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

Investment proposal:
Organize the production of methanol derivatives

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Organize the production of methanol derivatives

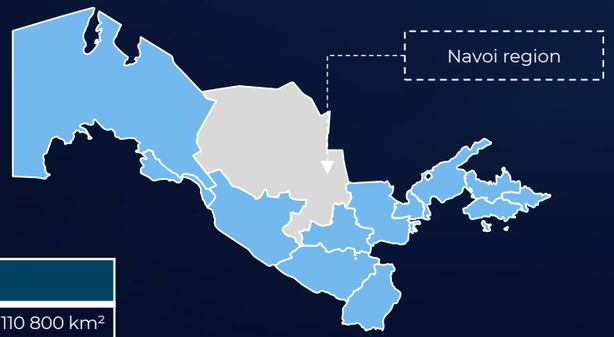
Economic impact:

- Diversification of chemical industry in Uzbekistan.
- $335–400 mln annual revenue, contributing to GDP.
- Significant foreign exchange earnings via exports.
- Strengthening industrial value chain (chemicals, plastics, construction).

Social impact:

- Creation of ~1500 direct jobs and
- Workforce upskilling in advanced chemical engineering.
- Development of local supply and logistics networks.
- Improved availability of downstream products materials.

Location of the project



Navoi region	
Size	110 800 km²
Population	1,1 million

Project description:

1. Implementation in EIZ with full infrastructure, low-cost utilities, and direct access to domestic & export markets.

2. High value-added products: Shift from raw methanol exports to derivatives with higher margins.

3. Import substitution & export growth: Replacing imported chemicals and building regional export capacity.

4. Long-term sustainability: Energy-efficient design, compliance with environmental standards, scalable production.

Economic indicators:

Financing: 170 mln USD

Area: 30-35 hectares

Revenue: $335 million

ROI: 32 %

NPV: ~ $185 million

IRR: ~19%

Production indicators:

Annual production: 100 000 tons

Formaldehyde: 300 000 tons

Acetic acid: 150 000 tons

MTBE *(Methyl tert-butyl ether)*: 100 000 tons

Amines & solvents: 50 000 tons

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Processing chain & product yield

Key production stages

1. Methanol feedstock preparation
- Receipt and storage of methanol feedstock.
- Filtration, dehydration, and purification to remove impurities.
- Preheating and conditioning for reaction units.

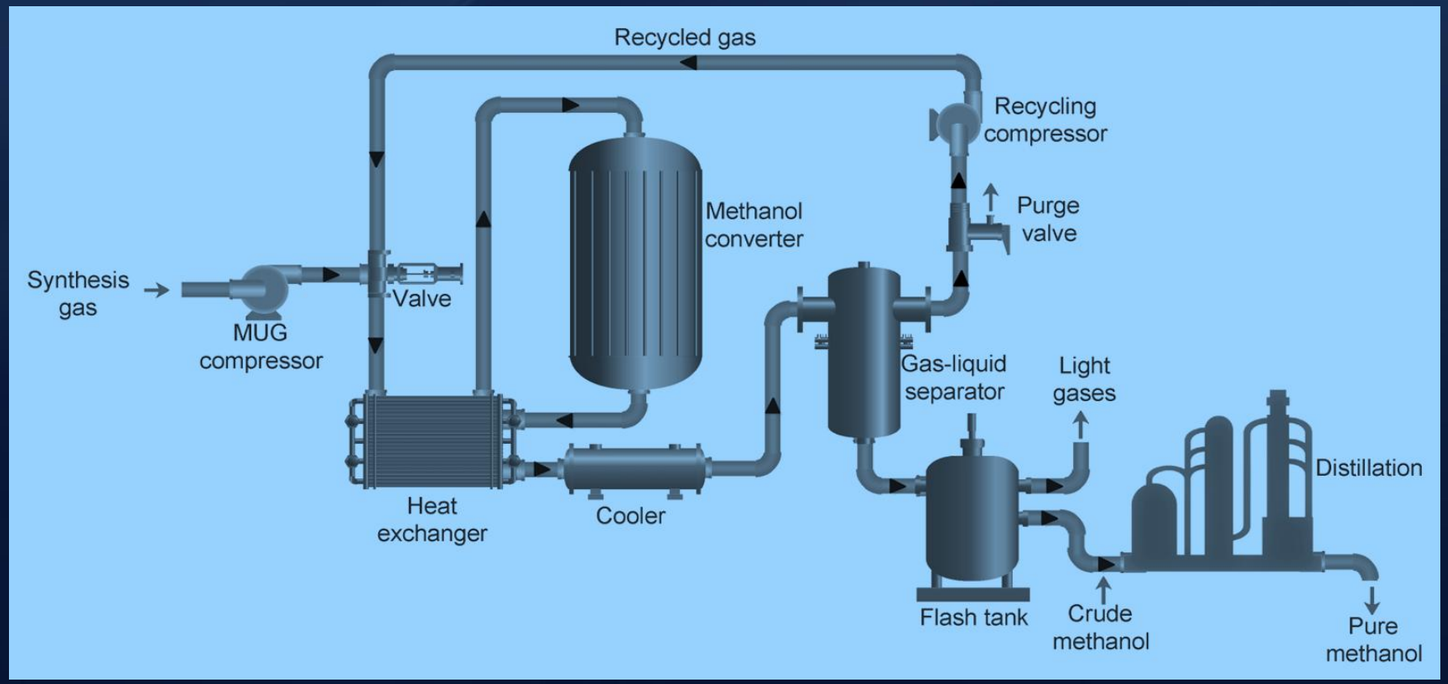
2. Catalytic conversion (process units)
- Formaldehyde unit: Oxidation of methanol over a silver/catalyst bed to produce formaldehyde solution (37%).
- Acetic acid unit: Carbonylation of methanol with CO using Rh-based catalyst.
- MTBE unit: Reaction of methanol with isobutylene in a catalytic reactor to produce methyl tert-butyl ether (gasoline additive).Methanol Amines Unit: Reaction of methanol with ammonia to form mono-, di-, and tri-methylamines and solvents.

