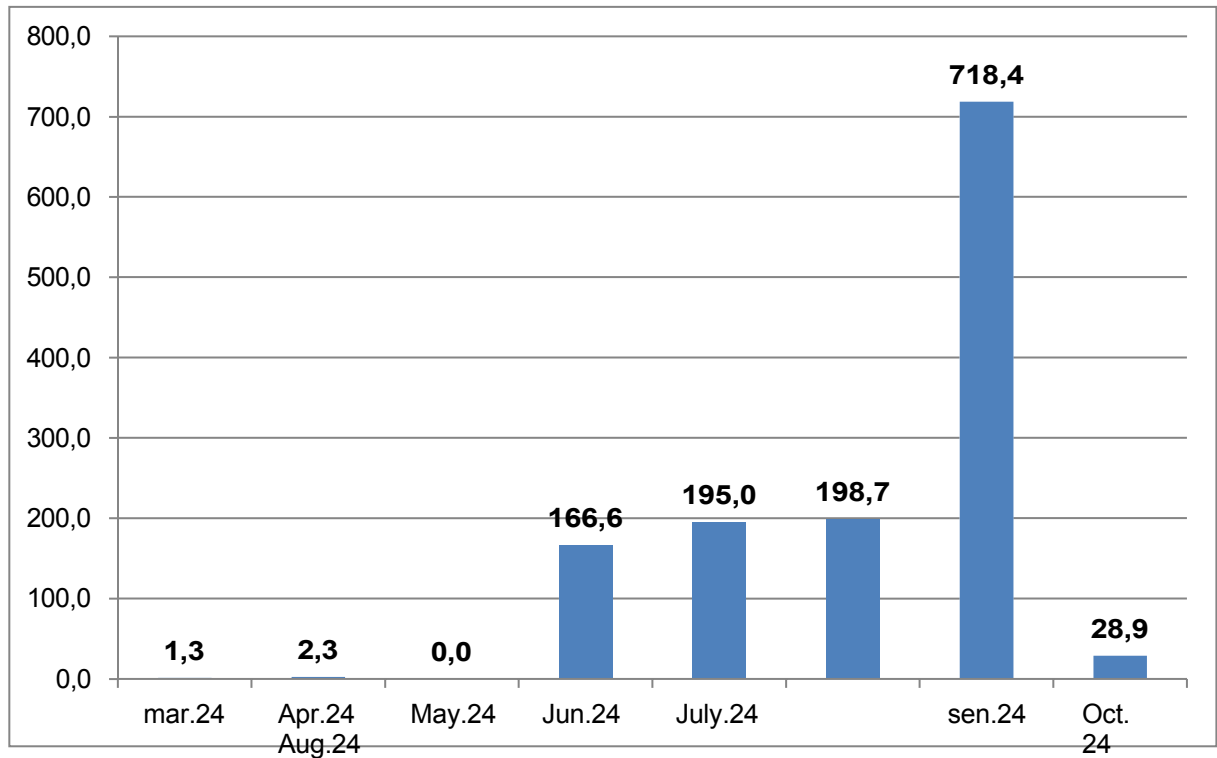
4.4 Project funding schedule

In the "Investments" tab of the project's calculation part, a project financing schedule was additionally formed.

The diagram below shows a monthly calendar of investments in the project.



Figure 4.3. Project financing schedule



Source: Global Innovation Trade analysis and calculations

Thus, the main load in the investment period will fall on the period from June to September, when the main preliminary stages will take place (equipment design, information system development). In September, the purchase of components for the trial run will take place, so August will be the largest volume of investments.



5. WORK PLAN

5.1 Description of production buildings and premises

The production and office premises of the project are planned to be built on an area of 0.8 hectares in the area of Oinakol MFU of Kamashi district of Kashkadarya region.

To organize the production of separate waste collection modules, buildings are constructed based on the following requirements:

- The possibility of increasing the production area from 150 sq.m. to 1000 sq.m;
- buildings must be equipped with all necessary communications (electricity, water, communications);
- the height of the ceiling should allow the installed LHD cart to enter the production area;
- The building must be equipped with sliding doors.

5.2 Description of the production process

When calculating the personnel, it was assumed that one team (1 technologist + 2 workers) can assemble and install 5 modules for separate waste collection per month.

The technological process of production for the collection of modules for separate waste collection can be divided into several stages:

- partial assembly of module parts at the production site (e.g., connection of containers and baling mechanism, partial connection of module electronic systems for separate waste collection);
- site preparation and final installation of structures. Assembly of the module by the installation team at the installation site, as well as full adjustment of the systems module for separate waste collection.

5.3 Description of the main technological equipment

The enterprise will specialize in the production of modules for separate waste collection. Large-size technological equipment will not be involved in the production process.



6. FINANCIAL PLAN

6.1 Initial data and assumptions

A four-year planning horizon was adopted in the economic evaluation of the project. The assumptions adopted in the project are described below.

Product Assumptions

The products of this company are modules for separate waste collection (aboveground and underground) and maintenance of information systems of these modules for separate waste collection.

Assumptions about price

In the project the average sales prices of products during the year are accepted. It is expected that the cost of 1 above-ground module for separate waste collection will be 21.92 thousand dollars, 1 underground module for separate waste collection - 32.42 thousand dollars.

Assumption about the sales plan

Revenue plans are based on the company's production plans.

Assumptions about investment costs

Investment costs are divided into two categories: initial costs for the purchase and installation of equipment and working capital project.

In addition, funds to cover the cash flow deficit are taken into account, for which a projected calculation of profits and losses on current activities of the company until the moment of reaching self-sufficiency.

Assumption about the discount rate

The project adopted a discount ^{rate}¹ of 13.55% per year. Below is the rationale for the calculation of this indicator.

The method of construction is based on summing up the risk-free (10.01%) rate of return and premiums for the risk of investing in the evaluated enterprise. The method takes into account all kinds of investment risks related both to the factors common for the industry and economy, and to the specifics of the evaluated enterprise. The calculations are made according to the formula:

¹ The discount factor or barrier rate is an indicator used to bring the amount of cash flow in the n-period of the evaluation of the effectiveness of an investment project, in other words the discount rate is the interest rate used to recalculate the future income flows into a single value of the present value.



$$r = r_b + \sum_{i=1}^n R_i$$

where r is the discount rate; r_b is the base (risk-free or least risky) rate; R_i is the premium for the i -type of risk; n is the number of risk premiums. Let us present below the calculation according to this methodology.

Table 6.1. Determination of the cost of equity

Constituents	%
The size of the risk-free rate	10,01%
Amount of country risk adjustment	2,55%
Amount of industry risk adjustment	2,00%
Amount of other risk adjustment	2,00%
Cost of equity	16,56%

Source: Global Innovation Trade analysis and calculations

Then, based on this, the discount rate was determined.

