



以東部鐵路、公路、輸電管道、山體採礦等完整結構為基礎的建設設施項目

PROJECT OF A BUILDING FACILITY BASED ON THE COMPLETE
STRUCTURE OF THE EASTERN RAILWAY, HIGHWAY, TRANSMISSION
PIPE, AND BUILDING MINING

ДОРНОДЫН ТӨМӨР ЗАМ, АВТО ЗАМ, ДАМЖУУЛАХ ХООЛОЙ,
БАРИЛГА УУЛ УУРХАЙН БҮТЭЭН БАЙГУУЛАЛТАД СУУРИЛСАН
ДАЙРГАНЫ ҮЙЛДВЭРИЙН ТӨСӨЛ



Авто замын бүтээн байгуулалт

公路建设工程

Highway Construction Project



Хоолойн бүтээн байгуулалт

管道建设工程

Pipeline Construction Project



Төмөр замын бүтээн байгуулалт

铁路建设工程

Railway Construction Project



项目名称：PROJECT NAME:

基于东方省铁路、公路、管道、建筑及采矿建设需求的碎石加工厂

项目 Gravel Processing Plant Project Based on Railway, Road,
Pipeline, Construction and Mining Development in Dornod Province

项目目标：PROJECT OBJECTIVE:

本项目的核心目标是引入先进技术，建立全自动碎石加工厂，向区域各建设项目及有需求的场所稳定供应符合标准要求的各类碎石产品。 The fundamental objective of this project is to introduce advanced technology and establish a fully automated gravel processing plant to provide a stable supply of standard-compliant gravel varieties to regional construction projects and other demand sites.

目标活动 Target Activities

生产并向市场供应符合客户需求及安全操作标准的分级碎石产品。 Crushed and classified gravel products meeting customer requirements and safety operation standards will be produced and supplied to the market.

结合季节特点，精细开展市场调研，按订单供应各类碎石产品。 Gravel product variety planning will be adjusted to seasonal characteristics and precise market research will be conducted to supply products on an order basis.

将特别重视扩大和稳定就业岗位。 Special attention will be paid to increasing and sustaining employment.

项目目标及直接成果PROJECT OBJECTIVES AND DIRECT OUTCOMES：

碎石加工厂建设项目 / Gravel Processing Plant Development Project

1. 在规划地点将建设总面积1,195.0平方米、采用夹芯板方案的6类用途工业设施。 Industrial facilities with 6 functional types totaling 1,195.0 sq.m. with sandwich panel construction will be built at the planned location.
2. 将安装价值25亿图格里克（490万元人民币）、年产能75万立方米（每年工作200天、每天8小时单班制）的生产设备，同时配备价值43亿图格里克（840万元人民币）的自行走车辆。 Equipment valued at MNT 2.5 billion (CNY 4.9 million) with a production capacity of 750,000 cubic meters per 200 working days (8-hour single shift) will be installed, and self-propelled vehicles valued at MNT 4.3 billion (CNY 8.4 million) will be provided.
3. 将建设价值13亿图格里克（250万元人民币）的基础设施，以保障工厂的持续运营。 Infrastructure construction valued at MNT 1.3 billion (CNY 2.5 million) will be carried out to ensure uninterrupted factory operations.
4. 将新增40至50个就业岗位。 40 to 50 new employment positions will be created.
5. 项目投资情况如下。 The project investment is structured as follows.

投資計算-Investment calculations

成本價值-Value of cost	元-Yuan	美元-USD	泰格魯格-Tugrug
設備採購-Purchase of equipment	¥4,565,652.0	\$629,320	2,328,482,500₮
修理店 - Repair shop	¥44,820.4	\$6,178	22,858,410₮
廠房 - Factory premises	¥3,254,709.8	\$448,622	1,659,902,000₮
運輸車輛 - Transportation vehicle	¥1,958,671.6	\$269,979	998,922,500₮
基礎設施-Infrastructure	¥2,640,625.0	\$363,978	1,346,718,750₮

礅石加工厂建设项目 / Gravel Processing Plant Development Project

啟動資金-Start-up funds	¥39,215.7	\$5,405	20,000,000₹
管理成本-Management costs	¥9,803.9	\$1,351	5,000,000₹
總投資額-Total investment	¥12,513,498.4	\$1,724,834	6,381,884,160₹

