Ministry of Investments,
Industry and Trade of the Republic
of Uzbekistan

Investment proposal:
Glass and ceramics products project

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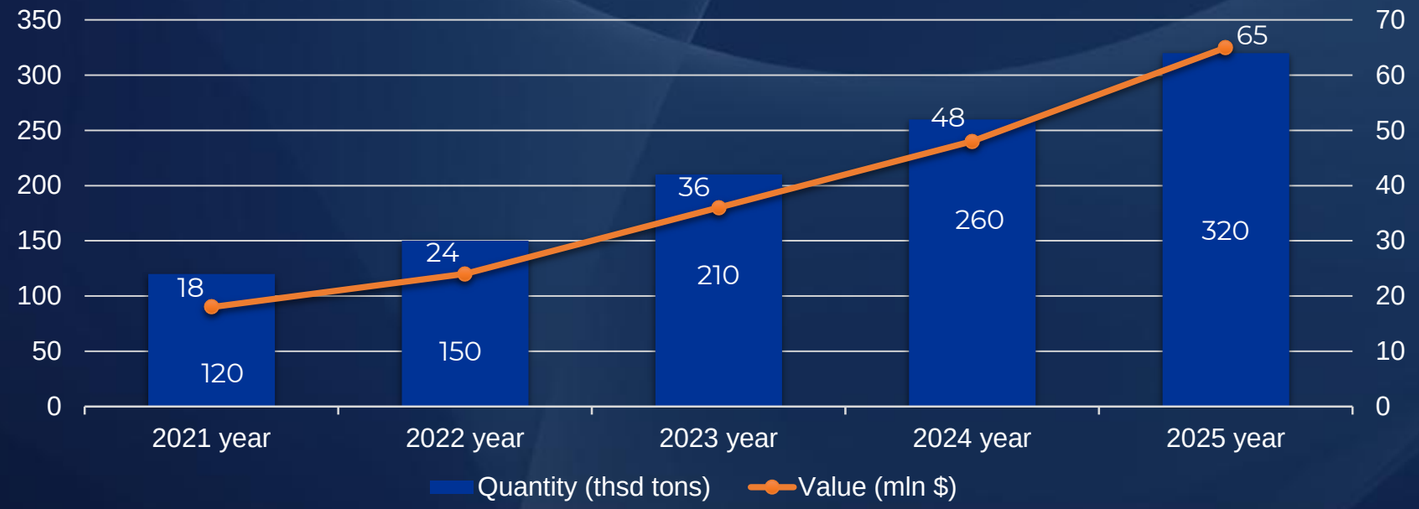
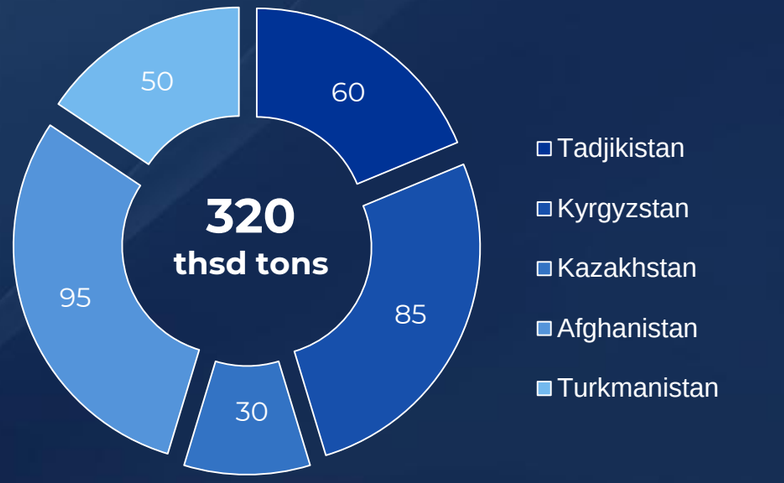
Export and import analysis

