



---

STRICTLY CONFIDENTIAL

---

## **Pinemont Securities Ltd\***

330 High Holborn, London, UK

An investment banking project to support the industrialization of the Republic of Kazakhstan

**Planning, building and establishing float glass production**

Astana, 20 June 2012



*London*  
**STOCK EXCHANGE**



*\*Regulated by the Financial Services Authority and a member of the London Stock Exchange*

# The President of Kazakhstan aims to increase GDP per capita to \$15,000 and create a high-income country

---



*Nursultan Nazarbayev*

- 7 percent economic growth through processing industries → investment in fixed capital during the next 5 years will have to rise by 50 percent
- Kazakhstan has adopted the five-year State Programme for Accelerated Industrial-Innovative Development, aimed at shifting investors' focus from extractive industries toward the establishment of export-oriented and high-tech innovative industries
  - Designed to ensure industrial growth through the implementation of 469 large investment projects and the opening of new production facilities
  - Implementation of niche projects for manufacturing products that are not yet produced in Kazakhstan – investors who are interested in such projects will be specially supported by the Government
- Roadmap 2020, a large-scale initiative to spur entrepreneurship in modern Kazakhstan has been implemented since 2010
  - The Kazakh Government pursues a pro-business, yet equitable and predictable corporate tax policy
  - Significant steps to combat corruption and form a legislative framework that meets current needs
  - Listed in the top 10 countries for creating a favourable environment for entrepreneurship\*
- Priorities for infrastructure investment project: modernization, renovation and construction of new generating capacity for the electrical power grid, modernization of airports, highway reconstruction and expansion and various major railway project

