



Ministry of Investment,
industry and trade
of the Republic of Uzbekistan

Investment proposal: Production of medical diagnostic reagents



Production of medical diagnostic reagents

Economic and social impact:

- Import substitution: Reduce dependency on imported diagnostic kits by up to 60%.
- Healthcare improvement: Ensure timely and affordable diagnostic materials for hospitals and labs.
- Employment: Create 120–150 skilled jobs.
- R&D development: Promote local biotechnology innovation and collaborations with universities.
- Export potential: Supply to Central Asian and CIS markets.

Land selection criteria

Located in an industrial or biotech zone with utility access (electricity, water, sewage). Proximity to air and road transport for import/export logistics.

Location of the project



Jizzakh region	
Size	21 200 km ²
Population	1,5 million



Project description:

To establish a modern facility for the local production of diagnostic reagents used in biochemical, hematology, immunology, and molecular testing — reducing import dependency and strengthening the healthcare and biotechnology sector.

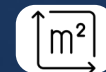
Products:

Biochemical reagents (e.g., glucose, urea, creatinine, cholesterol test kits)
Hematology reagents (e.g., diluents, lysing reagents)
Immunoassay reagents (ELISA kits for infectious and non-communicable diseases)
PCR reagents (buffers, primers, enzymes, DNA extraction kits)
Quality control and calibration reagents

Economic indicators:



Financing: 20 million USD



Area: 1,2 hectares



Revenue: \$21,7 million/year



ROI: 29,1 %

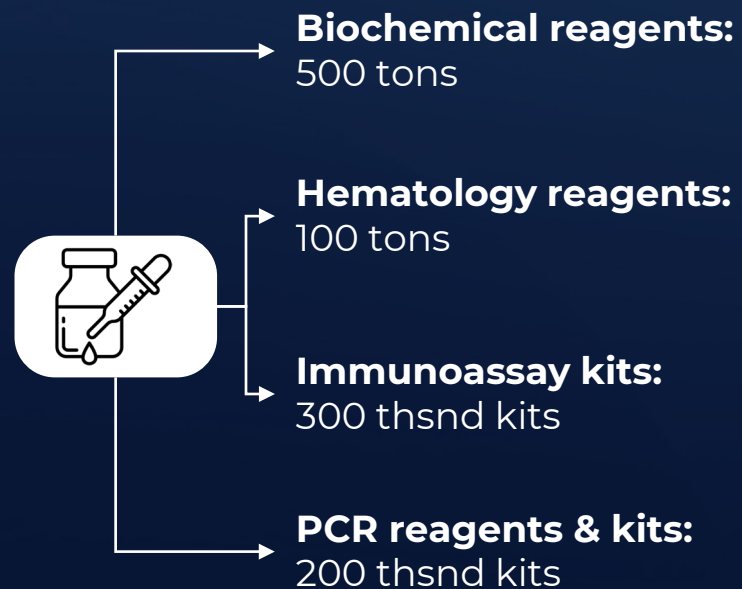


NPV: \$38,2 million (10 years)



IRR: ~26%

Production indicators:



Processing chain & product yield

Key production stages

1. Raw material procurement

Purchase of high-purity chemicals, antigens, enzymes, and reagents.

2. Formulation & mixing

Precise preparation under sterile conditions using automated dispensers.

3. Filling & packaging

Reagent filling into bottles, vials, or kits under cleanroom conditions.

4. Quality control

Testing of each batch for stability, specificity, and sensitivity.

5. Labeling & certification

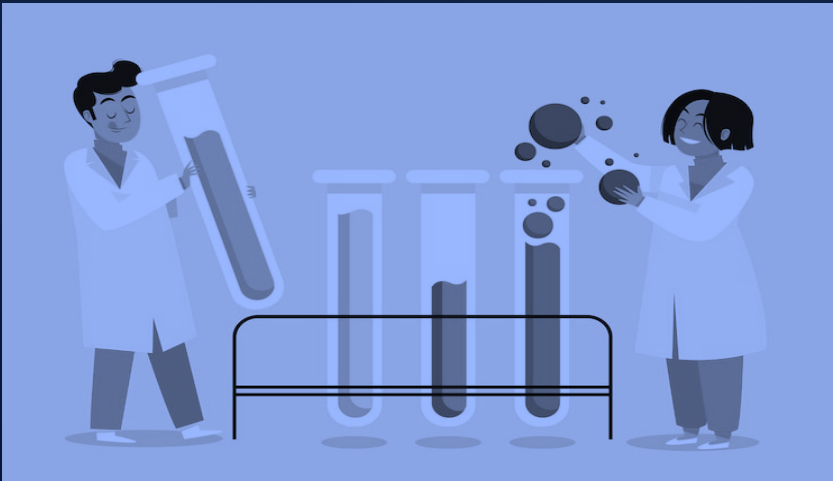
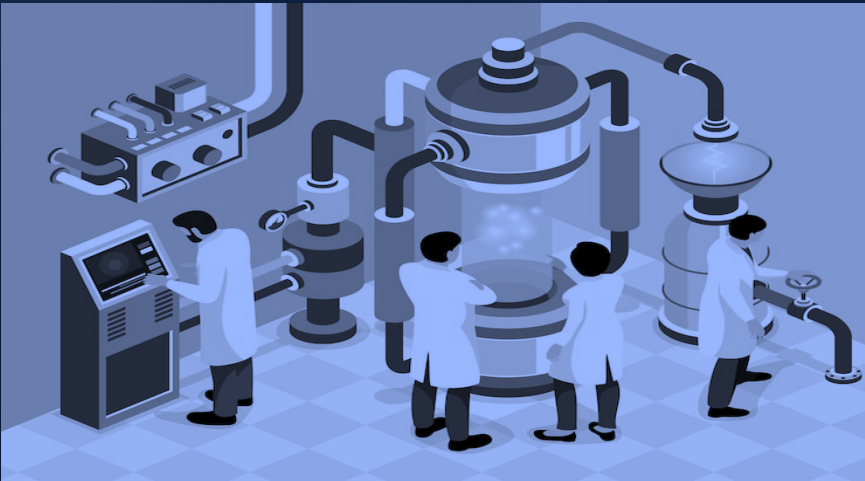
Compliance with ISO 13485 and national pharmacological standards.