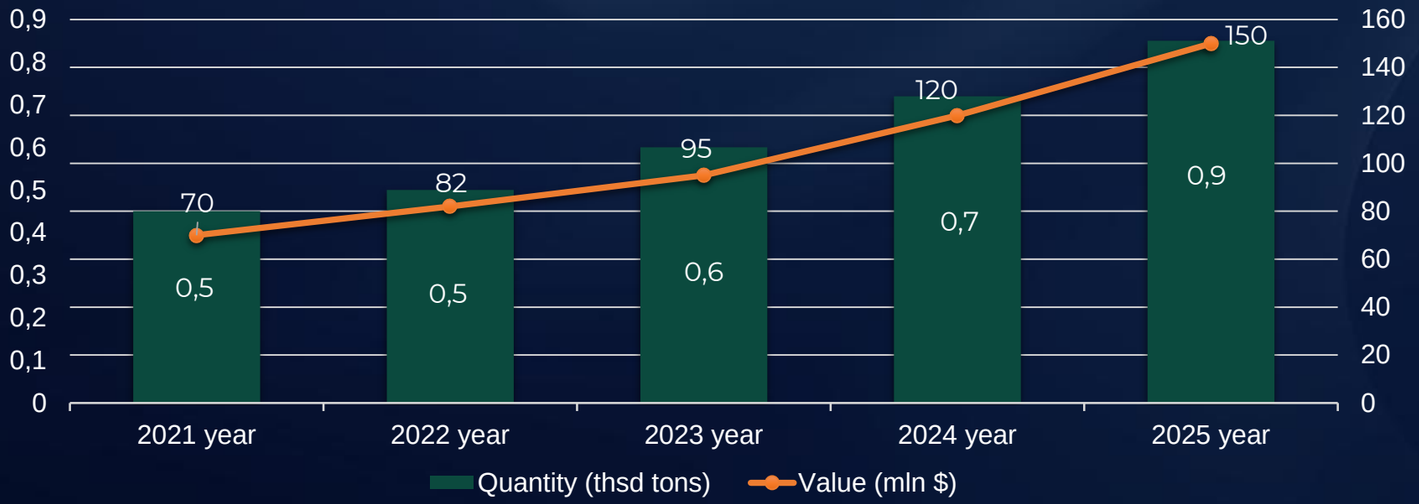
Export by Glass and ceramic products



Export by countries



Import by Glass and ceramic products



Imports by countries

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Glass and ceramic products market analysis

Glass and ceramic products production and consumption

(thousand units)

Import trends

Significant growth: Last five Glass and ceramic products in the year There has been a significant increase in imports. The volume is expected to reach approximately 450 million in 2021. 850 tons in 2025 increased to tons. Value Increase: The financial value of these imported products has increased dramatically, from $70 million in 2021 to $150 million in 2025, indicating either a higher volume of premium units or price inflation.

Main suppliers: China is the leading supplier, accounting for 300% of the total volume. thousand tons, followed by Russia with 180 leading with a thousand tons.

Export trends

The highest volume was recorded in 2025 (320 thousand tons). Value anomaly: Despite the small volume, export value increased sharply in 2021 to $18 million, a significant increase over previous years when the value was close to zero. This indicates that very high-value, industrial-grade equipment was exported in 2021.

Destinations: Exports are focused on Asian countries, with the market being Kazakhstan (30 thousand tons), Afghanistan (95 thousand tons), Kyrgyzstan (85 thousand tons), Tajikistan (60 thousand tons) and Turkmenistan (50 thousand tons) are distributed relatively evenly between.