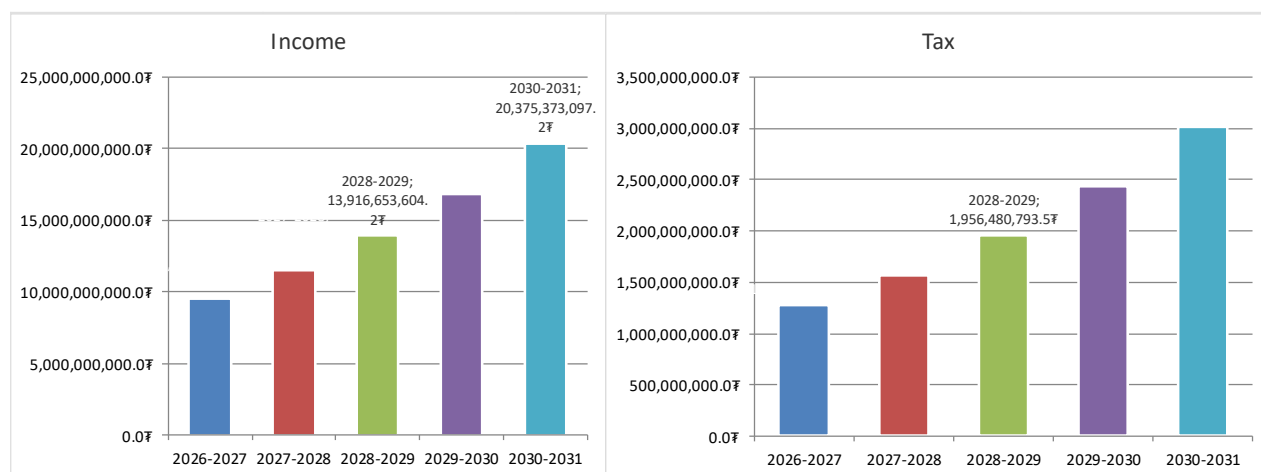
产品种类 **PRODUCT TYPES**

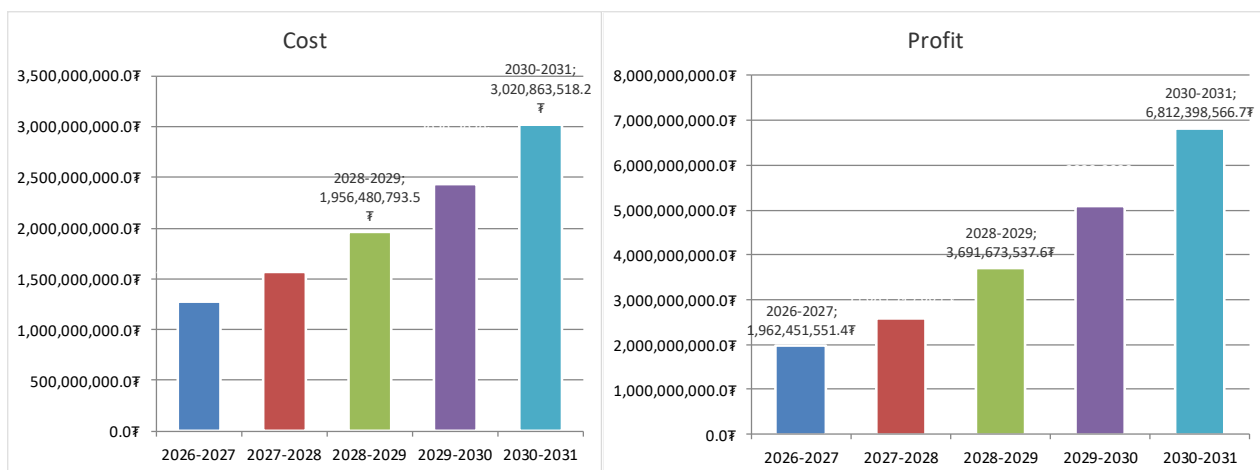
以下10种产品类别作为代表性品种纳入项目规划。

The following 10 product types have been included in the project as representative varieties.

1. 0–5毫米细料（屑料） / 0–5 mm Otsev (Fine Aggregate)
2. 碎石（5–10毫米） / Gravel (5–10 mm)
3. 碎石（10–20毫米） / Gravel (10–20 mm)
4. 碎石（20–40毫米） / Gravel (20–40 mm)

项目核心内容（可行性研究）：**CORE PROJECT CONTENT (FEASIBILITY STUDY):**





收入 / Income		税款 / Tax	
2026-2027	7,128,945,562.4₮	2026-2027	881,004,503.0₮
2027-2028	8,626,024,329.2₮	2027-2028	1,105,759,233.6₮
2028-2029	10,437,489,656.8₮	2028-2029	1,395,867,943.7₮
2029-2030	12,629,362,725.2₮	2029-2030	1,751,845,382.8₮
2030-2031	15,281,529,161.9₮	2030-2031	2,185,458,487.7₮
合计 / Amount	54,103,351,435.5₮	合计 / Amount	7,319,935,550.9₮

利润 / Profit		成本 / Cost	
2026-2027	800,094,964.6₮	2026-2027	5,447,846,094.9₮
2027-2028	1,325,808,773.5₮	2027-2028	6,194,456,322.0₮
2028-2029	2,125,321,836.5₮	2028-2029	6,916,299,876.7₮
2029-2030	3,137,245,720.3₮	2029-2030	7,740,271,622.0₮
2030-2031	4,387,597,227.8₮	2030-2031	8,708,473,446.4₮
合计 / Amount	11,776,068,522.6₮	合计 / Amount	35,007,347,362.0₮

在60个月的经营期内,

预计实现5,400亿图格里克收入，支出3,500亿图格里克运营

成本，缴纳700亿图格里克税款，净利润达1,100亿图格里克

。运营费用中已包含年度贷款还款额。 revenue of MNT 54

billion is projected, with operating costs of MNT 35 billion,

砾石加工厂建设项目 / Gravel Processing Plant Development Project

tax payments of MNT 7 billion, and net profit of MNT 11 billion. Annual loan repayments are included in operating costs.

然而，项目计划以65亿图格里克的初始投资，通过60个月期限、年利率3%的贷款融资方式启动。3,600亿图格里克净利润是收回初始投资后的效益。项目总净利润为180亿图格里克。 However, the project is projected to commence with an initial investment of MNT 6.5 billion financed through a loan with a 60-month term at an annual interest rate of 3%. The MNT 36 billion net profit represents returns after recovering the initial investment. The total net profit of the project is MNT 18 billion.