6. Distribution

Logistics to hospitals, diagnostic centers, and laboratories.

Product yield breakdown

Product	Volume(tons)	Main applications (Uses)	Raw materials / sources
Biochemical reagents	500 tons	Clinical chemistry tests for enzymes and metabolites.	Enzymes, buffers, stabilizers, organic compounds.
Hematology reagents	100 tons	Blood cell counting and hemoglobin testing.	Surfactants, saline, dyes, preservatives.
Immunoassay kits	300 thsnd kits	Detection of hormones, infections, biomarkers.	Antibodies, antigens, enzymes, conjugates.
PCR reagents & kits	200 thsnd kits	DNA/RNA amplification and pathogen detection.	DNA polymerase, primers, nucleotides, buffers.
TOTAL	6 500 tons		





Project expenses

Initial Investment (CAPEX) (mln dollar)



Total CAPEX: \$20 mln

- Land & civil works
- Equipment & machinery
- Laboratory setup & certification
- Utilities and infrastructure
- Other

Operating Costs (OPEX) (mln dollar)



Total OPEX: \$9 mln

- Raw materials
- Labor
- Utilities & maintenance
- Laboratory & waste treatment
- Sales & distribution

This financial overview outlines a comprehensive cost structure and strong profitability of the proposed medical diagnostic reagents production project. The breakdown includes both initial capital investment (CAPEX) and annual operating costs (OPEX), alongside projected revenue and profit estimates.

Product	Capacity	Amount <i>(million USD)</i>
Biochemical reagents	500 tons	9
Hematology reagents	100 tons	2,5
Immunoassay kits	300 thsnd kits	4,2
PCR reagents & kits	200 thsnd kits	6
TOTAL		21,7

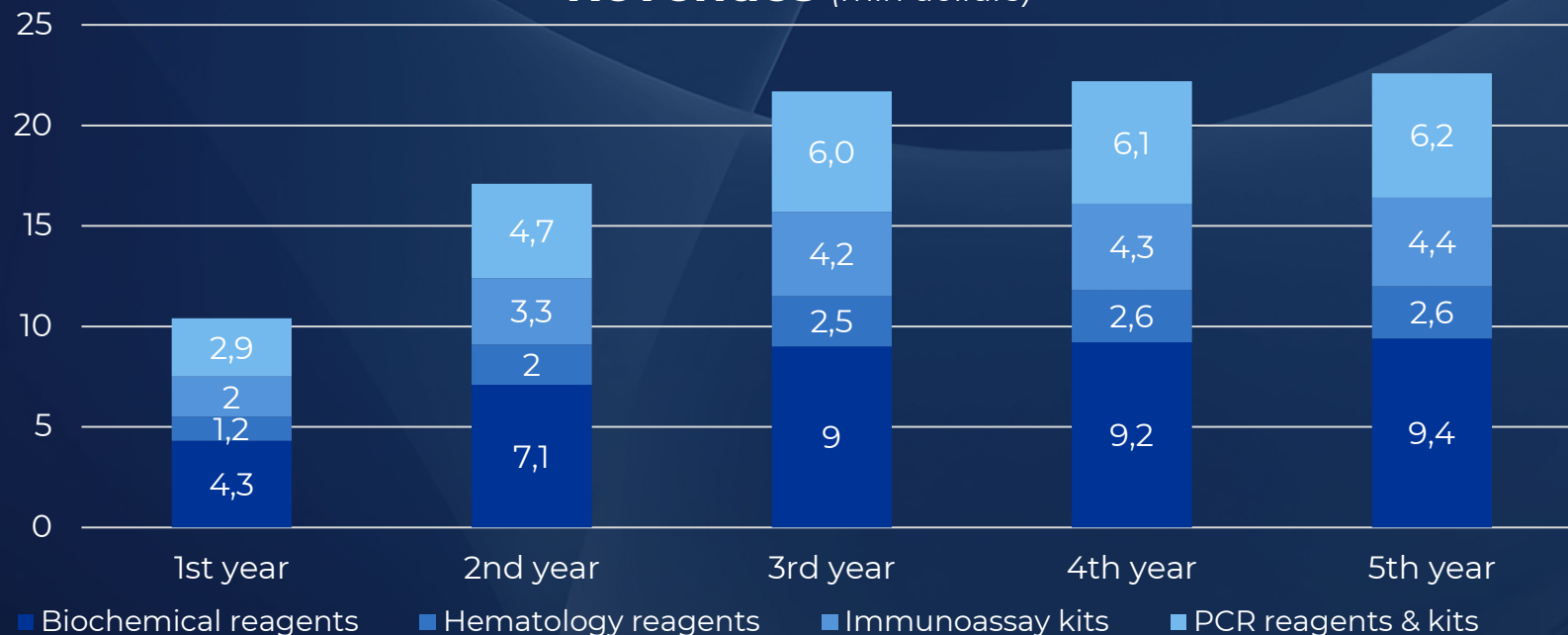
Annual EBITDA:
= \$21,7 mln - \$9 mln = **\$12,7 mln**