Table 6.2. Determination of the discount rate

Constituents	%
Equity share	20%
Share of borrowed capital	80%
Tax	20,00%
Cost of equity	16,56%
Cost of borrowed capital	16%
Total discount rate	13,55%

Source: Global Innovation Trade analysis and calculations

Thus, the expert calculation of the discount rate was 13.55% per annum.

Assumptions about revenue, profit and loss projections (P&L) and cash flow (CFP)

All of the above indicators were used to build revenue, P&L, and DDS plans.



6.2 Nomenclature and prices

The main products that will be produced as part of this project are modules for separate waste collection.

The cost of 1 aboveground module for separate waste collection will be \$21.92 thousand, 1 underground module for separate waste collection - \$32.42 thousand.

Over time, an important product that the company will be able to offer its customers will be the maintenance of information systems of its modules.

6.3 Investment costs

At Forming investments of the project were defined basic investment categories:

- preparatory work;
- production equipment;
- additional costs;
- current assets;
- cache-flo deficit coverage.

The investments that will be required to organize the production of modules for separate waste collection are shown in the Table below.

Table 6.3 Investment costs of the project, thousand dollars.

№	Capital expenditures	Price, thousand dollars.	Quantity	Cost, thousand dollars.
1	Preparatory work			233,2
1.1	Business plan development	5	1	5,2
1.2	Project works	144	1	144,0
1.3	Creating an information system	84	1	84,0
2	Production equipment	0		436,3
2.1	Mounting tool	48	9	436,3
3	Additional expenses	0		458,2
3.1	Contribution on lease production area	2	3	6,5
3.2	First contribution at lease office space	355	4	354,5



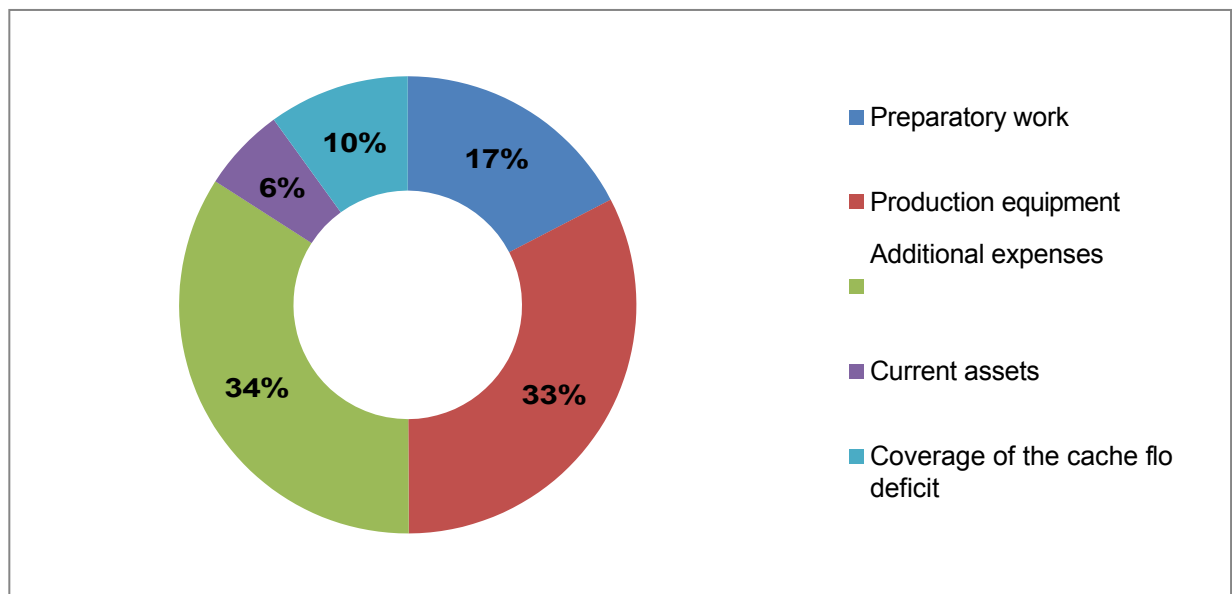
No	Capital expenditures	Price, thousand dollars.	Quantity	Cost, thousand dollars.
3.3	Office software	1	7	7,6
3.4	Arrangement of the workplace	1	7	5,0
3.5	Marketing company	32	1	32,4
3.5	Unforeseen expenses (5%)	-	5,0%	52,2
4	Current assets	0		79,8
4.1	Purchase of components for the first month of production	80	1	79,8
Total capital costs				1 207,5
	Coverage of the cache-flo deficit			133,6
Total investment in the project				1 341,1

Source: Global Innovation Trade analysis and calculations

Covering the deficit cache-flo \$ 133.6 thousand - this is the minimum necessary investment, which will go to pay staff, permanent payments while revenues for the project is still not enough.

Below is a graphical representation of the investment structure.

Figure 6.1. Structure of investments



Source: Global Innovation Trade analysis and calculations



6.4 Cost price

The cost of above-ground and underground modules for separate waste collection is 21.9 and 32.4 thousand dollars. More than 95% of the cost of the modules is made up of components:

- metal frame, which is clad with clad metal;
- baling system, which helps to reduce the volume of removed MSW from each module;
- system for identifying and controlling the opening of the waste discharge sections;
- the system of weighing of MSW.

Table 6.4. Cost of the ground module for separate waste collection

Cost items	Average as of 12.2022	
	Consumption for the entire products per month, dollars.	Consumption, per 1 pc.
Accessories	739,15	20,53
Electricity	1,08	0,03
Transportation costs		0,11
Site preparation		0,60
Staff salaries	17,19	0,48
Production cost, \$/t		21,75
Fixed costs	10,44	0,17
Cost of production, \$/t		21,92

Source: Global Innovation Trade analysis and calculations



Table 6.5. Cost of underground module for separate waste collection

Cost items	Average as of 12.2022	
	Consumption for the entire products per month, dollars.	Consumption, \$ per 1 pc.
Accessories		29,03
Electricity	1,08	0,09
Transportation costs		0,11
Site preparation		2,12
Staff salaries	7,17	0,60
Production cost, \$/t		31,95
Fixed costs	5,74	0,48
Cost of production, \$/t		32,42

Source: Global Innovation Trade analysis and calculations

Let's look at the main components that make up the waste collection module below.

The module for separate waste collection consists of the following components:

Table 6.6. Components for the module for separate waste collection

Title	Price, thousand dollars.
Metal clad frame	4,2
Identification system	5,0
Weighing system	4,2
Containers	2,8
Pressing system	4,2
System lifting system containers (for underground module)	8,5

Source: information provided by the project initiator

The costs of purchasing the main elements of the module for separate waste collection are the main ones at the assembly plant.



6.5 Revenue of a potential client of the company

Prior to the development of the project, a study was conducted in which 60 families of 3 people each participated. The sample is 5 percent (1,200 people) of the number of users who can use the waste collection module.