月均利润 / Average Monthly Profit	196,267,808.7₮
总投资回收额 / Total Investment Payback	7,101,530,172.4₮
不含投资回收的利润 / Profit Excluding Investment Repayment	18,877,598,695.0₮

区域建设碎石最低需求估算 Minimum Gravel Demand Estimates for Regional Construction

每公里公路约需1,500至2,500立方米，取决于道路等级（区域或主干）、基础材料、路基、弹性、土壤条件及铺装厚度。 1 km of Road: ~1,500–2,500 m³ depending on road classification (regional or main), base material, sub-base, plasticity, soil conditions, and pavement thickness.

每公里铁路约需2,000至3,500立方米，取决于基础材料、铁路等级、区域地质、排水要求、宽高及土壤密实度。 1 km of Railway: ~2,000–3,500 m³ depending on base material, railway classification, land geology, drainage requirements, width and height, and soil compaction.

每公里油气管道约需500至1,500立方米，取决于管道深度、防护措施、绝缘材料、预防性措施、路线地貌、水文条件及土壤稳定性。 1 km of Oil Pipeline: ~500–1,500 m³ depending on pipeline depth, protection, insulation, preventive measures, route geomorphology, drainage, and soil stability.

区域年度碎石及骨料需求估算 / Average Estimates of Annual Gravel and Aggregate Demand in the Region

行业 / Sector	预计建设距离 (公里) / Estimated Construction Distance (km)	每单位所需碎石量 (立方米) / 平均估算 / Quantity Required per Unit (m ³) / Average Estimate	碎石总量 (立方米) / Total Gravel (m ³)
石油管道 / Oil Pipeline	250	1800	450,000
公路桥梁 / Road Bridge	100	3000	300,000
铁路 / Railway	200	1500	300,000
其他 / Other			50,000
合计 / Total (1 year)			1,100,000
项目产量 / Project Production			263,477
项目产量占建设需求比			23.952%

例 / Share of Projects in Construction			
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项目位置及实施机构 PROJECT LOCATION AND IMPLEMENTING ORGANIZATION

“Hard Stone”

有限责任公司于2015年12月09日由3名成员共同设立。

“Hard Stone” LLC was established on December 09, 2015 by 3 founding members.

本公司依据东方省省长2016年04月08日A/152号令，按照法律规定条件，在东方省马塔德苏木第6巴格辖区取得了名为“Chuluut”、面积181.6公顷土地的DO-007X号常规矿产勘探特别许可证。 Our company obtained Exploration Special License No. DO-007X for common minerals in a 181.6-hectare area named “Chuluut” in the 6th Bag of Matad Soum, Dornod Province, pursuant to Governor Order No. A/152 dated 2016-04-08, in accordance with legally stipulated conditions.

根据东方省省长2019年04月04日A/151号令，特别许可证有效期延长两年，即延至2021年04月01日。 The term of the special license was extended by two years to 2021-04-01 pursuant to Dornod Province Governor Order No. A/151 dated 2019-04-04.

该地块位于马塔德苏木东南方向公25公里处，距“中国石油大庆塔木萨格”有限责任公司第19号开采区垵5公里。

The area is located 25 km to the southeast of Matad Soum

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and 45 km from the No. 19 extraction field of “PetroChina Daqing Tamsag” LLC.



研究区块位于L-50-

VIII图幅内，乌兰巴托市东偏南方向800公里处，距东方省马塔德苏木中心向东25公里，位于马塔德苏木额尔德纳巴德拉

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赫（第6巴格）辖区内。 The research area is located on the L-50-VIII map sheet, 800 km to the southeast of Ulaanbaatar, 25 km to the east of the center of Matad Soum, Dornod Province, within the territory of Erdenebadarkh (6th Bag) of Matad Soum.

从自然地理区划来看，北部塔木萨格—

门恩格草原区属于低丘地带的努赫特达瓦山口段，哈拉河—

努木鲁格河流域则属于戈壁—杭盖山地区。 In terms of physical geographic zoning, the northern Tamsag-Menengiin steppe and the Nukhit Davaan area consist of low hills, while the Khalkh-Numrug river basin falls within the Gobi-Khangai mountainous region.

地貌：区块大部分地区由大型洼地、延伸数百米至数十公里的谷地和干沟组成，平均海拔588至625米，地形平坦开阔，无山脊，无裸岩，北部为带有矮丘的平原地带。南部沿中华人民共和国边境一带地形相对多山。区块周边地区最高点海拔1,600米（巴彦扎尔嘎兰特山），最低点海拔588米（希林洪戈尔托勒盖）。总体上为由西向东延伸、被若干数十公里长的南北走向谷地切割的低山地形。 Orography: The majority of the area is occupied by large depressions, valleys, and dry ravines extending from a few hundred meters to several tens of kilometers, with average elevations of 588–625 m. The northern part consists of flat, stone-free plains with low mounds and no ridgelines. The southern part is relatively hilly along the border with the PRC. The highest point in the wider district is 1,600 m (Baruun Jargalant Mountain) and the lowest is 588 m (Shiliin Khongor Tolgoi). Overall, the terrain consists of low

mountains extending west to east, cut by north-south valleys several tens of kilometers long.