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Glass and ceramics products recycling

Economic and social impact:

Import substitution

- If the product is import-substituting in the domestic market:

Supply chain development:

- Scrap collection network: accepted points, sorting, pressing
- Logistics: rail/road, container flow
- Consumption materials: flux, degasser, refractory, filter
- Machine-service: furnace, crane, mold, laboratory
- Down flow: billet → **profile actories**, cable, sheet, casting details

Project description:

- The project aims to create a modern industrial plant, a Glass and Ceramic Products Plant - aluminum waste (scrap) sorting/cleaning → melting → refining → ingot/billet production complex.
- **Objectives: Reduce import** dependency (ingots/billets) Raw material supply to the extrusion/profile industry Reducing CO_2 and energy consumption (green industry) Production of export-oriented alloys (6063/6061 and Al-Si series)

Economic indicators:

Funding: 80 million US dollars

Area: 15 hectares

Income: $ 170 million/year

Return on Investment (ROI): 137 %

NPV: ~ $ 95 million (5 years)

IRR: ~ 36 %

Production indicators:

Per year 101 thsd tons:

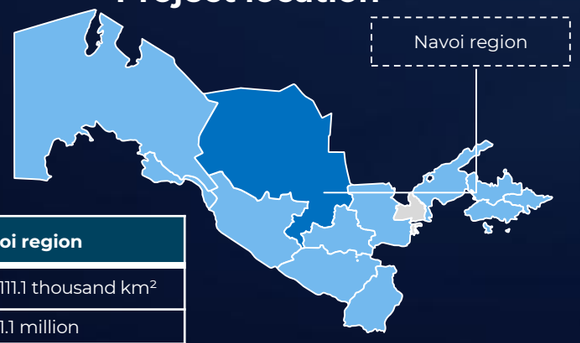
Billet: 60% (for extrusion):

48 thousand ton

Ingot: 40% (cast, for processors):

32 thousand ton (4 thsd pieces)

Project location



Navoi region	
Size	111.1 thousand km²
Population	1.1 million

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Glass and ceramics products chain and product profitability

Key stages of production

Glass products – key stages

- **Raw material sourcing & storage**
  Silica sand, soda ash, limestone/dolomite, feldspar; optional **cullet (recycled glass)**.

Batch formulation & mixing

- Weighing, dosing, dry mixing; cullet blending.

Melting & refining

- Furnace melting (typically 1,400–1,600°C), fining/refining to remove bubbles and impurities.

Conditioning (forehearth)

- Temperature control to reach forming viscosity.

Forming / shaping *(depends on product)*

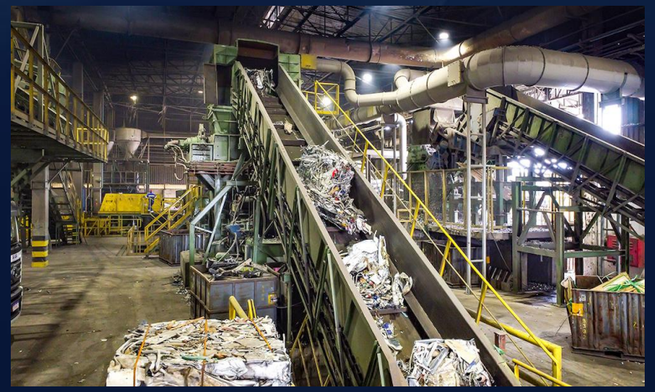
- Utilities & energy: gas/electric power, compressed air, water treatment, heat recovery

Maintenance & molds/tools management

- EHS & environmental controls: dust filtration, kiln/furnace emissions control, waste recycling
- Production planning & inventory management

Technology and features

	Technology	Features
1	**Multi-alloy control (6063/6061/AlSi)**	Spectral analysis
2	**Degassing (rotor) and ceramic filter**	Reduces internal defects
3	**Scrapni "charge mix" algorithm**	Sustainable chemistry
4	**Energy-efficient oven**	Heat recovery (recuperation)
5	**Ecology:**	Gas cleaning (bag filter), slag management