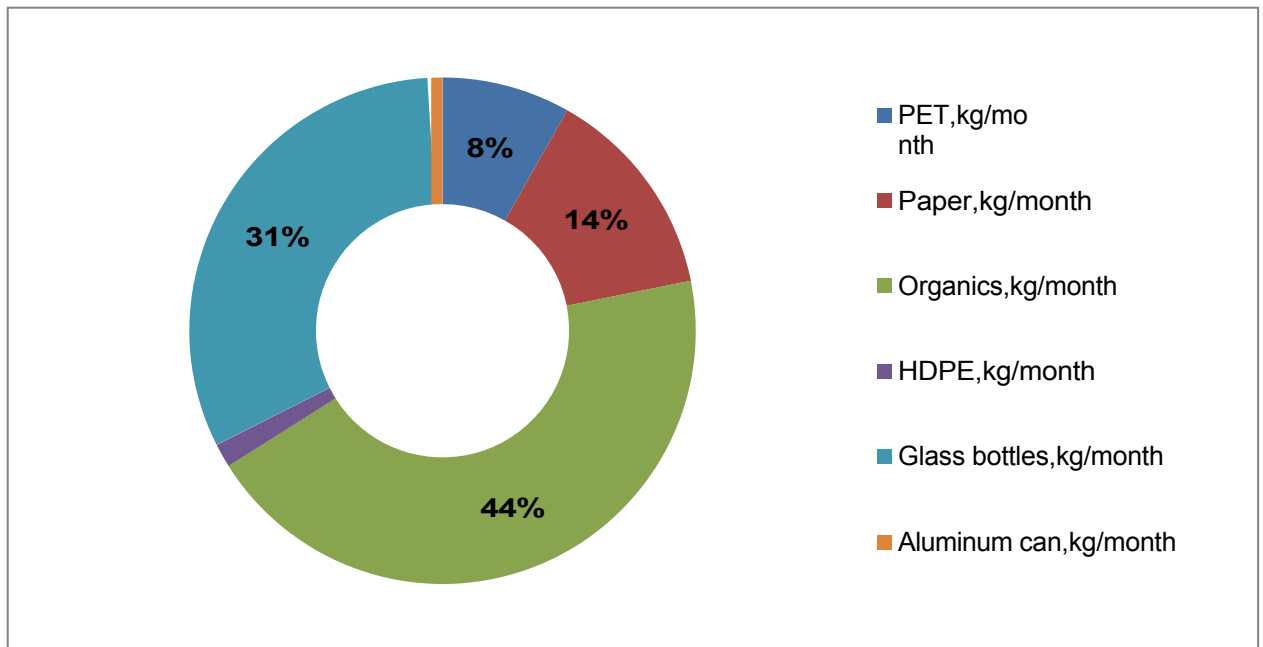
A stratified sample was selected for this study. Each family lived in different areas of Kamasi County and had different social status. In general, all the necessary conditions for obtaining up-to-date information were created.

During the month, the trash thrown away in each family was counted in fractions (item 8.2). The following fractions were analyzed:

- glass bottle;
- organic;
- paper waste;
- plastic (PET);
- canisters (LDPE).

Overall, an average was obtained for each family.

Figure 6.2. Results of the study of litter formation



Source: Global Innovation Trade

Two fractions account for the largest share in the structure of waste generation: organics and glass bottles (44% and 31%, respectively).



To calculate the revenue of a potential client company used 2 more indicators:

- number of serviced apartments;
- the price offered by recyclers.

In carrying out the calculations, the first indicator was taken as a constant value and was equal to 1,200 apartments.

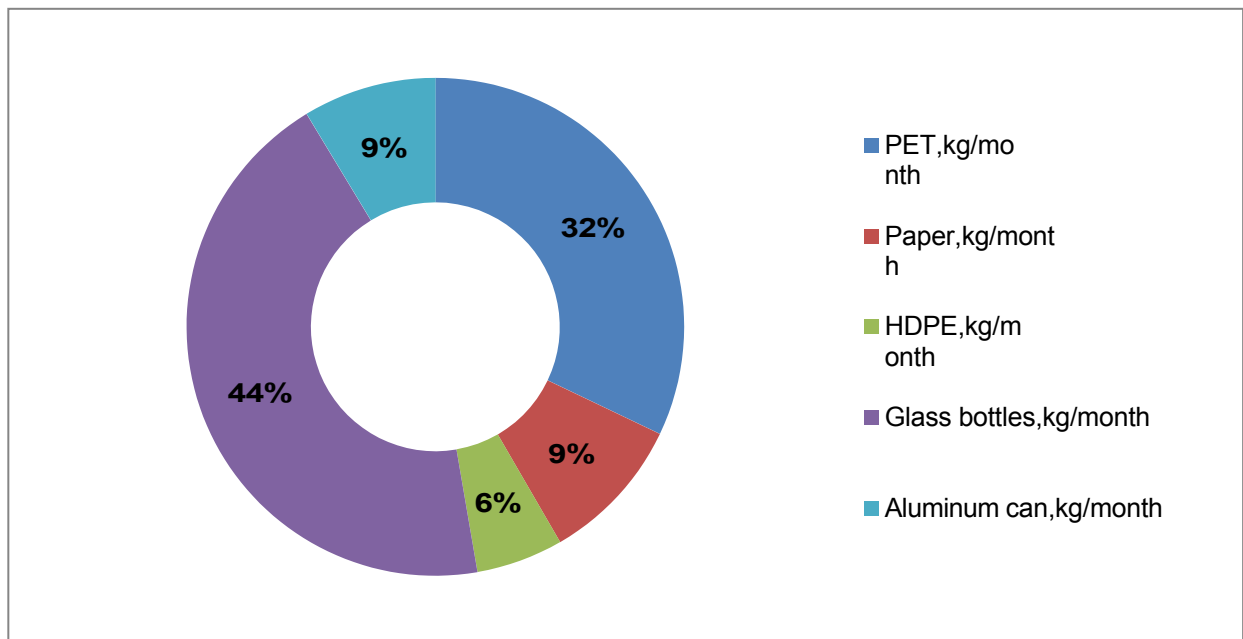
The price of the main fractions is given in the Table below:

Table 6.7. Price of main trash fractions \$/kg

	Price (\$/kg)
PET	0,34
Paper	0,061
IPA	0,32
Glass bottle	0,12
Aluminum can	0,79

Source: information provided by the project initiator

Figure 6.3. Potential customer revenue structure



Source: Global Innovation Trade analysis and calculations

More than 75% of a potential customer's revenue will come from 2 fractions - glass bottle and plastic.



6.6 Initial working capital requirement

The project provides for initial working capital for the following types of costs:

- Purchase of accessories to ensure operation during the first month (\$69,700);
- FTE before production start-up - \$42.2 thousand;

The funds required for components for subsequent production are included in the variable costs of the project.

6.7 Tax deductions

In the project it is planned to apply the general system of taxation (DST).