水系：该区块属于水系极不发达的地区，位于太平洋流域。区内无常年性河流。虽有少量水塘，但在少雨干旱年份会蒸发干涸。咸水干湖因年度降水量不同而存在差异。在多岩丘陵和谷地地带，沿断裂带有泉水出露，在降水丰富的夏季形成小溪。本勘探特别许可证区块内无已标注的水源点。

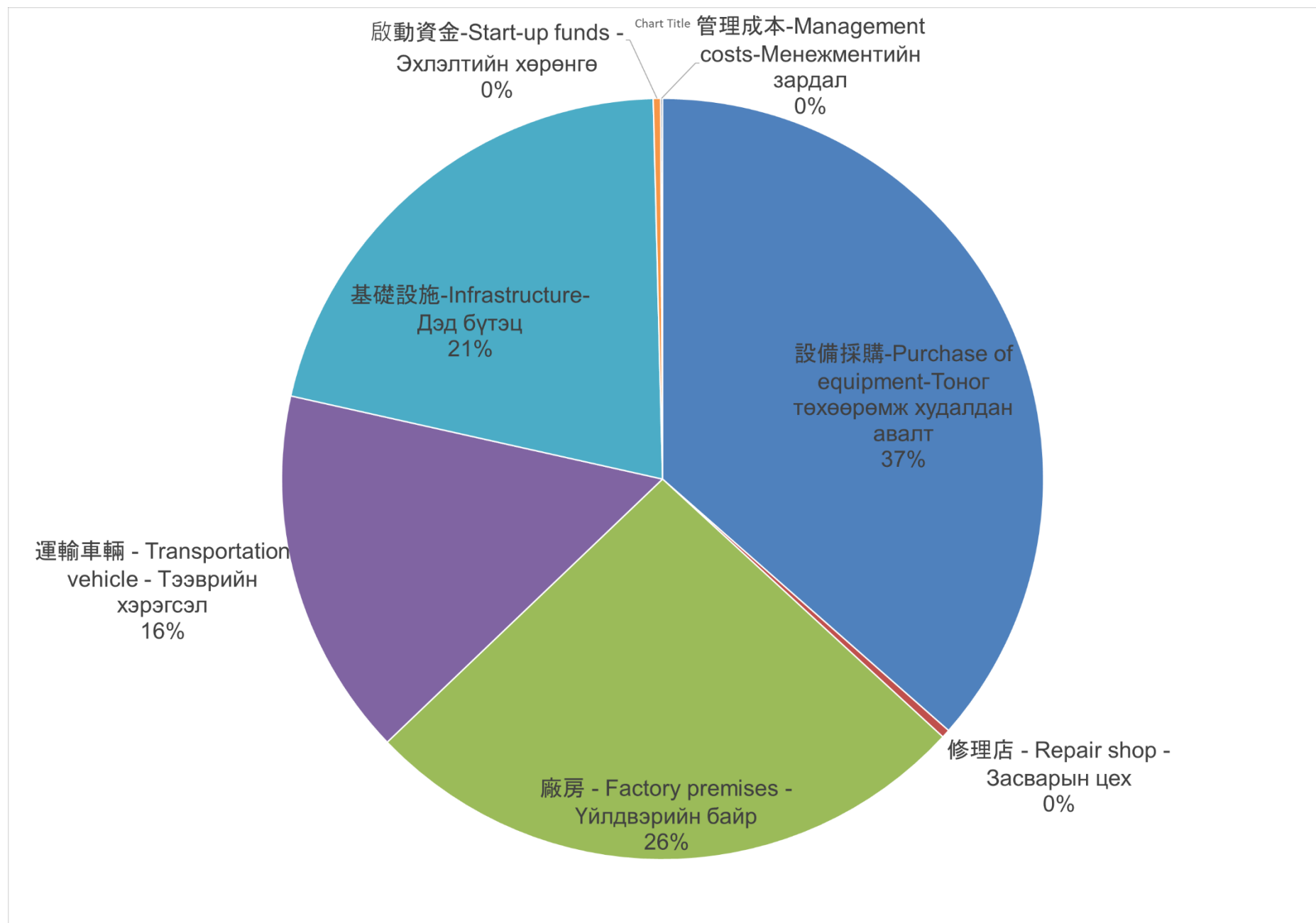
。 Hydrographic Network: The area belongs to a region with a very poorly developed hydrographic network within the Pacific Ocean drainage basin. There are no permanently flowing rivers. A small number of ponds exist but evaporate in drought years. Salt-encrusted dry lakes vary depending on annual precipitation. Springs along fractures occur in rocky hill and valley areas, forming streams during rainy summer months. No water sources are marked within the exploration special license area.

NPV						-
	Initial Invest Amount /C/	Cash flow /income/				
		2026-2027	2027-2028	2028-2029	2029-2030	2030-2031
	6,381,884,160¥	7,128,945,562¥	8,626,024,329¥	10,437,489,657¥	12,629,362,725¥	15,281,529,162¥
Discount Rate		14%	14%	14%	14%	14%
Coefficient of the time value of money		0.881057	0.776262	0.683931	0.602583	0.530910
Present value		6,281,009,306¥	6,696,054,128¥	7,138,524,815¥	7,610,233,648¥	8,113,112,663¥
Net presen value	29,457,050,400¥					
	Initial Invest Amount /C/	Cash flow /income/				
		2026-2027	2027-2028	2028-2029	2029-2030	2030-2031
	6,381,884,160¥	7,128,945,562¥	8,626,024,329¥	10,437,489,657¥	10,959,364,140¥	11,507,332,347¥
Discount Rate		14%	14%	14%	14%	14%
Coefficient of the time value of money		0.881057	0.776262	0.683931	0.602583	0.530910
Present value		6,281,009,306¥	6,696,054,128¥	7,138,524,815¥	6,603,921,635¥	6,109,354,816¥
Net presen value	26,446,980,540¥				MN	(8.79)
					IRR	31.21

投资： INVESTMENT:

投資計算-Investment calculations

成本價值-Value of cost	元-Yuan	美元-USD	泰格魯格-Tugrug
設備採購-Purchase of equipment	¥4,565,652.0	\$629,320	2,328,482,500₮
修理店 - Repair shop	¥44,820.4	\$6,178	22,858,410₮
廠房 - Factory premises	¥3,254,709.8	\$448,622	1,659,902,000₮
運輸車輛 - Transportation vehicle	¥1,958,671.6	\$269,979	998,922,500₮
基礎設施-Infrastructure	¥2,640,625.0	\$363,978	1,346,718,750₮
啟動資金-Start-up funds	¥39,215.7	\$5,405	20,000,000₮
管理成本-Management costs	¥9,803.9	\$1,351	5,000,000₮
總投資額-Total investment	¥12,513,498.4	\$1,724,834	6,381,884,160₮

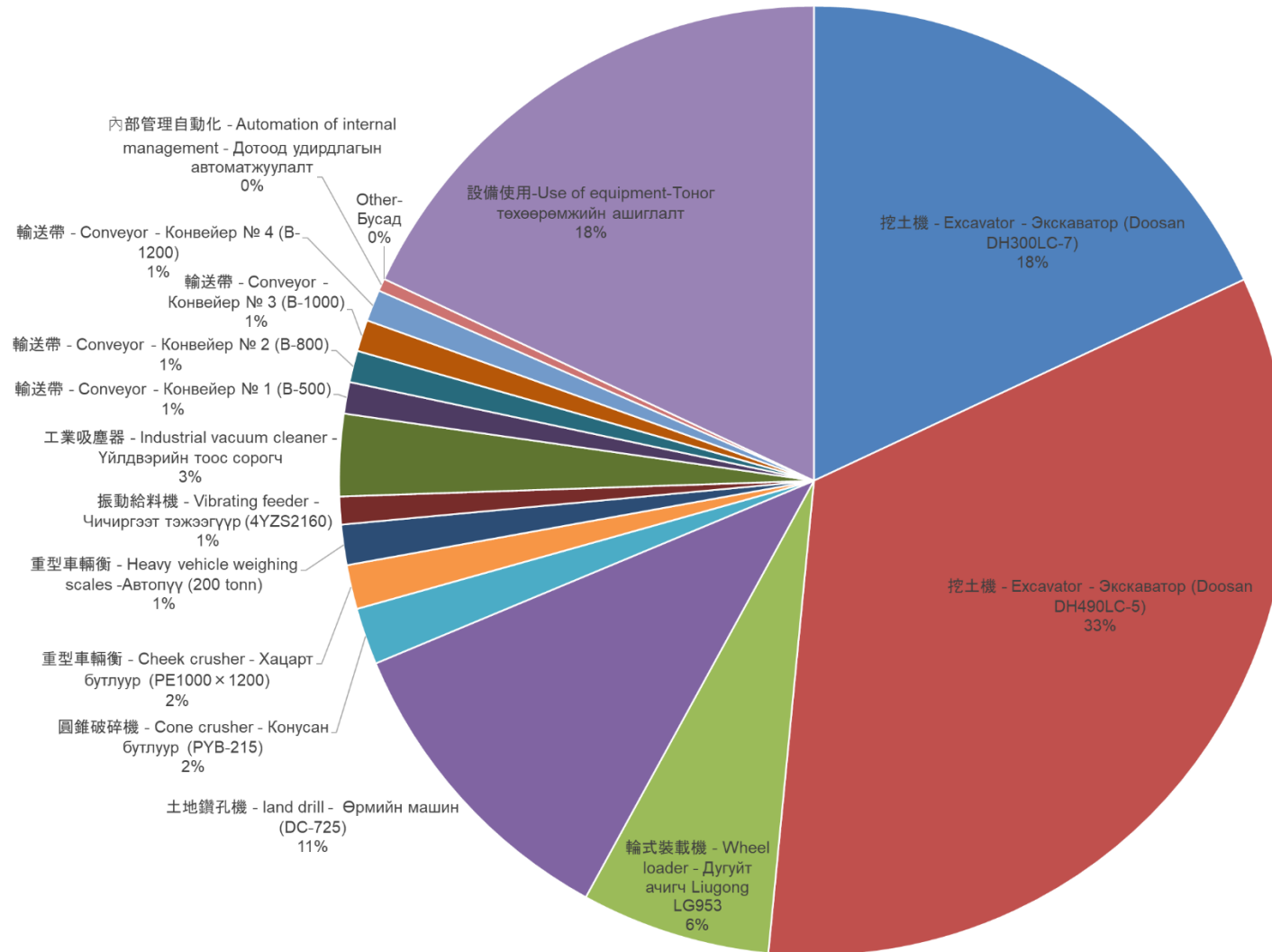


設備採購-Purchase of equipment

成本價值-Value of cost	元-Yuan	美元-USD	泰格魯格-Tugrug
挖土機 - Excavator (Doosan DH300LC-7)	¥823,529.4	\$116,667	420,000,000₮
挖土機 - Excavator (Doosan DH490LC-5)	¥1,529,411.8	\$216,667	780,000,000₮
輪式裝載機 - Wheel loader Liugong LG953	¥588,235.3	\$83,333	300,000,000₮
土地鑽孔機 - Land drill (DC-725)	¥490,196.1	\$69,444	250,000,000₮
圓錐破碎機 - Cone crusher (PYB-215)	¥88,235.3	\$12,500	45,000,000₮
重型車輛衡 - Cheek crusher (PE1000x1200)	¥68,627.5	\$9,722	35,000,000₮
重型車輛衡 - Heavy vehicle weighing scales (200 ton)	¥62,745.1	\$8,889	32,000,000₮
振動給料機 - Vibrating feeder (4YZS2160)	¥43,137.3	\$6,111	22,000,000₮
工業吸塵器 - Industrial vacuum cleaner	¥127,451.0	\$18,056	65,000,000₮

