

**Investment proposal:  
Glass production**



## Establishment of glass production

### Economic impact:

- Reduction of float glass and processed glass imports, saving foreign currency
- Generation of export revenues to CIS, Central Asian and regional construction markets
- Stable tax contributions to the state budget
- Development of related industries including silica sand mining, aluminum profiles, logistics, and construction materials

### Social impact:

- Creation of new skilled jobs and improvement of regional industrial employment
- Creation of 120 new jobs within the production facility
- Training of skilled workforce in modern glass manufacturing and processing technologies
- Support for regional industrial growth and infrastructure development

### Location of the project



Samarkand region	
Size	16 800 km <sup>2</sup>
Population	4,3 million



### Project description:

The project aims to establish a modern glass manufacturing plant for float glass production and processing to meet growing domestic and regional demand. It leverages local quartz (silica sand) reserves to ensure stable and cost-efficient raw material supply.

**Objectives:** Establish a competitive and cost-efficient local glass production system.

Utilize existing quartz deposits to secure sustainable raw material supply.

Develop export opportunities to neighboring and regional markets.

### Economic indicators:



**Financing:** 40 million USD



**Area:** 5,5 hectares



**Revenue:** \$ 63,5 million/year



**ROI:** 21 %



**NPV:** ~ \$29,4 million (5 years)



**IRR:** ~23,2 %

### Production indicators:



**Annual production:**  
45 000 tons



**Window glass:**  
30 000 tons



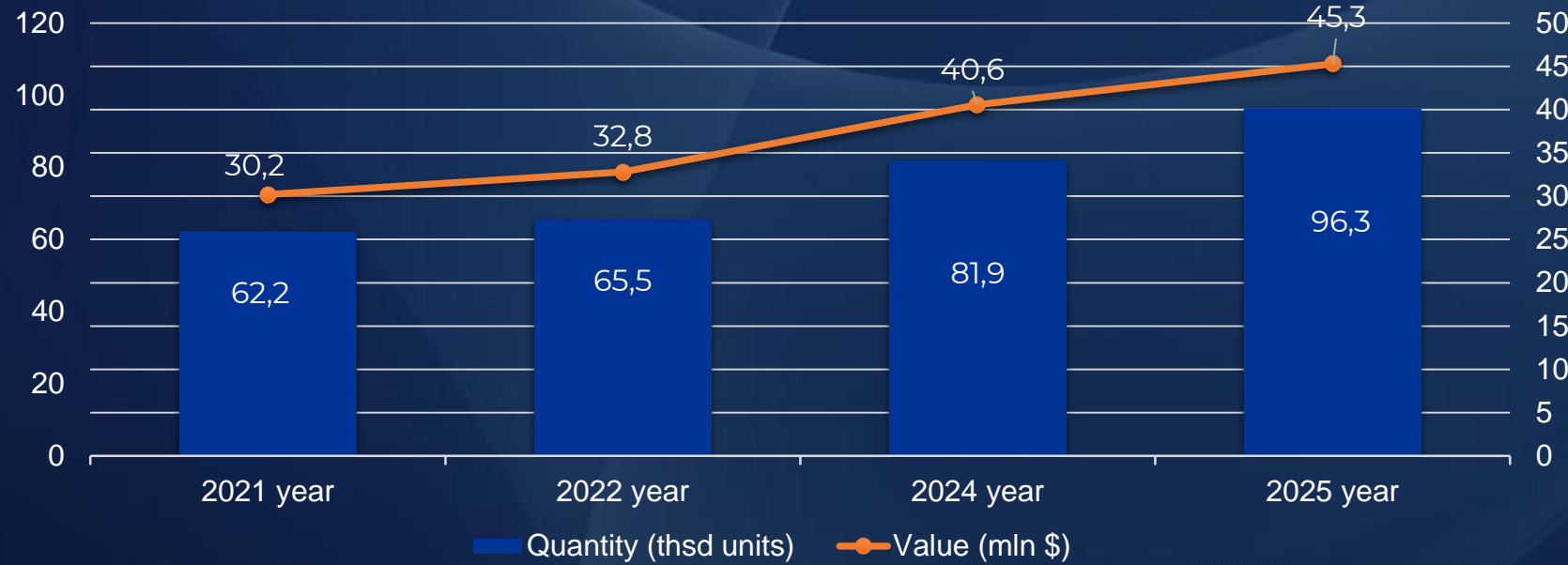
**Facade glass:**  
10 000 tons



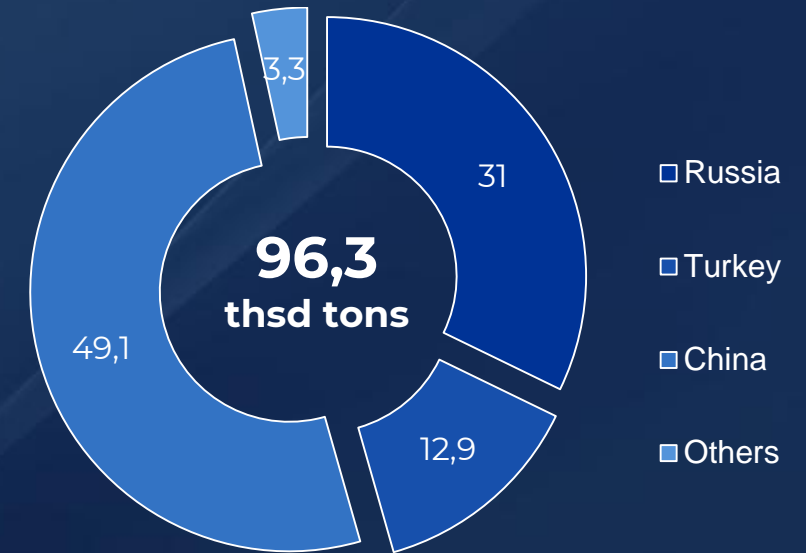