The main taxes under the DST are shown in the table below:

Table 6.8. Tax environment under DOS

Period	Rate
Income tax	12%
VAT	12%

Source: Tax Code of the Russian Federation

Taxes in operating activities. In the course of its operations, an enterprise will pay:

1. VAT - value added tax - 12%. It is accrued and paid quarterly.

VAT is shown in the reports "Taxes" and DDS of the project's calculation part. In addition, in the tab "Taxes" takes into account the mechanism of return/offset from the current activity of accumulated input VAT in the investment cycle.

2. Corporate income tax - 12%. It is paid quarterly. The tax base for determining the tax is the amount of income received minus the amount of expenses incurred. Income tax is shown in the profit and loss statement.



6.8 Operating costs (fixed and variable)

Fixed project costs are project costs that do not depend on changes in production volume. They include, as a rule, maintenance and management costs. The main fixed costs are presented in the table:

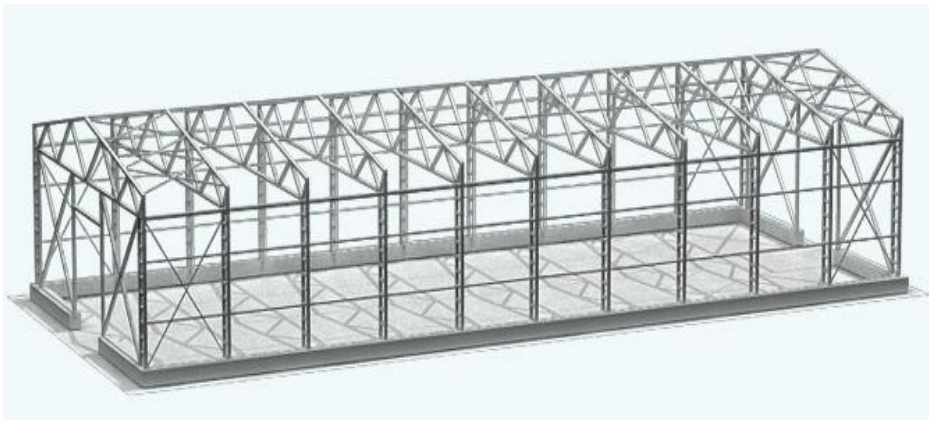
Table 6.9 Fixed costs, thousand dollars.

No	Indicator	Thousands of dollars per month.
1	Office space for rent	1,21
2	Depreciation of buildings	11,10
3	Server rental	0,23
4	Communication and Internet	0,23
5	Marketing	1,52
	TOTAL	14,29

Source: Global Innovation Trade analysis and calculations

Project variable costs are the costs of raw materials required for production:

Table 6.10 Variable costs, thousand dollars.

No	Purchasing raw materials	Average cost per month, thousand dollars.
1	Accessories	797,15
1.1	Metal-clad frame 	164,93
1.2	Identification system	192,41
1.3	Weighing system	164,93
1.4	Containers	109,95
1.5	Trash compacting system	164,93



1.6	Container lifting system (underground module)	86,58
2	Site preparation (underground module)	21,64
3	Site preparation (aboveground module)	20,64
3	Transportation costs	4,12
4	Electricity	2,15
5	Staff salaries	26,35
	Total	1755,78

6.9 Production plan

The sales plan by year is shown in the table below:

Table 6.11 Production plan by year, pcs.

Period	2024	2025	2026	2027
Module for separate waste collection	11	262	432	432
Module for separate waste collection (underground version)	2	87	144	144
Maintenance of the information system of waste collection points	9	1 595	7 514	14 426
Total	13	349	576	576

Source: Global Innovation Trade analysis and calculations

6.10 Revenue Calculation

The calculation of revenue is based on the sales plan and prices for the products in question. The revenue plan in the first years of sales is presented in the Table:

Table 6.12 Revenue plan by year, thousand dollars.

Period	2024 r.	2025 r.	2026 r.	2027 r.
Equipment for solid waste collection	3,0	69,7	115,1	115,1
Equipment for collection MSW (underground option)	0,8	38,3	63,2	63,2
Maintenance of the point information system waste collection	0,0	1,1	5,4	10,4
Total	3,8	109,2	183,7	188,7

Source: Global Innovation Trade analysis and calculations

6.11 Forecast of profits and losses

The profit and loss statement by year is shown in the table:

Table 6.13 Profit and loss statement, thous.

Income / expense item	2024	2025	2026	2027
Revenue from sales	26 625	758 237	1 275 970	1 310 530
Variable costs	29 334	639 174	1 048 275	1 049 115
Gross profit	-2 709	119 063	227 695	261 415
Fixed costs	1 708	12 764	16 493	17 176
Taxes (except income tax)	1 733	11 113	29 198	34 722
EBITDA	-6 149	95 186	182 004	209 517
EBIT, % (to revenue) average	-23%	13%	14%	16%
Depreciation of fixed assets	0	0	0	0
EBIT	-6 149	95 186	182 004	209 517
Payment of interest on loans and credits	6 071	9 232	4 837	555
Profit (Loss) before taxation	-12 220	85 955	177 168	208 963
Income tax	0	2 737	35 434	41 793
Retained earnings	-12 220	83 218	141 734	167 170
Retained earnings on an accrual basis	-12 220	70 998	212 732	379 902
Repayment of accounts payable	15 338	27 469	31 864	14 737
Net income	-27 558	55 749	109 870	152 433
Return on sales	-104%	7%	9%	12%

Source: Global Innovation Trade analysis and calculations

6.12 Cash flow forecast

Cash flow projections by year are shown in the table below. Cash flow projections by month are shown in the appendix.

Table 6.14 Cash flow forecast, thousand USD.

	2017	2018	2019	2020
INVESTMENT CASH FLOW (ICEF)	-100 622	0	0	0
Capital expenditures	100 622	0	0	0
OPERATING CASH FLOW (OPF)	8 327	89 264	154 304	203 478
Revenue total	26 625	758 237	1 275 970	1 310 530
Expenses total	31 042	651 938	1 064 767	1 066 290
<i>Variable costs</i>	29 334	639 174	1 048 275	1 049 115
<i>Fixed costs</i>	1 708	12 764	16 493	17 176
Accrued taxes and payments	-21 834	-19 666	20 198	25 470
Payments of interest on the loan	6 071	9 232	4 837	555
FINANCIAL CASH FLOW (FDP)	110 540	0	0	0
Own funds	21 132	0	0	0
Borrowed funds	89 407	0	0	0
Payment of the body of the debt	15 338	27 469	31 864	14 737
Net cash flow (NFC)	-92 295	89 264	154 304	203 478
Cumulative NPD	-92 295	-3 031	151 273	354 751

Source: Global Innovation Trade analysis and calculations



6.13 Project efficiency analysis

6.13.1 Methodology for assessing the effectiveness of the project

Evaluation of investment projects is carried out according to the following main indicators:

- Net present value NPV
- Profitability index PI
- PB payback period
- Discounted payback period DPB
- Internal rate of return IRR

6.13.2 Project performance indicators

Performance indicators of an investment project make it possible to determine the efficiency of investment of funds in this or that project. When analyzing the effectiveness of investment projects the following indicators of investment efficiency are used: Net discounted (discounted) income (cash flow); Net present value, NPV; Payback period (period), PB; Discounted Payback period, DPB; Internal rate of return (profitability), Rate of Return, IRR (Modified Rate of Return, MIRR); Profitability index, profitability index, profitability index, PI.