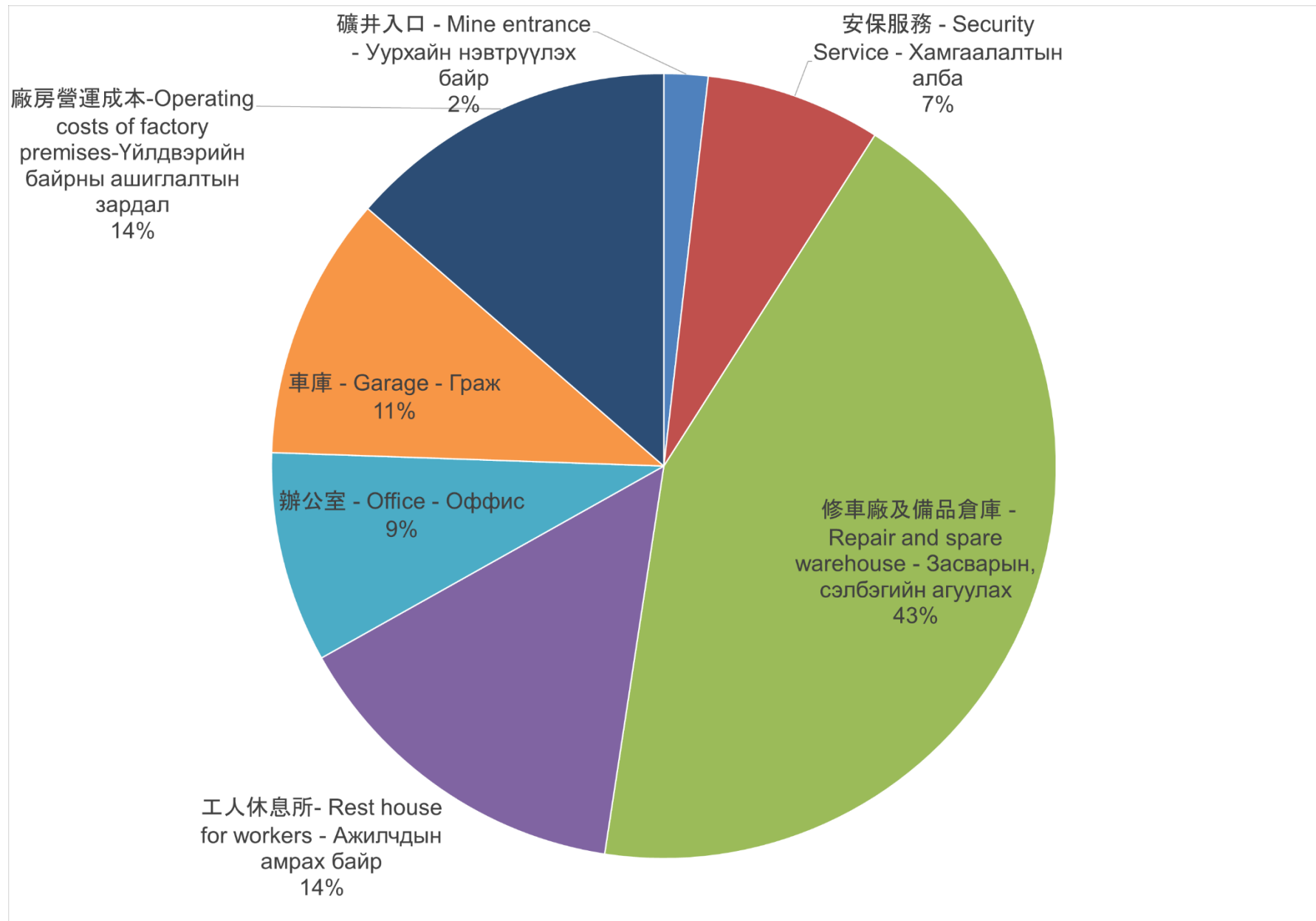
輸送帶 - Conveyor No.1 (B-500)	¥49,019.6	\$6,944	25,000,000¥
輸送帶 - Conveyor No.2 (B-800)	¥49,019.6	\$6,944	25,000,000¥
輸送帶 - Conveyor No.3 (B-1000)	¥49,019.6	\$6,944	25,000,000¥
輸送帶 - Conveyor No.4 (B-1200)	¥49,019.6	\$6,944	25,000,000¥
內部管理自動化 - Automation of internal management	¥19,607.8	\$10,001	10,000,000¥
Other	¥0.0	\$0	0¥
設備使用-Use of equipment	¥879,132.4	\$190,107	448,357,500¥
投資-Investment	¥4,916,387.3	\$769,275	2,507,357,500¥