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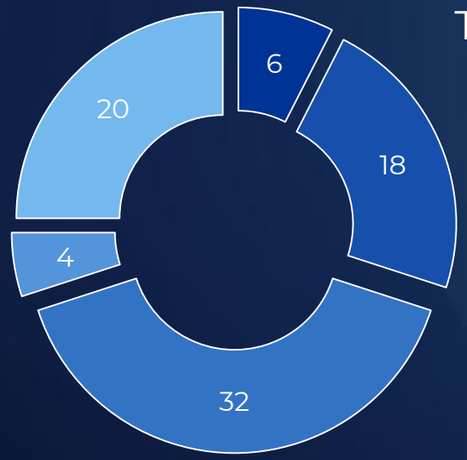
Project costs

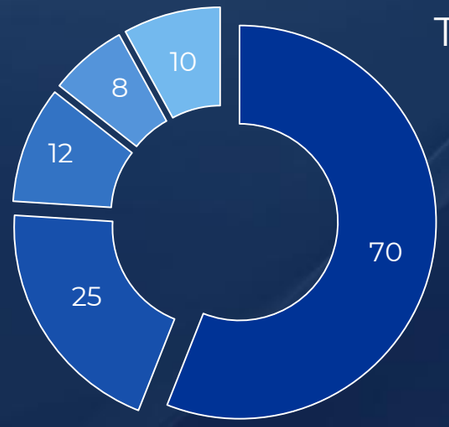
Initial investment (CAPEX) *(million dollars)*



Total CAPEX: **80 million**

- Land preparation, building construction
- Buildings and structures
- Main technological equipment
- Laboratory + testing equipment
- Energy and others

Operating expenses (OPEX) *(million dollars)*



Total OPEX: **$ 176,4 million**

- Raw materials
- Energy
- Labor
- Repair/service
- Other

This financial review outlines the comprehensive cost structure and high profitability of glass and ceramics products proposed project.
The breakdown includes initial capital investment (CAPEX) and annual operating expenses (OPEX), as well as projected revenue and profit projections.

Product	**Capacity**	**Quantity** (million US dollars)
Ceramic	48 thsd tons	180
Kvars	32 thsd tons	125
TOTAL	**80 thsd tons**	**305**

Annual EBITDA:
= $ 305 million - $ 176,4 million = **$ 128,6 million**

The project's high profitability forecast is supported by efficient operations and high market demand, making it a very attractive investment.