The main financial indicators are shown in the table below.

Table 6.15. Indicators of investment efficiency

Investment performance indicators	
Calculation period (planning horizon), months.	46
Net income (NV), thousand dollars.	354 751
Net discounted income (NPV), thousand dollars.	235 996
Internal rate of return (IRR), % per year	129%
Profitability index (PI), units.	3,11
Payback period (PB), months.	22,3
Discounted payback period (DPB), months.	23,3
Investments in the project, thousand dollars.	111 759
Average return on sales for the project, %	9%
Net income (cumulative), thousand dollars.	290 494
Discount rate, %	13,55%

Source: Global Innovation Trade analysis and calculations

Let us consider these indicators in more detail.



6.13.3 Net present value (NPV)

Net present value (commonly abbreviated as NPV) is the sum of discounted simultaneous differences between the benefits and costs of a project. - The sum of discounted simultaneous differences between benefits and costs of a project. The sum of cash flows (receipts and payments) associated with operational and investment activities, reduced (discounted) at the beginning of the investment.

Net discounted income NPV is calculated by the formula 1.

$$NPV = \sum_{t=0}^T \frac{CF_t}{(1+i)^t}$$

Where i is the discount rate;

CF_t - net cash flow of period t ;

T - the duration of the project in periods.

The NPV calculation is a standard method of evaluating the effectiveness of an investment project and shows an estimate of the effect of the investment, adjusted for the present time value of money. If the NPV is greater than 0, the investment is profitable, and if the NPV is less than 0, the investment is unprofitable.

With the help of NPV can also assess the relative effectiveness of alternative investments (with the same initial investment is more profitable project with the highest NPV).

Positive qualities of NPV:

- clear criteria for decision-making
- indicator takes into account the value of money over time (using the discount factor in the formulas).

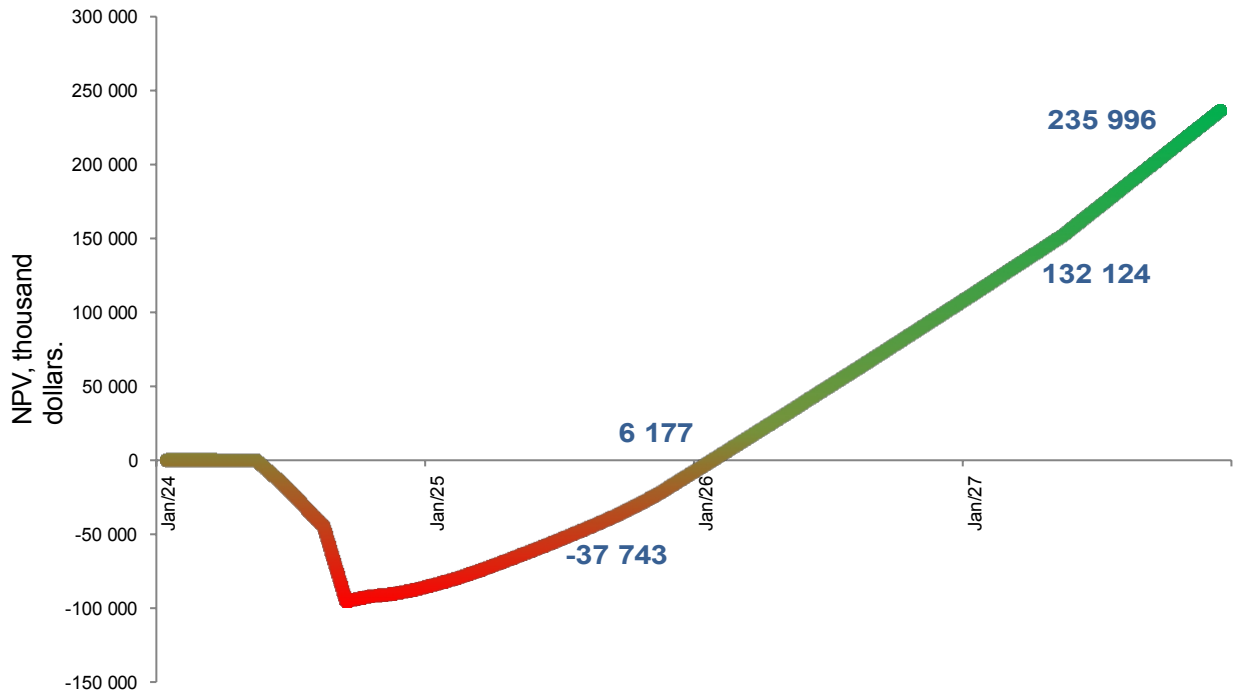
Negative qualities of NPV:

- the indicator does not take risks into account.
- does not take into account the probability of the event outcome, since all cash flows and the discount factor are predicted values.

Below is the graph of the change in NPV of the project. The NPV graph shows an increase in the net present value of the project by years:



Figure 6.4. Graph NPV of the project



Source: Global Innovation Trade analysis and calculations

6.13.4 Internal rate of return (IRR)

In the case of heterogeneous cash flows, as in this project, can be applied appropriate analogue of IRR - the modified internal rate of return (MIRR).

The calculation algorithm involves several procedures. First, the total discounted value of all outflows and the total accrued value of all inflows are calculated, and both discounting and accretion are performed at the price of the project's financing source. The accrued value of inflows is called the terminal value. Then the discount rate is determined, which equalizes the total present value of outflows and the terminal value, which in this case is the MIRR. So, the general formula for calculation is as follows:

$$\sum_{t=0}^N \frac{OF_t}{(1+r)^t} = \frac{\sum_{t=0}^M IF_t(1+r)^{n-t}}{(1+MIRR)^n} \quad (2)$$

Where OF, - cash outflow in the N-th period (in absolute value); IF, - cash inflow in the N-th period;

d - the cost of the source of funding for this project; n - the duration of the project.

Note that the formula makes sense if the terminal value exceeds the sum of discounted outflows.



The internal rate of return (IRR) in this project is 919%, which indicates a high profitability of the project.

6.13.5 Return on investment index (PI)

The profitability index (PI) is the discounted value of cash proceeds from the project (NPV) per unit of investment. It shows the relative profitability of the project.

Profitability index PI is calculated by formula 4.

$$PI = \frac{NPV}{Investments} \quad (4)$$

PI values:

For an effective project PI must be greater than 1

Discounted cost and investment return indices are greater than 1 if the NPV is positive for that stream.

The resulting profitability index $PI = 22.11$. This means that each dollar invested in the project will bring 22.11 dollars for the considered period of the project, taking into account the mechanism of discounting.