**Laminated glass:**  
5 000 tons



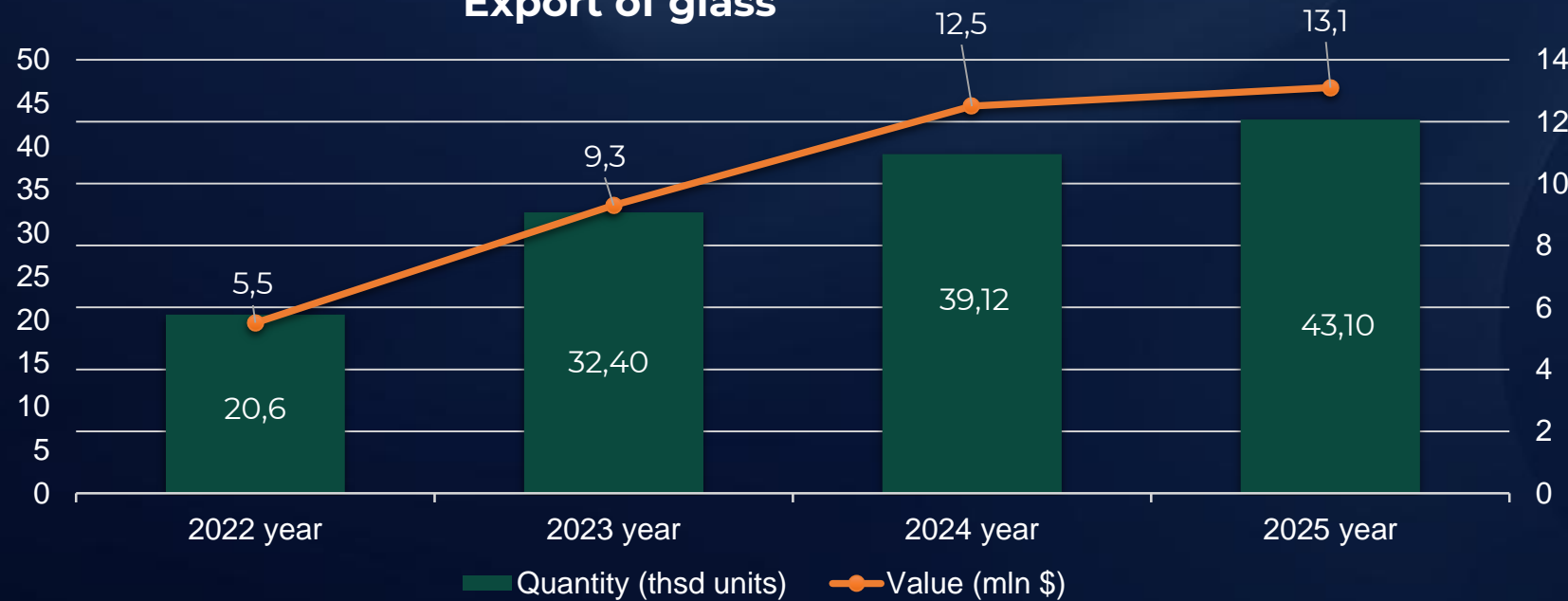
### Import of glass



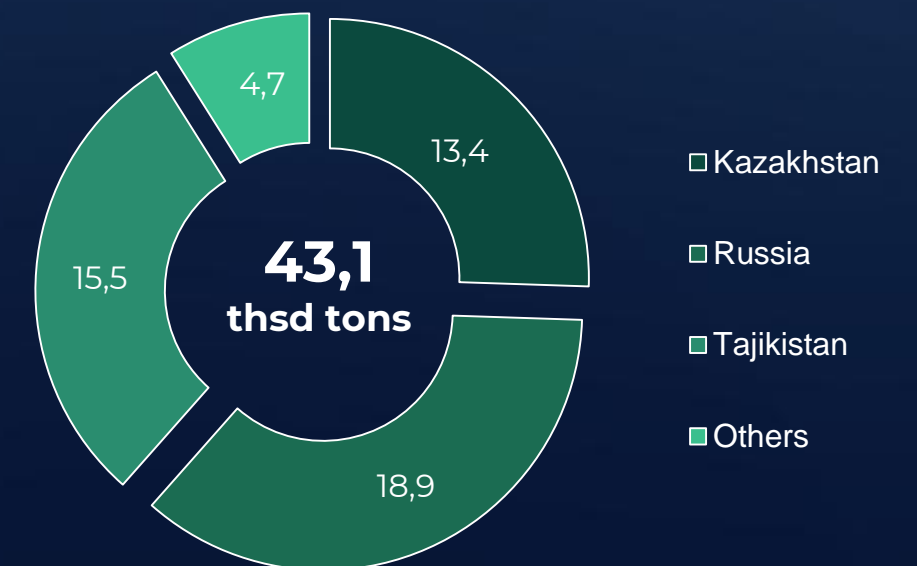
### Import by countries



### Export of glass

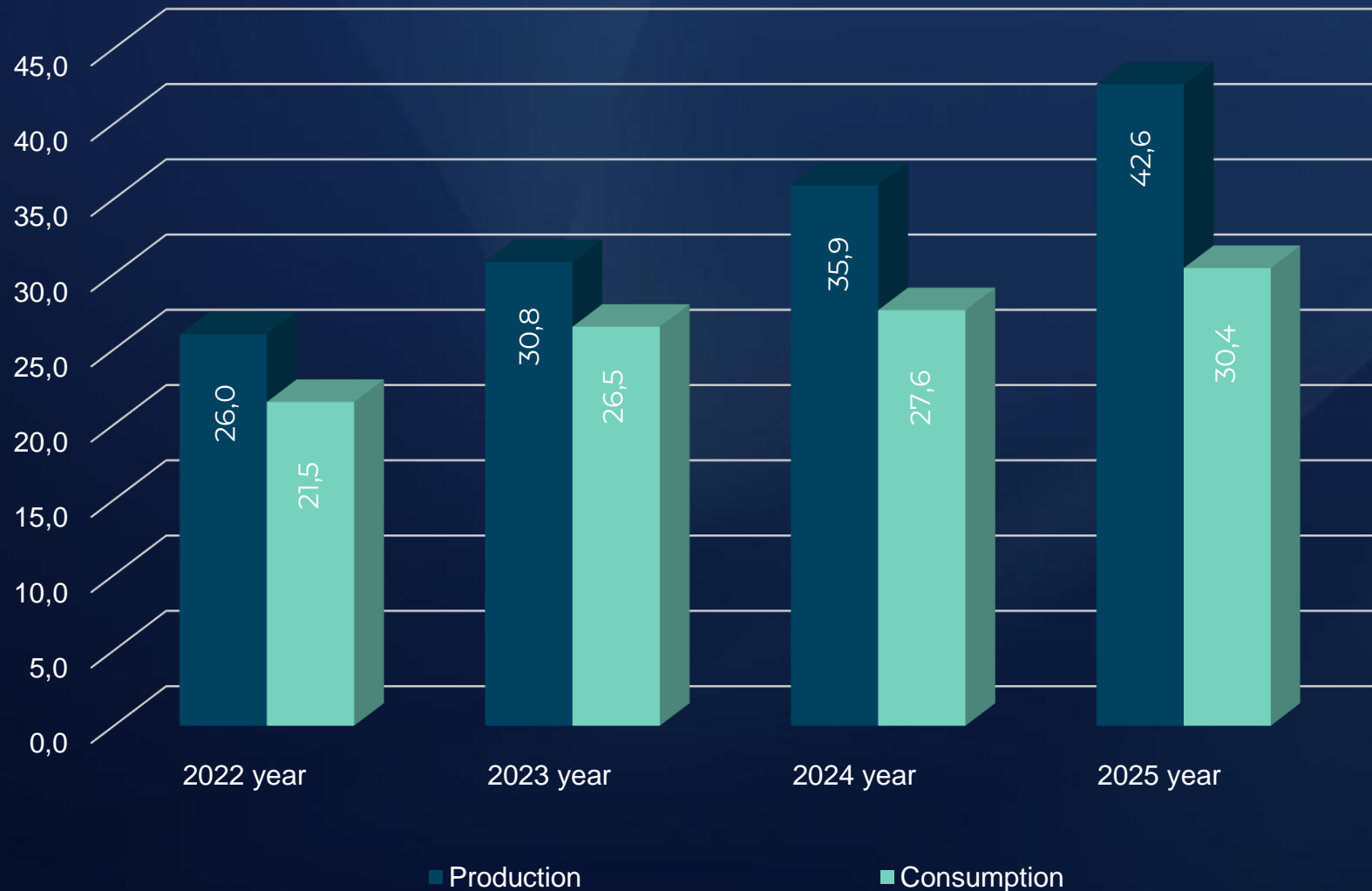


### Export by countries





## Production and consumption of glass (thsd tons)



Glass imports have shown consistent growth over the observed period. The volume increased from 62.2 thousand units in 2021 to 96.3 thousand units in 2025, reflecting strong and expanding domestic demand.

Import value rose from \$30.2 million in 2021 to \$45.3 million in 2025, indicating both higher volumes and possible price adjustments.

The main supplier is China (49.1 thsd units), followed by Russia (31.0 thsd units) and Turkey (12.9 thsd units). Other countries account for 3.3 thsd units. This shows a high concentration of imports from a few major partners.

Glass export volumes increased steadily from 20.6 thousand units in 2022 to 43.1 thousand units in 2025, more than doubling over four years. Export value grew from \$5.5 million in 2022 to \$13.1 million in 2025, confirming expanding external market presence.

Exports are primarily directed to neighboring countries — Kazakhstan (18.9 thsd units), Tajikistan (15.5 thsd units), and Russia (13.4 thsd units), with others accounting for 4.7 thsd units.



### Key production stages

#### 1. Raw material preparation & batch processing

Extraction and processing of quartz (silica sand), including crushing, washing, and purification. Preparation of glass batch mix (silica sand, soda ash, limestone, additives) using automated dosing systems.

#### 2. Melting & float glass production

Continuous melting in energy-efficient high-capacity furnaces.

Formation of float glass on molten tin bath to ensure uniform thickness and high surface quality.