Chart Title



廠房 - Factory premises

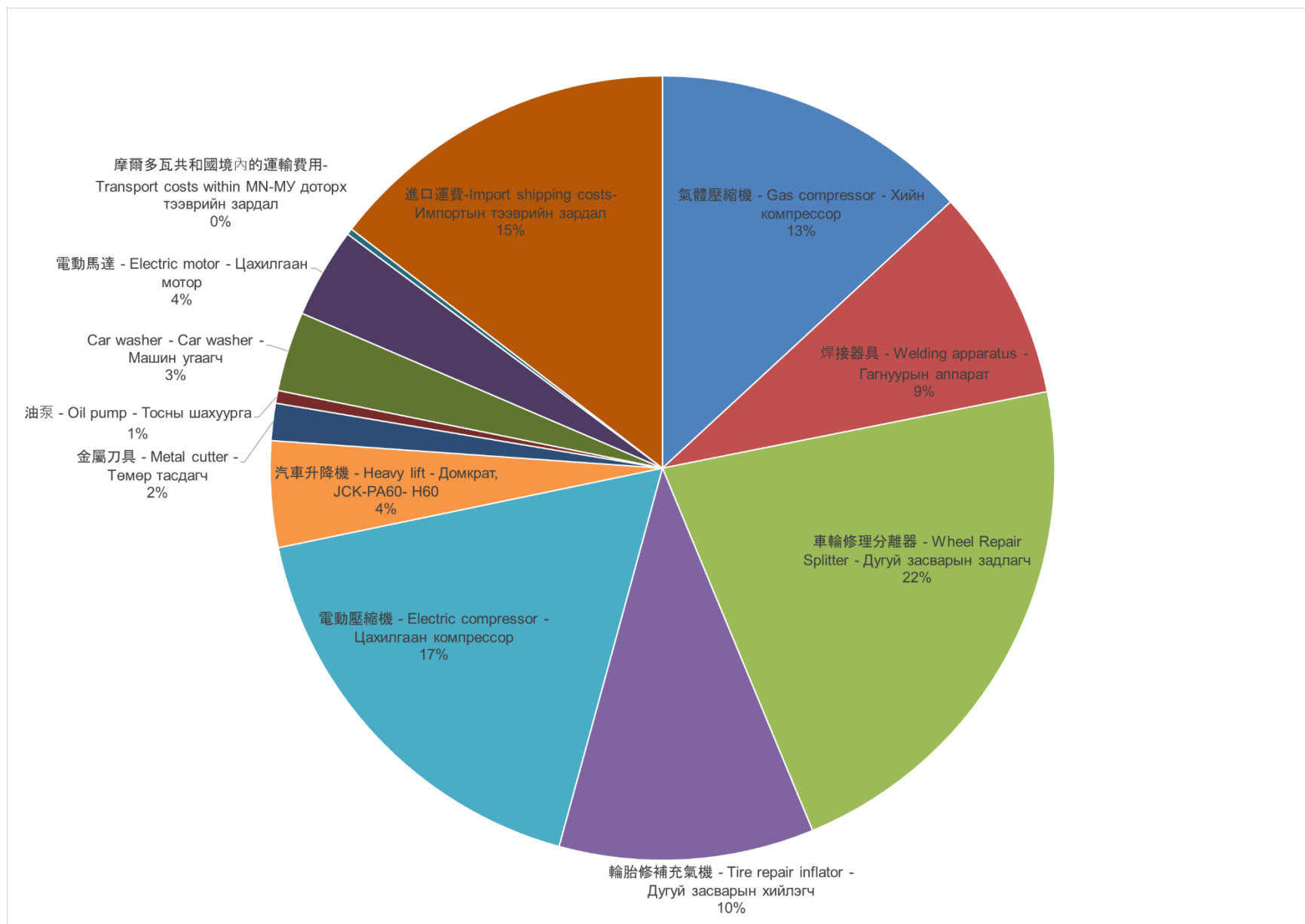
成本價值-Value of cost	元-Yuan	美元-USD	泰格魯格-Tugrug
礦井入口 - Mine entrance	¥58,823.5	\$8,108	30,000,000₮
安保服務 - Security Service	¥235,294.1	\$32,432	120,000,000₮
修車廠及備品倉庫 - Repair and spare parts warehouse	¥1,411,764.7	\$194,595	720,000,000₮
工人休息所- Rest house for workers	¥470,588.2	\$64,865	240,000,000₮
辦公室 - Office	¥282,352.9	\$38,919	144,000,000₮
車庫 - Garage	¥352,941.2	\$48,649	180,000,000₮
廠房營運成本-Operating costs of factory premises	¥3,254,709.8	\$448,622	225,902,000₮
投資-Investment	¥6,066,474.5	\$836,190	1,659,902,000₮