6.13.6 Payback Period (PBP)

Payback period (PBP) - the expected period of recovery of the initial investment from the net cash proceeds. The time in which the revenues from the operating activities of the enterprise will exceed the costs of the investment.

PBP payback period is calculated by formula 2.

$$PBP = Investments/ACF \quad (2)$$

Where Investments is the initial investment;

ACF - Annual Cash Flow (the average annual amount of net cash flow). The payback period of the project is 1.1 year.

6.13.7 Discounted Payback Period (DPBP)

Discounted Payback Period (DPB) - payback period (see above), but including discounting.

The discounted payback period of DPB is calculated by formula 3.



$$DPB = t_{-} - \frac{NPV_{t_{-}}}{NPV_{t_{+}} - NPV_{t_{-}}} \quad (3)$$

Where t_{-} , t_{+} - the period when negative and positive NPV was observed. The discounted payback period of this project is 14 months.

6.13.8 Other indicators

Profitability of sales from operating activities was equal to 9%.



7. PROJECT RISK ANALYSIS

7.1 Qualitative risk analysis

As any company operating in the market, this project is under the conditions of risks. The main possible risks, the probability of their realization, the degree of danger and ways to reduce the risks are shown in the table below.

Table 7.1. The main risks of the project

Risk	Probability and degree of danger. Manifestations of Negative Influence	Leveling tools risks
Production risks		
Failures Work equipment and transport	Probability: low Degree of danger: medium Impact: production stoppage	The use of quality equipment and transport, timely its service
Shortage of qualified personnel	Probability: low Degree of danger: high Impact: disruption production the production process, problems with product quality	Effective personnel policy, attractive motivation system
Failures component deliveries	Probability: medium Degree of danger: high Impact: disruption of production volumes modules	Concluding contracts with proven suppliers, compliance with all the nuances concluded agreements
Market risks		
Emergence of competitor projects in the region	Probability: medium Degree of danger: medium Impact: Decrease profit companies	Creating attractive conditions for consumers
Institutional hazard	Probability: medium Degree of danger: high Impact: Decrease profit companies	Macroeconomic risk
Financial risks		



Delay payments from counterparties	Probability: low Degree of danger: medium Impact: Shortage turnover company resource	Building modern and efficient methods of payment for plant products and access on the site, lining up
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Risk	Probability and degree of danger. Manifestations of Negative Influence	Leveling tools risks
		payments with counterparties
Shortage working capital funds investment company's investment phase	Probability: low Degree of danger: medium Impact: "freezing" the project	Planning of expenses and cash receipts in the investment phase of the project, finding a partner-investor

Source: Global Innovation Trade analysis and calculations

7.2 Sensitivity analysis

The table shows the sensitivity of the project to changes in external market conditions:

Table 7.2 Sensitivity analysis

Indicator	NPV		IRR	
Base value	235 996		129%	
Deviations	Δ	%	Δ	%
Reduction of selling prices by 5%	479 902	103,4%	719%	456,3%
Decrease in sales volumes by 5%	549 326	132,8%	855%	561,5%
Increase in variable costs by 5%	498 299	111,1%	742%	473,8%
Increase in fixed costs by 5%	583 941	147,4%	915%	607,3%

Continued

Indicator	PI		PB	
Base value	3,11		22,3	
Deviations	Δ	%	Δ	%
5% decrease in selling prices	18,02	479,2%	14,6	34,3%
Decrease in sales volumes by 5%	20,82	569,0%	14,1	36,9%
Increase in variable costs by 5%	18,97	509,8%	14,5	34,8%
Increase in fixed costs by 5%	22,06	609,1%	13,9	37,8%

Source: Financial model calculations



According to the results of the analysis, there is a dependence of the project on the sales price of products, as well as on changes in variable costs. A decrease in consumption volumes has a medium impact on the project's efficiency indicators.

The increase in fixed costs has almost no effect on the financial performance of the project.

7.3 Project break-even point

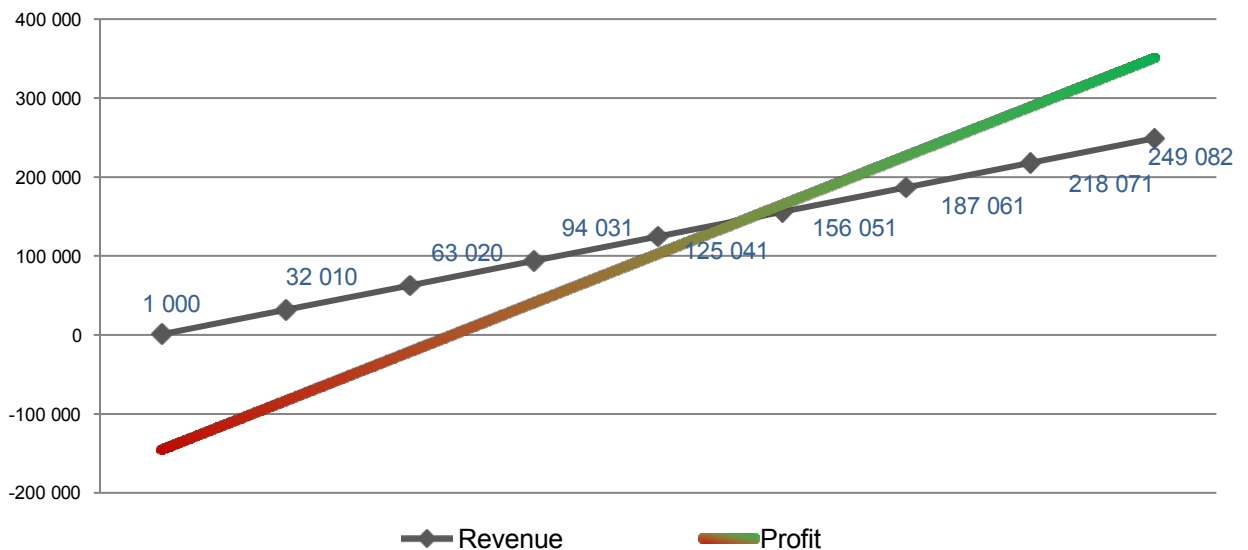
The break-even point determines what the volume of sales should be in order for the company to work break-even, could cover all its costs without making a profit.

To calculate the breakeven point, you must divide the costs into two components:

- Variable costs - increase in proportion to an increase in sales volume.
- Fixed costs - does not depend on the number of sales.

For this company, the break-even point chart will look as follows:

Figure 7.1 Break-even point chart



Source: Global Innovation Trade analysis and calculations

The break-even point is of great importance for the viability of a company and its solvency. Thus, the degree to which sales volumes exceed the break-even point determines the company's financial strength (margin of safety).

Due to the fact that the largest project costs are variable costs, the impact of other costs on the project is insignificant.

The break-even point chart shows that the company must sell at least \$125,041.0 thousand worth of products per year in order to make a profit on sales.

