INVESTMENT PROFILE I REPUBLIC OF MOLDOVA

WASTE MANAGEMENT AND RECYCLING CENTRE

A modular facility for plastic sorting, pre-processing and recycling



Illustrative image; it does not depict the proposed configuration, operator or site.

CAPEX **EUR 4.45 million**	**CAPACITY** **7,500 t/year**	**MODULE INPUT** **Approximately 4,050 t/year**
IRR **15.72%**	**NPV AT 12%** **EUR 1.100 million**	**EBITDA** **EUR 1.205 million/year**

1. Executive summary

The project comprises a modular centre with a capacity of 7,500 t/year for reception, traceability, sorting and pre-processing, complemented by one PET or HDPE/PP recycling module. At 90% utilisation, the financial scenario assumes 6,750 t/year processed and approximately 4,050 t/year fed into the module. Scenario B is the recommended investment option. PET and HDPE/PP remain mutually exclusive technical alternatives pending validation of feedstock composition, yields, technology and market conditions.

Scenario	Configuration	CAPEX EUR million	EBITDA EUR million	IRR	NPV at 12% EUR million	Role
A	Core centre	2.90	0.615	10.51%	(0.274)	Fallback; below 12%
B	Centre plus one selected module (PET or HDPE/PP)	4.45	1.205	15.72%	1.100	Recommended investment option
C	Integration/expansion	5.80	1.578	16.12%	1.577	Separate decision

RECOMMENDATION. Promote a modular architecture with polymer, operator and site selection still open. Scenario A is the fallback; Scenario B presents alternatives requiring validation; Scenario C is an expansion option subject to additional data and contracts.

2. Strategic rationale: why now

Driver	Evidence	Implication
Physical potential	An estimated 52,610 t of plastic POM in 2024; 24,474 t reported under EPR and 3,116 t formally recovered [S11]	Sufficient physical market potential for preliminary assessment; feedstock must still be contracted
EPR / traceability	A substantial gap between estimated physical volumes and reported volumes [S11]	Demand for contracting, auditing and sorting infrastructure
DRS	Administrator appointed; implementation under way [S16]	May provide cleaner PET, but no volumes are budgeted without a contract
Regionalisation	Public/IFI investment in transfer, sorting and regional systems [S5,S6,S12]	New aggregation points may supply the project over time
EU market	Sorting quality is a major constraint, including for polyolefins [S21]	Supports strict quality control and module installation only after market confirmation

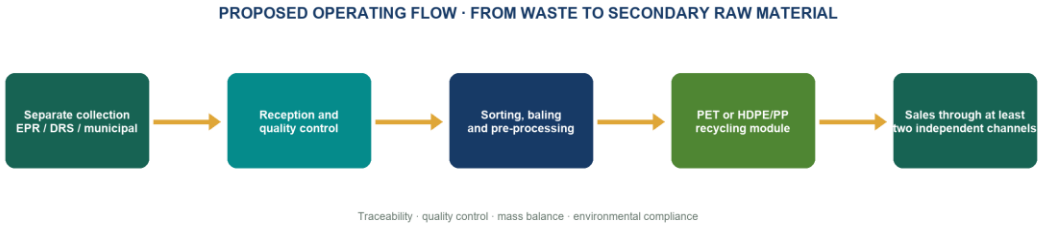
2.1. Feedstock availability

The 7,500 t/year capacity is an analytical design assumption. It is not derived by applying a fixed percentage to the quantity of packaging placed on the market (POM). POM measures packaging entering the market; feedstock availability for the project depends on collection, ownership and contracting rights, contamination, sorting, location and competition.

Channel	Potential contribution	Conditions
Non-DRS EPR schemes	PET, HDPE, PP and other packaging	Multi-year contracts and quantity/quality audits
Waste management regions / licensed operators	Bales and sorted fractions	Specifications, rejects, baling and traceability
Retail / logistics / industry	Clean commercial and post-industrial streams	Direct sourcing only where legally permitted; packaging remains subject to EPR rules
DRS	Beverage PET and other covered streams	Contractual option; excluded from the base case pending agreement
Imports	Potential regional fallback supply	Excluded from the base case; legal, customs and environmental assessment required

THRESHOLDS. Before the final investment decision (FID): at least 4,500 t/year of qualified feedstock that can be secured under contract from at least two sources. A PET module requires at least 2,700 t/year of qualified non-DRS PET, with a prudent target of 3,150 t/year and at least two sources.

3. Operating model and scope of Scenarios A, B and C



Operating flow: collection and contracting → core centre → selected recycling module → sales → conditional expansion.