3. Separation & purification
- Distillation, condensation, and absorption steps to isolate pure derivative products.
- Removal of by-products and recycling of unreacted methanol back into reactors.
- Drying, stabilization, and quality control analysis of each product stream.

4. Storage & packaging
- Dedicated storage tanks for bulk products (formaldehyde, acetic acid, MTBE).Barrel/drum filling systems for amines and specialty solvents.
- Loading facilities: truck, rail, and potential pipeline connections for domestic and export customers.

Product yield breakdown

	Product	Share	Annual volume (tons)
1	Formaldehyde	45%	300 000
2	Acetic acid	25%	150 000
3	MTBE	20%	100 000
4	Methanol amines/solvents	10%	50 000



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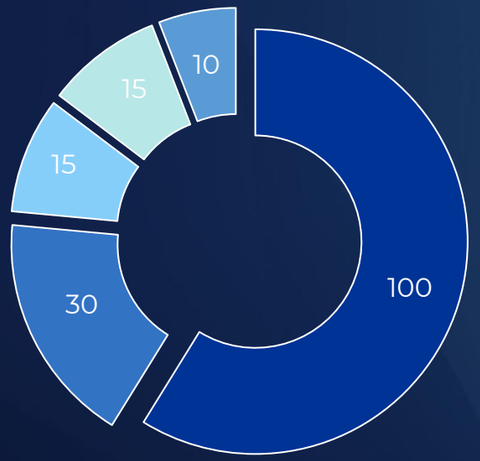
Project expenses

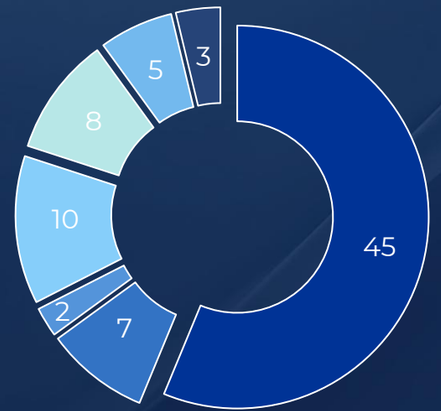
Initial Investment (CAPEX) *(mln dollar)*



Total CAPEX: **$170 mln**

- Process units
- Utilities & infrastructure
- Storage & logistics
- Engineering & installation
- Contingency & others

Operating Costs (OPEX) *(mln dollar)*



Total OPEX: **$80 mln**

- Natural gas
- Electricity
- Water & treatment
- Chemicals & catalysts
- Labor & administration
- Maintenance & spare parts
- Logistics & packaging

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

Product	Volume *(tons)*	Price	Revenue ($)
Formaldehyde	300 000	$350	105 000 000
Acetic Acid	150 000	$600	90 000 000
MTBE	100 000	$800	80 000 000
Methanol Amines/Solvents	50 000	$1 200	60 000 000
TOTAL			**335 000 000**