8. APPLICATIONS

8.1 Statement of cash flows by month, thousand dollars.

	Jan.24	Feb.24	mar.24	Apr.24	May.24	Jun.24	July 24	Aug. 24	sen.24	Oct. 24	Nov.24	Dec. 24
INVESTMENT CASH FLOW (ICEF)	0	0	-109	-196	0	-12 653	-14 706	-15 066	-57 893	0	0	0
Capital expenditures	0	0	109	196	0	12 653	14 706	15 066	57 893	0	0	0
OPERATING CASH FLOW (OPF)	0	0	0	0	0	-1 124	-1 374	-1 323	3 845	3 451	1 727	3 126
Revenue total	0	0	0	0	0	0	0	0	0	5 550	5 565	15 510
Expenses total	0	0	0	0	0	364	608	608	958	6 886	6 998	14 620
<i>Variable costs</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>345</i>	<i>570</i>	<i>570</i>	<i>920</i>	<i>6 469</i>	<i>6 419</i>	<i>14 041</i>
<i>Fixed costs</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>19</i>	<i>38</i>	<i>38</i>	<i>38</i>	<i>417</i>	<i>579</i>	<i>579</i>
Accrued taxes and payments	0	0	0	0	0	0	0	0	-5 547	-5 514	-5 479	-5 294
						0	271	240	236	237	235	
Payments of interest on the loan	0	0	0	0	0	0	1 075	1 050	1 025	1 000	974	948
FINANCIAL CASH FLOW (FDP)	0	0	109	196	89 407	2 755	3 216	3 278	11 579	0	0	0
Own funds	0	0	109	196	0	2 755	3 216	3 278	11 579	0	0	0
Borrowed funds	0	0	0	0	89 407	0	0	0	0	0	0	0
						760	495	475	508	490	493	
Payment of the body of the debt	0	0	0	0	0	3 058	1 984	2 008	2 033	2 059	2 084	2 110
Net cash flow (NFC)	0	0	-109	-196	0	-13 777	-16 080	-16 389	-54 048	3 451	1 727	3 126
Cumulative NPD	0	0	-109	-305	-305	-14 081	-30 161	-46 550	-100 598	-97 148	-95 420	-92 295
Cash balance at the beginning of the period	0	0	0	0	0	89 103	78 081	65 218	52 106	9 637	13 088	14 815
Cash balance at the end of the period	0	0	0	0	89 103	78 081	65 218	52 106	9 637	13 088	14 815	17 940
Net discounted income (NPV)	0	0	-109	-194	0	-13 346	-15 413	-15 543	-50 720	3 204	1 587	2 842
NPV on an accrual basis	0	0	-109	-302	-302	-13 649	-29 061	-44 605	-95 325	-92 121	-90 534	-87 693

	Jan.25	fev.25	mar.25	Apr. 25	May.25	Jun 25	July 25	Aug. 25	sen.25	Oct. 25	Nov. 25	Dec. 25
INVESTMENT CASH FLOW (ICEF)	0	0	0	0	0	0	0	0	0	0	0	0
Capital expenditures	0	0	0	0	0	0	0	0	0	0	0	0
OPERATING CASH FLOW (OPF)	4 183	5 016	5 919	6 482	6 782	6 826	7 391	7 605	7 986	8 997	10 252	11 825
Revenue total	22 770	30 047	37 340	44 651	51 978	59 322	66 683	74 060	81 455	88 866	96 294	104 771
Expenses total	20 547	26 623	32 551	38 738	45 105	51 642	57 569	63 756	69 684	75 611	81 669	88 443
<i>Variable costs</i>	<i>19 968</i>	<i>26 026</i>	<i>31 953</i>	<i>38 140</i>	<i>44 068</i>	<i>50 305</i>	<i>56 233</i>	<i>62 420</i>	<i>68 347</i>	<i>74 275</i>	<i>80 332</i>	<i>87 106</i>
<i>Fixed costs</i>	<i>579</i>	<i>598</i>	<i>598</i>	<i>598</i>	<i>1 038</i>	<i>1 336</i>	<i>1 336</i>	<i>1 336</i>	<i>1 336</i>	<i>1 336</i>	<i>1 336</i>	<i>1 336</i>
Accrued taxes and payments	-5 018	-4 651	-4 188	-3 628	-2 967	-2 204	-1 336	-360	727	1 200	1 315	1 445
Payments of interest on the loan	922	895	868	841	813	786	757	729	700	670	641	610
FINANCIAL CASH FLOW (FDP)	0	0	0	0	0	0	0	0	0	0	0	0
Own funds	0	0	0	0	0	0	0	0	0	0	0	0
Borrowed funds	0	0	0	0	0	0	0	0	0	0	0	0
Payment of the body of the debt	2 137	2 163	2 190	2 217	2 245	2 273	2 301	2 330	2 359	2 388	2 418	2 448
Net cash flow (NFC)	4 183	5 016	5 919	6 482	6 782	6 826	7 391	7 605	7 986	8 997	10 252	11 825
Cumulative NPV	-88 112	-83 096	-77 176	-70 694	-63 913	-57 086	-49 695	-42 090	-34 104	-25 107	-14 855	-3 031
Cash balance at the beginning of the period	17 940	22 124	27 139	33 059	39 541	46 322	53 149	60 540	68 145	76 131	85 128	95 380
Cash balance at the end of the period	22 124	27 139	33 059	39 541	46 322	53 149	60 540	68 145	76 131	85 128	95 380	107 205
Net discounted income (NPV)	3 763	4 464	5 213	5 648	5 847	5 824	6 239	6 352	6 600	7 357	8 295	9 467
NPV on an accrual basis	-83 930	-79 466	-74 253	-68 605	-62 758	-56 934	-50 695	-44 343	-37 743	-30 386	-22 091	-12 624