#### 3. Cutting, processing & finishing

Automated cutting to standard and custom dimensions.

Tempering, laminating, insulating (double glazing), and edge processing according to construction and industrial standards.

#### 4. Packaging & distribution

Quality inspection, packaging, and palletizing in compliance with domestic and export standards. Organized logistics and distribution network for local and regional markets.

### Technology & features

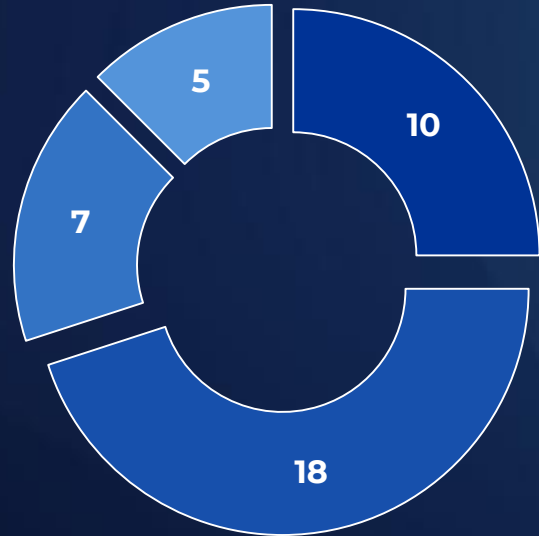
	Product	Estimated firing yield	Annual volume
1.	Window glass	70 %	30 thsd tons
2.	Facade glass	20 %	10 thsd tons
3.	Laminated glass	10 %	5 thsd tons





## Project expenses

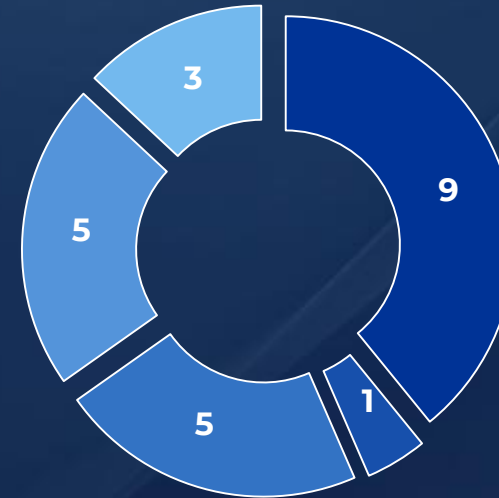
### Initial Investment (CAPEX) (mln dollar)



Total CAPEX: **\$40 mln**

- Land and construction
- Machinery & equipment
- Utilities & infrastructure
- Other

### Operating Costs (OPEX) (mln dollar)



Total OPEX: **\$23 mln**

- Raw materials
- Labor
- Utilities & maintenance
- Logistics & distribution
- Admin & overhead

This financial overview outlines the cost structure and profitability of the proposed glass manufacturing project, including CAPEX, OPEX, and projected revenues from float glass production, processing, and sales in domestic and export markets.

Product	Capacity	Price	Amount (million USD)
Window glass	30 000	700 doll/ton	21
Facade glass	10 000	730 doll/tons	7,3
Safety glass	5 000	630 doll/tons	3,1
<b>TOTAL</b>			<b>31,4</b>