修理店 - Repair shop

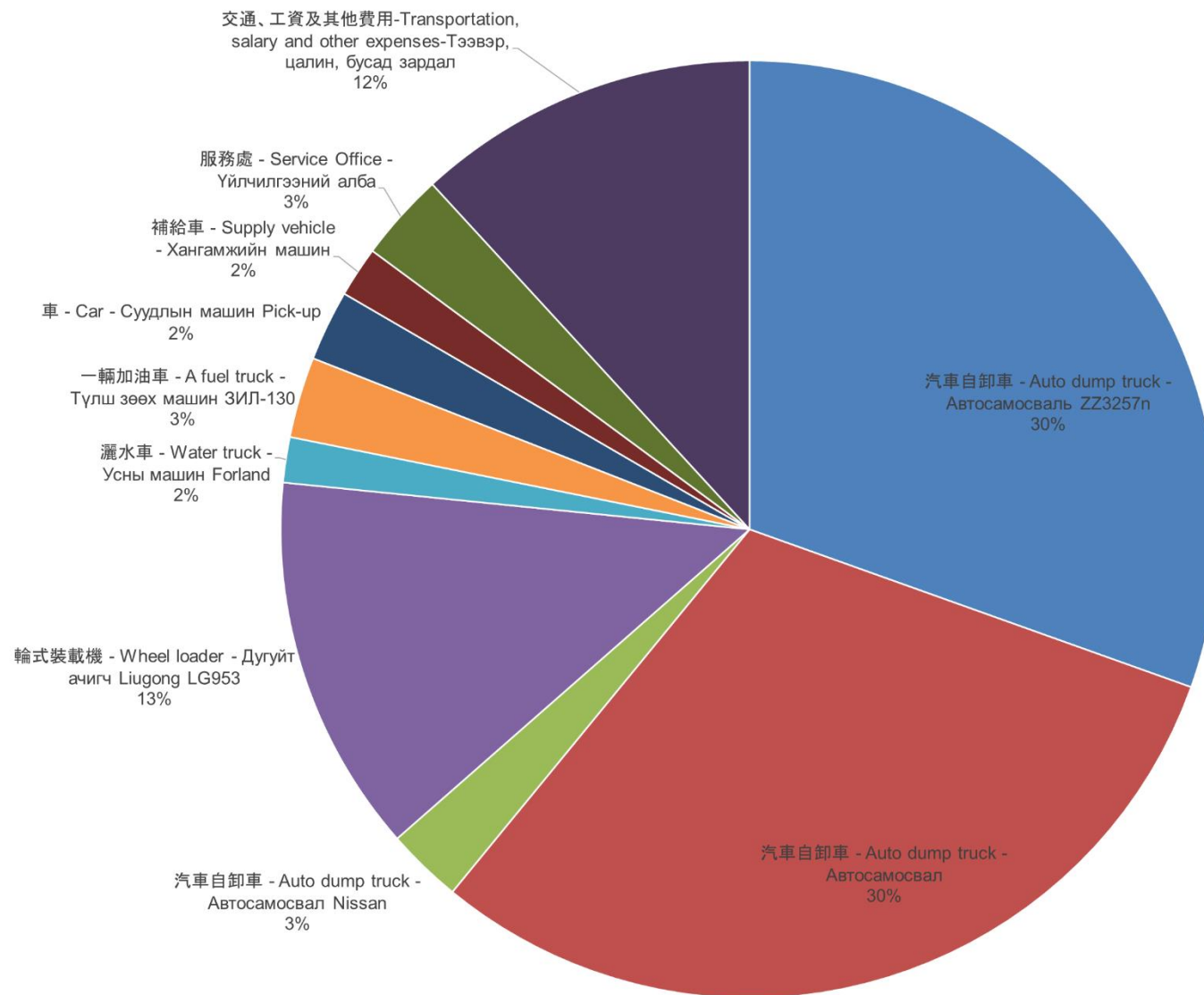
成本價值-Value of cost	元-Yuan	美元-USD	泰格魯格-Tugrug
氣體壓縮機 - Gas compressor	¥5,882.4	\$811	3,000,000₮
焊接器具 - Welding apparatus	¥3,921.6	\$541	2,000,000₮
車輪修理分離器 - Wheel repair splitter	¥9,803.9	\$1,351	5,000,000₮
輪胎修補充氣機 - Tire repair inflator	¥4,705.9	\$649	2,400,000₮
電動壓縮機 - Electric compressor	¥7,843.1	\$1,081	4,000,000₮
汽車升降機 - Heavy lift (JCK-PA60-H60)	¥1,960.8	\$270	1,000,000₮
金屬刀具 - Metal cutter	¥686.3	\$95	350,000₮
油泵 - Oil pump	¥235.3	\$32	120,000₮
- Car washer	¥1,470.6	\$203	750,000₮

電動馬達 - Electric motor	¥1,666.7	\$230	850,000₮
摩爾多瓦共和國境內的運輸費用-Transport costs within Mongolia	¥114.5	\$16	58,410₮
進口運費-Import shipping costs	¥6,529.4	\$900	3,330,000₮
投資-Investment	¥44,820.4	\$6,178	22,858,410₮



運輸車輛 - Transportation vehicle

成本價值-Value of cost	元-Yuan	美元-USD	泰格魯格-Tugrug
汽車自卸車 - Auto dump truck ZZ3257N	¥686,274.5	\$94,595	350,000,000₮
汽車自卸車 - Auto dump truck	¥686,274.5	\$94,595	350,000,000₮
汽車自卸車 - Auto dump truck Nissan	¥58,823.5	\$8,108	30,000,000₮
輪式裝載機 - Wheel loader Liugong LG953	¥294,117.6	\$40,541	150,000,000₮
灑水車 - Water truck Forland	¥35,294.1	\$4,865	18,000,000₮
一輛加油車 - Fuel truck ZIL-130	¥62,745.1	\$8,649	32,000,000₮
車 - Pick-up car	¥54,902.0	\$7,568	28,000,000₮
補給車 - Supply vehicle	¥39,215.7	\$5,405	20,000,000₮
服務處 - Service office	¥68,627.5	\$9,459	35,000,000₮
交通、工資及其他費用-Transportation, salary and other expenses	¥266,514.7	\$36,736	135,922,500₮
投資-Investment	¥2,252,789.2	\$310,520	1,148,922,500₮



基礎設施-Infrastructure

成本價值-Value of cost	元-Yuan	美元-USD	泰格魯格-Tugrug
路-Road	¥8,823.5	\$1,216	4,500,000₮
家具陳設-Furnishings	¥392,156.9	\$54,054	200,000,000₮
加熱系統-Heating system	¥500,000.0	\$68,919	255,000,000₮
交通、工資及其他費用-Transportation, salary and other expenses	¥250,919.1	\$34,586	127,968,750₮
投資-Investment	¥1,151,899.5	\$158,775	587,468,750₮

交通、工資及其他費用-
Transportation, salary
and other expenses-
Тээвэр, цалин, бусад
зардал
22%

路-Road-Зам
1%

家具陳設-Furnishings-
Тохижилт
34%

加熱系統-Heating
system-Халаалтын
систем
43%