Scenario	Technical scope	Main product	Excluded from the scenario
A: core centre	Reception/weighing, traceability, bale breaking, metal/contaminant removal, optical/manual sorting, separation by polymer/colour, baling and selective shredding	Bales / shredded material	Wet processing, extrusion or pelletising

Scenario	Technical scope	Main product	Excluded from the scenario
B-PET	A + washing, separation and drying to produce PET flakes	Non-food-grade PET flakes in the base project	Automatic food-contact compliance, pelletising or a simultaneous HDPE/PP line
B-HDPE/PP	A + washing, density separation, drying and regranulation	Separate grades of recycled HDPE and/or PP	Undifferentiated HDPE/PP mixing or a simultaneous PET module
C: integration / expansion	Multiple material streams, with washing/recirculation, extrusion/filtration/pelletising; configuration requires revalidation	Flakes and/or pellets from validated streams	EUR 5.80 million CAPEX as a firm quotation, or multi-polymer integration without suitable lines

3.1. Technical benchmarks

Indicator	Scenario B: preliminary assessment	Scenario C / expansion	Validation
Operations	Approximately 300 days/year; two shifts, with scope to extend	Same basis, adjusted to the lines	Supplier quotation and staffing structure
Fresh water	1–2 m³/t of module input	1–2 m³/t as a preliminary benchmark	Separate water balance by polymer, recirculation and treatment
Energy	450–650 kWh/t of module input	Consumption depends on the full configuration	Supplier guarantees and local feedstock tests
Grid connection capacity	Subject to quotation for each module	1.5–2.5 MW as an initial design envelope for the integrated concept	Grid connection approval
Land area	Approximately 1.2–2.2 ha plus expansion reserve	Indicatively 1.5–2.5 ha	Site layout, storage, traffic and expansion
QA / environment	Moisture, contamination and IV/MFI as applicable; laboratory	Same requirements plus integration of multiple streams	Customer specifications; wastewater, sludge, rejects, dust/odour and fire safety

FOOD-CONTACT PET. This is not automatically included in Scenario B-PET. If pursued later, it requires appropriate decontamination/recycling technology, traceability, qualified PET feedstock, compliance/certification and dedicated offtake contracts.

4. Markets, products and regional benchmarks

Revenue depends on the net price achievable for the product specification, delivery terms and logistics. In the absence of quotations applicable to Moldova, the assessment temporarily assumes EUR 980/t for module output and EUR 450/t for pre-processed material. These analytical assumptions are to be replaced following commercial validation.

Product	Market / requirements	Validation
Bales / shredded material	Regional recyclers and compounders	Losses/rejects, Incoterms, net price and at least two buyers
Non-food-grade PET flakes	Romania/EU; colour, PVC, moisture, intrinsic viscosity (IV) and contamination	Samples and quotations/LOIs; EUR 980/t as the analytical base assumption
Recycled HDPE/PP	Moldova/Romania/EU; melt flow index (MFI), colour, odour and contamination	Separate polymers and grades; differentiated prices before FID
Food-contact rPET	Market with stringent requirements	Outside the base case; separate processing and compliance requirements

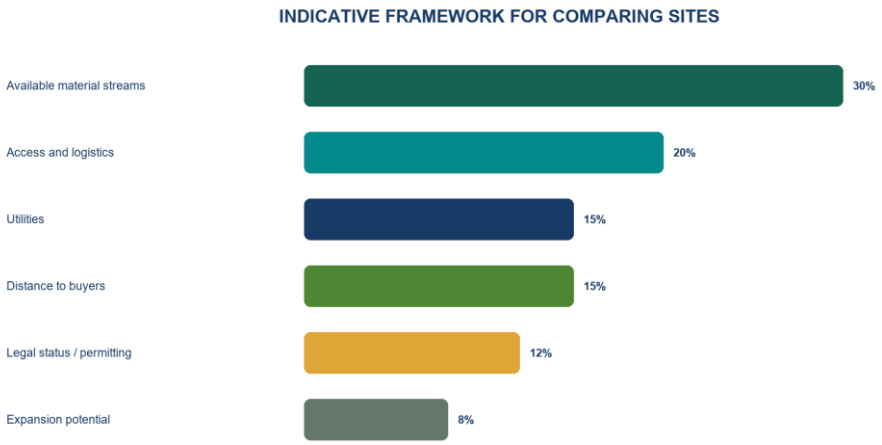
Benchmark	Model	Relevance to operators in Moldova
Targu Mures [S17]	Further processing of available recycled PET flakes	Further processing of available recycled PET flakes
Croatia: REKIS [S18]	Integrated bottle-to-bottle PET recycling	Full integration is more readily justified for a single polymer and DRS feedstock
Serbia–North Macedonia [S19]	Local sorting and regional recycling	Relevant precedent for aggregation linked to a regional recycling facility in a smaller market
Bulgaria: EcoInvest [S20]	Integrated multi-polymer operation at approximately 50 kt/year	Multi-polymer integration occurs at larger scale with established feedstock supply

BENCHMARK CONCLUSION. The examples support modularity and specialisation. They are not directly comparable in terms of CAPEX, capacity or financial returns.