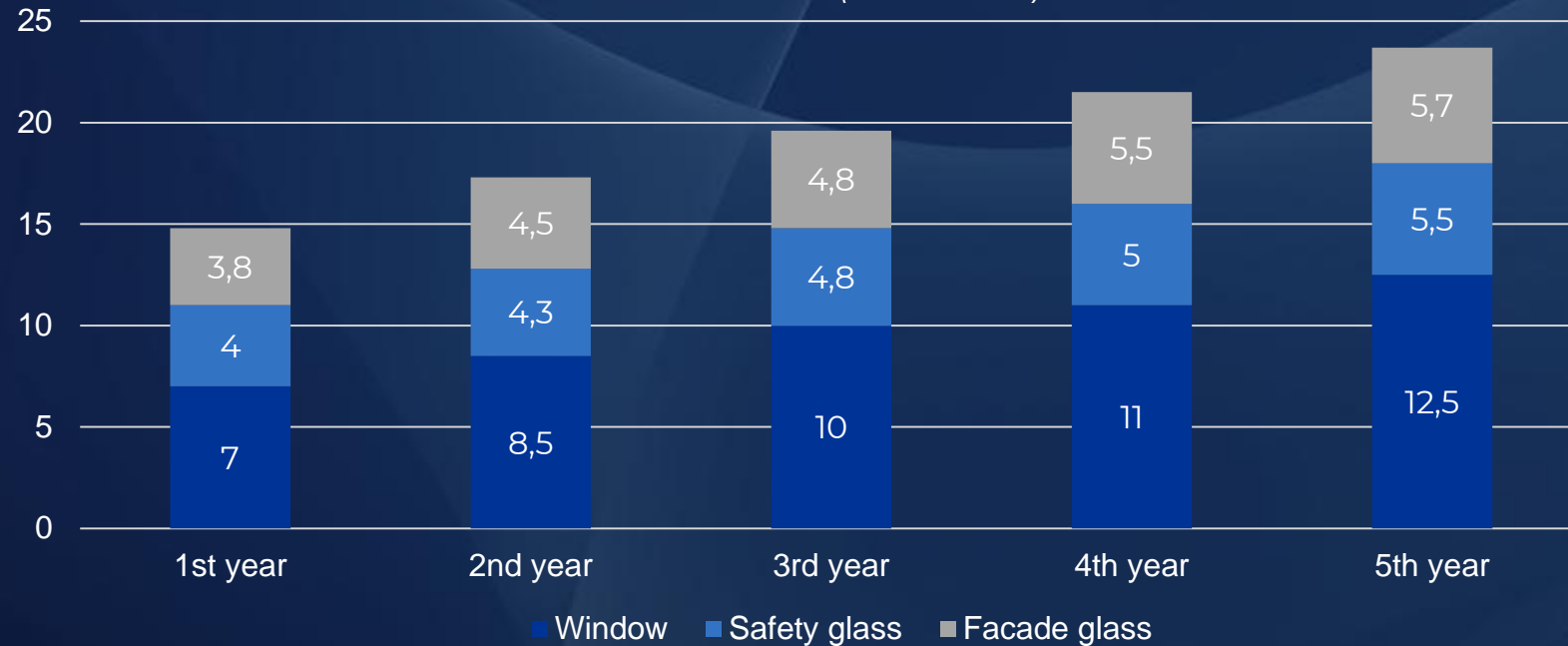
### Annual EBITDA:

$$= \$31,4 \text{ mln} - \$23 \text{ mln} = \mathbf{\$8,4 \text{ mln}}$$

The project's strong profitability forecast is underpinned by efficient operations and high market demand, positioning it as a highly attractive investment.



### Revenues (mln dollars)



### Operating expenses (mln dollars)



#### Total 10-year cash flow:

\$96,9 M after full CAPEX recovery

#### NPV (12% discount rate):

NPV= **\$29,4 million** (Highly favorable!)

IRR (Internal rate of return): ≈ **23,2 %**

#### Payback period (PP):

= **4,5 years**

#### Profitability index (PI):

$= (\text{NPV} + \text{CAPEX}) / \text{CAPEX} = (\$29,4\text{M} + \$40\text{M}) / \$20\text{M} = \mathbf{1,7}$

#### Return on investment (ROI):

$(\text{EBITDA} / \text{CAPEX}) * 100 = (8,4 / 40) * 100 = \mathbf{21\%}$



## Company overview

1. Established in **2016**.
2. Produces more than **13** types of products.
3. Float glass (various thicknesses), tempered and laminated safety glass, insulated glass units (double glazing), processed and cut-to-size architectural glass, as well as packaged glass products supplied to domestic construction projects and export markets.
4. More than **30** employees.
5. The company prepares products not only for the market, but also for a number of foreign countries.



## Production facility

### Cost of utilities

- Gas 17 cents/m<sup>3</sup>
- Electricity 8,5 cents/kWh
- Water \$1,1/m<sup>3</sup>