	Jan.26	Feb.26	mar.26	Apr.26	May.26	Jun 26	July 26.	Aug 26	sen.26	Oct. 26	Nov. 26	Dec. 26
INVESTMENT CASH FLOW (ICEF)	0	0	0	0	0	0	0	0	0	0	0	0
Capital expenditures	0	0	0	0	0	0	0	0	0	0	0	0
OPERATING CASH FLOW (OPF)	11 829	12 032	12 236	12 439	12 624	12 827	12 890	13 094	13 278	13 482	13 685	13 888
Revenue total	105 011	105 251	105 491	105 731	105 971	106 211	106 451	106 691	106 931	107 171	107 411	107 651
Expenses total	88 642	88 642	88 642	88 642	88 661	88 661	88 801	88 801	88 820	88 820	88 820	88 820
<i>Variable costs</i>	<i>87 286</i>	<i>87 286</i>	<i>87 286</i>	<i>87 286</i>	<i>87 286</i>	<i>87 286</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>
<i>Fixed costs</i>	<i>1 355</i>	<i>1 355</i>	<i>1 355</i>	<i>1 355</i>	<i>1 374</i>	<i>1 374</i>	<i>1 374</i>	<i>1 374</i>	<i>1 393</i>	<i>1 393</i>	<i>1 393</i>	<i>1 393</i>
Accrued taxes and payments	1 482	1 518	1 555	1 592	1 628	1 665	1 701	1 738	1 775	1 811	1 848	1 885
Payments of interest on the loan	580	549	518	486	454	422	389	356	322	288	254	219
FINANCIAL CASH FLOW (FDP)	0	0	0	0	0	0	0	0	0	0	0	0
Own funds	0	0	0	0	0	0	0	0	0	0	0	0
Borrowed funds	0	0	0	0	0	0	0	0	0	0	0	0
Payment of the body of the debt	2 478	2 509	2 541	2 572	2 604	2 637	2 669	2 703	2 736	2 770	2 805	2 840
Net cash flow (NFC)	11 829	12 032	12 236	12 439	12 624	12 827	12 890	13 094	13 278	13 482	13 685	13 888
Cumulative NPV	8 798	20 831	33 067	45 506	58 129	70 956	83 847	96 940	110 218	123 700	137 385	151 273
Cash balance at the beginning of the period	107 205	119 033	131 066	143 302	155 741	168 364	181 191	194 082	207 175	220 453	233 935	247 620
Cash balance at the end of the period	119 033	131 066	143 302	155 741	168 364	181 191	194 082	207 175	220 453	233 935	247 620	261 508
Net discounted income (NPV)	9 370	9 431	9 489	9 546	9 585	9 637	9 582	9 631	9 664	9 709	9 751	9 792
NPV on an accrual basis	-3 254	6 177	15 667	25 212	34 797	44 434	54 016	63 648	73 311	83 020	92 771	102 563

	Jan.27	fev.27	mar.27	Apr.27	May.27	Jun.27	July 27.	Aug. 27	sen.27	Oct. 27	Nov.27	Dec. 27
INVESTMENT CASH FLOW (ICEF)	0	0	0	0	0	0	0	0	0	0	0	0
Capital expenditures	0	0	0	0	0	0	0	0	0	0	0	0
OPERATING CASH FLOW (OPF)	14 073	14 276	14 480	14 683	14 867	18 129	18 332	18 536	18 720	18 924	19 127	19 330
Revenue total	107 891	108 131	108 371	108 611	108 851	109 091	109 331	109 571	109 811	110 051	110 291	110 531
Expenses total	88 839	88 839	88 839	88 839	88 858	88 858	88 858	88 858	88 877	88 877	88 877	88 877
<i>Variable costs</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>	<i>87 426</i>
<i>Fixed costs</i>	<i>1 412</i>	<i>1 412</i>	<i>1 412</i>	<i>1 412</i>	<i>1 431</i>	<i>1 431</i>	<i>1 431</i>	<i>1 431</i>	<i>1 450</i>	<i>1 450</i>	<i>1 450</i>	<i>1 450</i>
Accrued taxes and payments	1 921	1 958	1 994	2 031	2 068	2 104	2 141	2 177	2 214	2 251	2 287	2 324
Payments of interest on the loan	183	148	111	75	38	0	0	0	0	0	0	0
FINANCIAL CASH FLOW (FDP)	0	0	0	0	0	0	0	0	0	0	0	0
Own funds	0	0	0	0	0	0	0	0	0	0	0	0
Borrowed funds	0	0	0	0	0	0	0	0	0	0	0	0
Payment of the body of the debt	2 875	2 911	2 947	2 984	3 021	0	0	0	0	0	0	0
Net cash flow (NFC)	14 073	14 276	14 480	14 683	14 867	18 129	18 332	18 536	18 720	18 924	19 127	19 330
Cumulative NPV	165 346	179 622	194 102	208 784	223 652	241 781	260 113	278 649	297 369	316 293	335 420	354 751
Cash balance at the beginning of the period	261 508	275 581	289 857	304 337	319 019	333 887	352 016	370 348	388 884	407 605	426 528	445 655
Cash balance at the end of the period	275 581	289 857	304 337	319 019	333 887	352 016	370 348	388 884	407 605	426 528	445 655	464 986
Net discounted income (NPV)	9 817	9 854	9 889	9 923	9 941	11 995	12 002	12 007	11 999	12 001	12 002	12 002
NPV on an accrual basis	112 380	122 235	132 124	142 047	151 988	163 983	175 984	187 991	199 990	211 991	223 994	235 996

	Jan.27	fev.27	mar.27	Apr.27	May.27	Jun.27	July 27.	Aug. 27	sen.27	Oct. 27	Nov.27	Dec. 27
INVESTMENT CASH FLOW (ICEF)	0	0	0	0	0	0	0	0	0	0	0	0
Capital expenditures	0	0	0	0	0	0	0	0	0	0	0	0
OPERATING CASH FLOW (OPF)	381	383	386	389	392	404	407	410	412	415	418	421
Revenue total	1 295	1 298	1 300	1 303	1 306	1 309	1 312	1 315	1 318	1 321	1 323	1 326
Expenses total	904	904	904	904	905	905	905	905	905	905	905	905
<i>Variable costs</i>	<i>894</i>	<i>894</i>	<i>894</i>	<i>894</i>	<i>894</i>	<i>894</i>	<i>894</i>	<i>894</i>	<i>894</i>	<i>894</i>	<i>894</i>	<i>894</i>
<i>Fixed costs</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>11</i>	<i>11</i>
Accrued taxes and payments	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0	0	0
Payments of interest on the loan	1	0	0	0	0	0	0	0	0	0	0	0
FINANCIAL CASH FLOW (FDP)	0	0	0	0	0	0	0	0	0	0	0	0
Own funds	0	0	0	0	0	0	0	0	0	0	0	0
Borrowed funds	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
Payment of the body of the debt	9	9	9	9	9	0	0	0	0	0	0	0
Net cash flow (NFC)	381	383	386	389	392	404	407	410	412	415	418	421
Cumulative NPD	6 794	7 177	7 563	7 953	8 344	8 748	9 155	9 565	9 977	10 392	10 810	11 231
Cash balance at the beginning of the period	6 742	7 122	7 506	7 892	8 281	8 673	9 077	9 484	9 893	10 306	10 721	11 139
Cash balance at the end of the period	7 122	7 506	7 892	8 281	8 673	9 077	9 484	9 893	10 306	10 721	11 139	11 560
Net discounted income (NPV)	266	265	264	263	262	267	266	265	264	263	262	261
NPV on an accrual basis	5 204	5 469	5 732	5 996	6 258	6 525	6 791	7 056	7 321	7 584	7 846	8 108

9. Information about the excuter of the project

Business plan "Opening of clinker production" was made by the research agency "**Global Innovation Trade**". All our specialists have impressive experience in developing business plans, supported by deep knowledge in various areas of economics and business, the presence of a strong information base, knowledge of the most advanced approaches to business organization, knowledge of the latest methods of calculation and their competent adaptation to the specifics of the region or a particular industry.

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