4.1. Commercial coverage

The model assumes sales of 100% of saleable output. Confirmed commercial coverage is 0% at the date of analysis. This limits the certainty of the assessment but does not invalidate the scenario. Before the final investment decision (FID), contractual coverage should reach at least 60% of module capacity, with at least two independent sales channels for pre-processed material.

5. Siting and infrastructure



Indicative framework for comparing sites; final weights are to be agreed with the investor and the beneficiary.

No site has been selected. The preliminary screening list includes Chisinau–Ciocana, Ialoveni–Straseni, Orhei, Ungheni, Cahul, and the multifunctional industrial platforms in Glodeni/Ocnita. Stakeholder discussions also identified a potential site in Chisinau Municipality, Ciocana District, between Vetropack Chisinau and the ABS DMS sorting facility. This option requires further verification and validation and does not underpin the profile. Multifunctional industrial platforms may be considered subject to availability and technical and legal compatibility.

Criterion	Indicative weight	Items to assess
Feedstock	30%	Sources
Logistics	20%	Transport distances and costs, heavy-goods vehicle access and baling requirements
Utilities and water	15%	Power, water, sewerage, treatment and expansion capacity
Market / connectivity	15%	Customers, Romanian border access, roads and storage
Environment / permitting / community	12%	Zoning, EIA, wastewater, traffic and neighbouring uses
Labour / expansion	8%	Staff, maintenance, laboratory and additional land

6. Investment structure and stakeholder roles

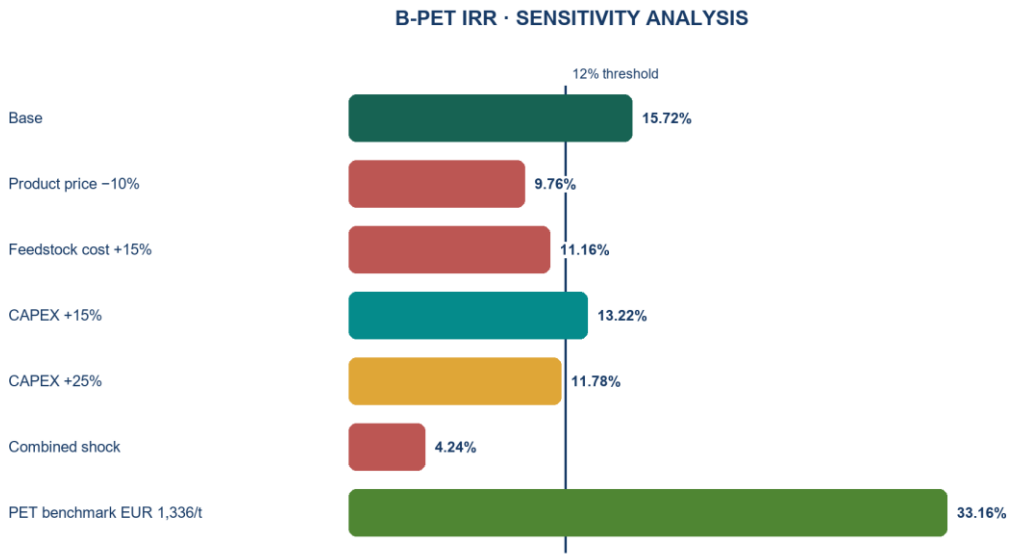
Stakeholder	Role in the base case
Investor/operator	Design, financing, construction, technology, operations, yields, quality and sales
Ministry of Environment / competent authorities	Policies and targets, EPR/DRS, permitting, traceability, oversight and sector data
Invest Moldova Agency (Invest Moldova / IMA) / Ministry of Economic Development and Digitalisation / local authorities / platform administrators	Promotion and facilitation; land/utilities information and administrative guidance; no guarantee of feedstock availability
EPR schemes / DRS administrator	Contracting and financing statutory responsibilities within the applicable legal framework; not assumed to be co-investors
Existing operators / collectors	Potential suppliers, competitors, subcontractors or partners on commercial and competitive terms; ABS is a documented example, not a designated partner
Buyers	Specifications, samples, qualification, prices and offtake contracts

6.1. Implementation structures

The recommended structure is a special-purpose vehicle (SPV) controlled by an industrial investor. Investment in an existing asset (brownfield development) may be considered if a compatible site is identified. A public-private partnership (PPP) would require a clearly defined public asset or commitment and is not assumed at this stage.