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

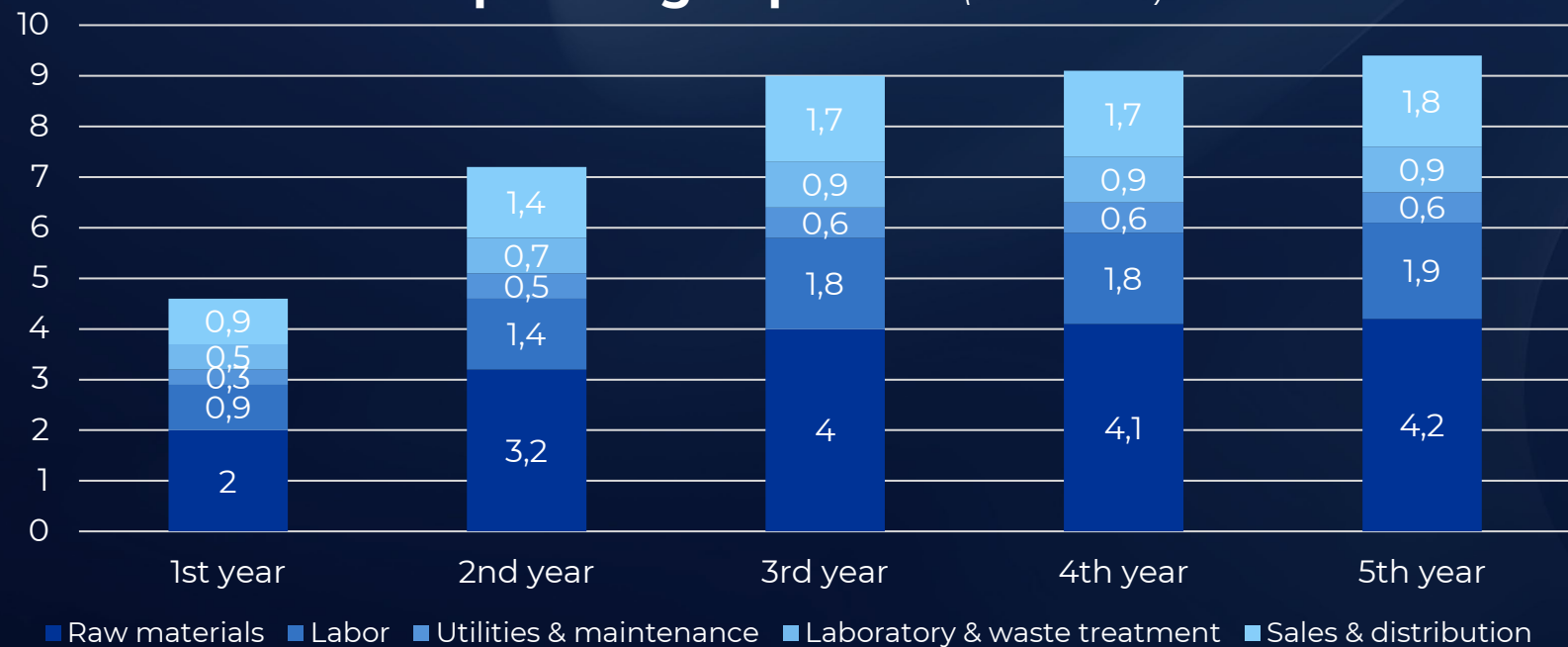


Financial indicators (5-year projection)

Revenues (mln dollars)



Operating expenses (mln dollars)



Total 10-year cash flow:

\$58,2M after full CAPEX recovery

NPV (12% discount rate):

NPV= **\$38,2 million** (Highly favorable!)

IRR (Internal rate of return): **≈ 26%**

Payback period (PP):

= **3,1 years**

Profitability index (PI):

$$=(NPV+CAPEX)/CAPEX=(\$38,2M+\$20M)/\$20M=$$
2,91

Return on investment (ROI):

= **29,1** (10 years)