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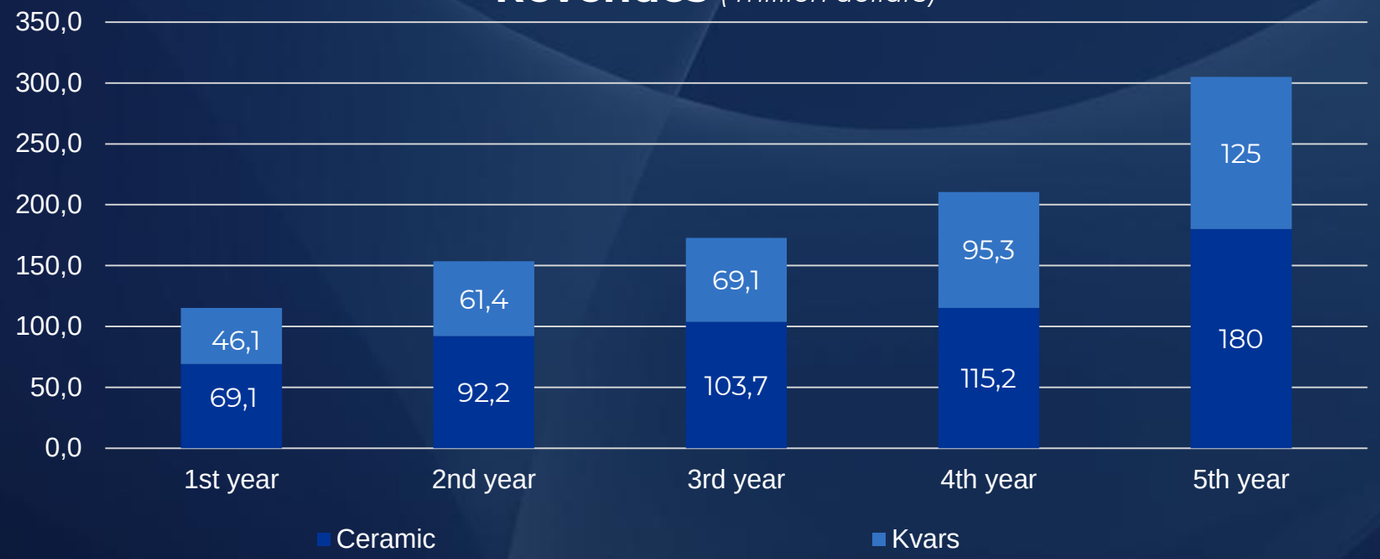
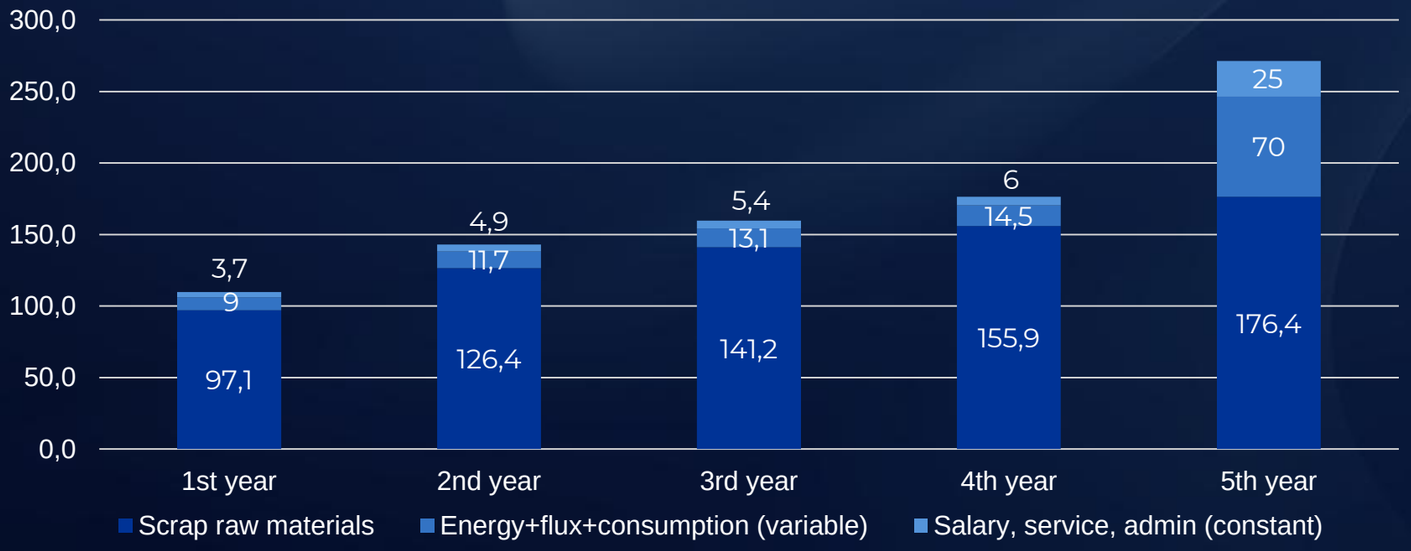
Financial indicators
(5-year forecast)

Revenues *(million dollars)*



Operating expenses *(million dollars)*



Total 5- year cash flow:

$957,1 mln after full capital cost recovery million

NPV (12% discount rate):

NPV= $95 million *(very convenient!)*

IRR (Internal Rate of Return): ≈ **36 %**

Payback period (PP):

= 3-3,5 year

Profitability Index (PI):

PI = (NPV + CAPEX)/CAPEX = (95+80)/80 ≈ 2,18

Return on Investment (ROI):

= 5-year net (not NPV) operating FCF – CAPEX: 76,4 – 40 = ~ $ 36,4