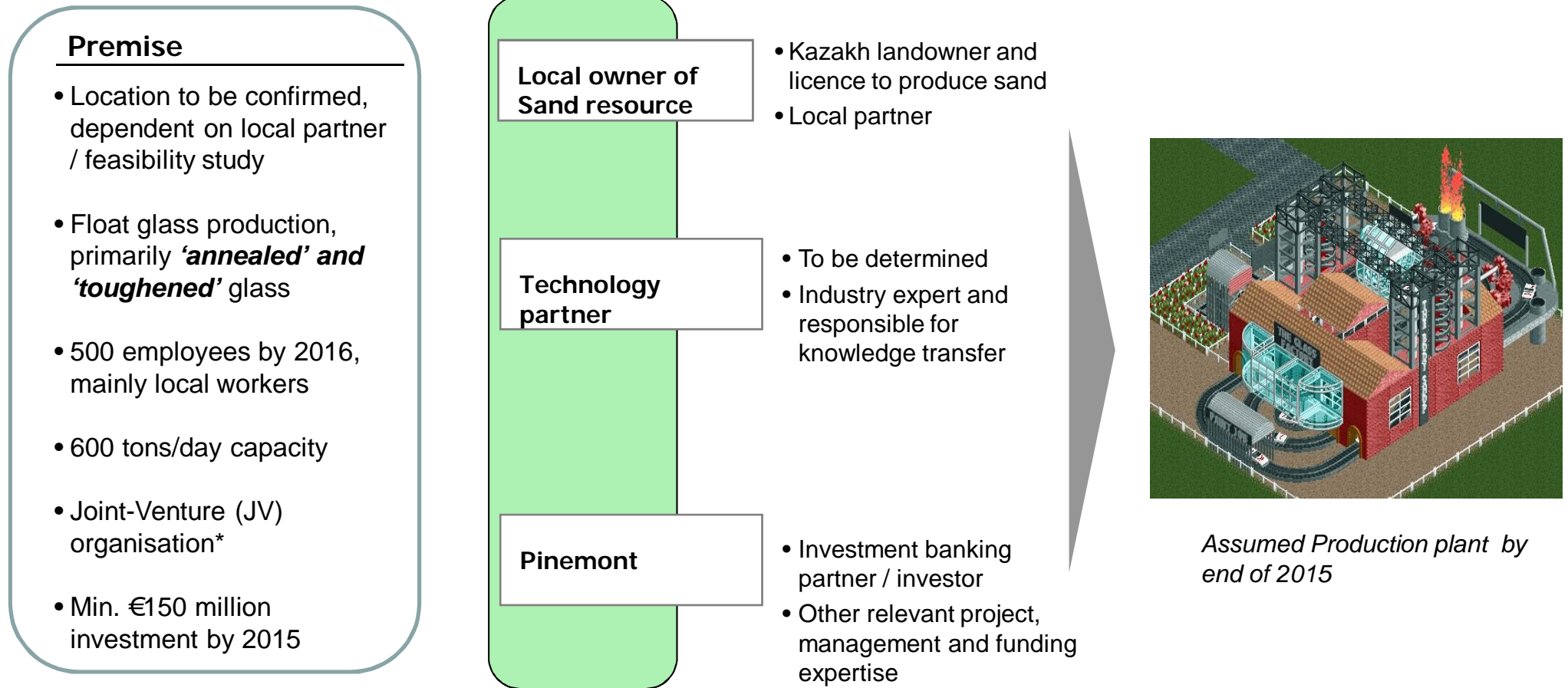
## Objectives of this project

---

- 1. To help meet the wish to reduce Kazakhstan's dependence on import of glass (today 100% of glass is imported)**
- 2. To contribute to the desired industrialization of Kazakhstan with a long term sustainable project**

# The Kazakh float glass production project in a nutshell

NOT EXHAUSTIVE



Assumed Production plant by end of 2015

\*JV is the initial proposed structure, to be confirmed with the involvement of Kazakh Government / Kazakh funding

# Proposed factory characteristics and location are key elements for the feasibility study

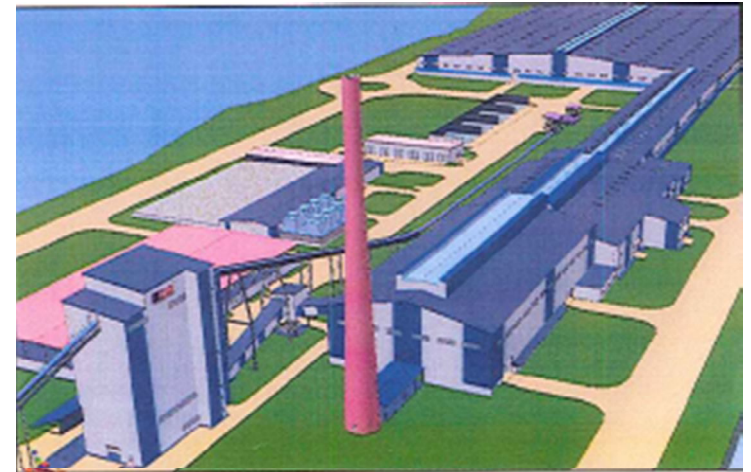
*NOT EXHAUSTIVE*

## Key facts

- Capacity 600 t/d
- Net production approx. 85% (510t/d)
- 51.000 m<sup>2</sup> / day – 18.6m m<sup>2</sup> / year
- Thickness: 2-12 mm
- Maximum glass size: 3.2 x 6.0m
- Size of the site 600 x 400 m (24 ha.)

## Location to be determined

- Location is critical and a key component of the feasibility study
- Availability of utilities (Natural gas, Water, Electrical Energy)
- Suitable and approved soil conditions
- Availability of qualified personnel



# Main processes and technologies in float glass production



## BATCH PLANT

*Dosing, weighting, mixing of the raw material materials*

## MELTING PLANT

*Melting of the raw materials, refining and homogenization of the glass*

## FLOAT PLANT

*Forming of the glass to an endless ribbon with a defined thickness*

## ANNEALING LEHR

*Slow cooling down of the glass ribbon*

## CUTTING LINE

*Cutting, stacking and packaging of the glass*

### UTILITIES

- Heating medium gas/oil
- Electrical power
- Cooling water
- Compressed air
- N<sub>2</sub>/H<sub>2</sub>

### CONTROL SYSTEMS

- Automation solutions
- Process control systems
- Industrial communication
- Process instruments and analytics

### ENVIRONMENTAL TECHNOLOGIES

- Heat recovery
- Cullet return
- Dust recycling
- Waste gas treatment
- Water treatment