Annual EBITDA:
= $335mln - $80mln = **$255 mln**

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

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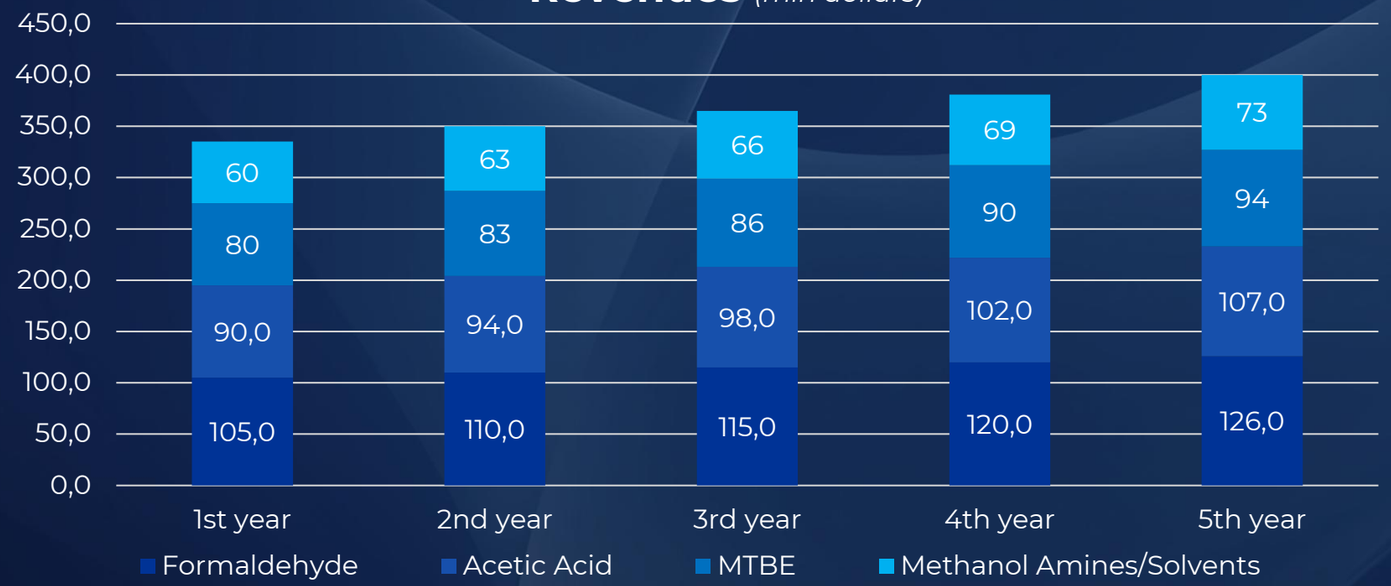
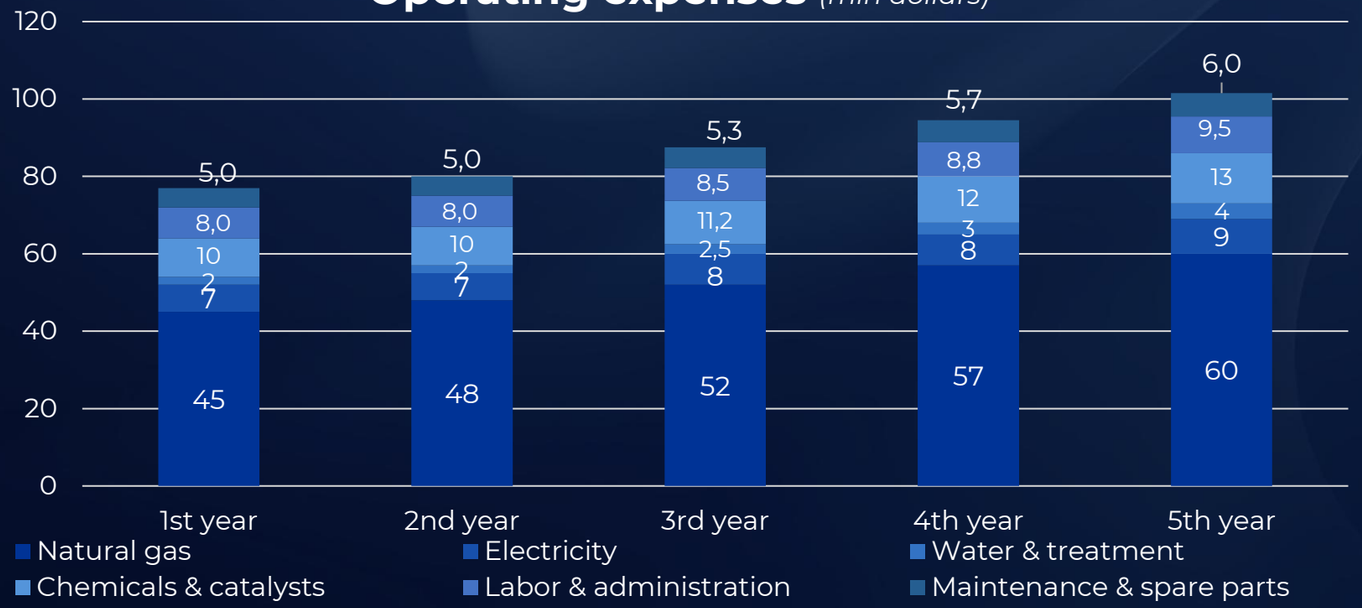
Financial indicators
(5-year projection)

Revenues *(mln dollars)*



Operating expenses *(mln dollars)*



Revenues increase steadily from $335M in year 1 to $400M in year 5. Growth is driven by all products.

Total **expenses** rise moderately from $80M to $106M in year 5, with raw materials being the largest cost component. The controlled growth in costs reflects operational efficiency and economies of scale.

Despite rising taxes and expenses, profitability improves due to stronger revenue and efficient cost management.

NPV (15% discount rate):

NPV = 185M (Highly favorable!)

IRR (Internal rate of return): **≈ 19%**

Payback period (PP):

=Payback = **5-6** years

Profitability index (PI):

PI = **2,08**