7. Financial model and resilience of Scenario B

Scenario B parameter	Value
Base CAPEX estimate	EUR 4.45 million, including EUR 0.25 million contingency
Indicative initial working capital: Year 1	Approximately EUR 0.38 million; 45 days receivables, 30 days inventory and 30 days payables
Uncertainty range pending quotations	EUR 4.45–5.56 million; the +15%/+25% sensitivities are not automatically added to the contingency
Utilisation	55% / 70% / 82% / 88% / 90%
Stabilised module input	Approximately 4,050 t/year
Module / pre-processed material yield	80% / 90%
Module product / pre-processed material price	EUR 980/t / EUR 450/t. Temporary assumptions to be replaced following quotations and commercial validation.
Discount rate / horizon	12% / 15 years
EBITDA / IRR / NPV	EUR 1.205 million/year / 15.72% / EUR 1.100 million

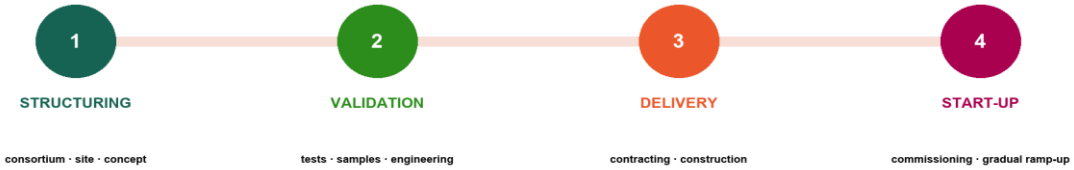


IRR sensitivity for the analytical B-PET scenario; the same financial assumptions are temporarily used for B-HDPE/PP.

Scenario B sensitivity	IRR	NPV, EUR million	Interpretation
Base	15.72%	1.100	Reference scenario
Product price −10%	9.76%	−0.616	Below the threshold; selling price is critical
Feedstock cost +15%	11.16%	−0.236	Below the threshold; input cost is critical
CAPEX +15%	13.22%	0.398	Remains above the threshold
CAPEX +25%	11.78%	−0.074	Slightly below the threshold
Price −10% and feedstock cost +15%	4.24%	−1.967	Fails to meet the threshold
75% utilisation	10.34%	−0.455	Below the threshold
75% module yield	12.11%	0.030	Close to the threshold
Service fee of EUR 0/t	12.67%	0.192	Remains above the threshold
75% utilisation and 75% yield	6.81%	−1.352	Fails to meet the threshold

FINANCING. The base case is assessed before financing and assumes no grant. Debt structure is assessed separately against financing terms. Debt service may constrain cash flow during the utilisation ramp-up and must be distinguished from project profitability.

8. Implementation and risk management



8.1. Principal risks

Risk	Level	Mitigation
Feedstock / competition for PET	High	Multiple sources, contractual thresholds and DRS excluded from the base case
Cleaner PET captured by the DRS	High	DRS excluded from the base case; proceed with the PET module only with at least 2,700 t/year of non-DRS PET, a target of 3,150 t/year and at least two sources
Module selection / quality	High	Assess PET separately from HDPE/PP; samples, mass balances and tests

Risk	Level	Mitigation
Price / offtake	High	At least 60% contractual offtake coverage, price formulas and at least two sales channels
Site / utilities	High	Exclusion criteria, approvals and total logistics cost
CAPEX / OPEX	Moderate	At least three comparable quotations and uncertainty ranges
Wastewater / rejects / permitting	Moderate to high	Defined technical scope, EIA, treatment and residue management
Premature expansion	Moderate	Scenario C only through a separate decision supported by additional data and contracts

8.2. Permitting and indicative sequence

Project preparation and permitting comprise six main stages:

01
LEGAL CLASSIFICATION
Waste-stream status and codes, recovery operations, origin and ownership of material, including the relationship with EPR/DRS

02
SITE SELECTION
Land, planning compatibility, heavy-goods vehicle access, buffer distances, power, water/sewerage and expansion potential

03
ENVIRONMENTAL IMPACT ASSESSMENT (EIA)
EIA screening, emissions, noise, dust/odour, wastewater, residues and operating conditions

04
DESIGN
Configuration of the centre and recycling module, best available techniques (BAT) where applicable, utility connections, recirculated water, fire safety and residue management

05
PERMITTING
Construction permit, waste management permit and, where applicable, water and emissions permits and other facility-specific approvals

06
COMMISSIONING
Local feedstock tests, verification of yields and consumption, acceptance testing, traceability procedures and authorisation to operate

8.3. Impact and sustainability

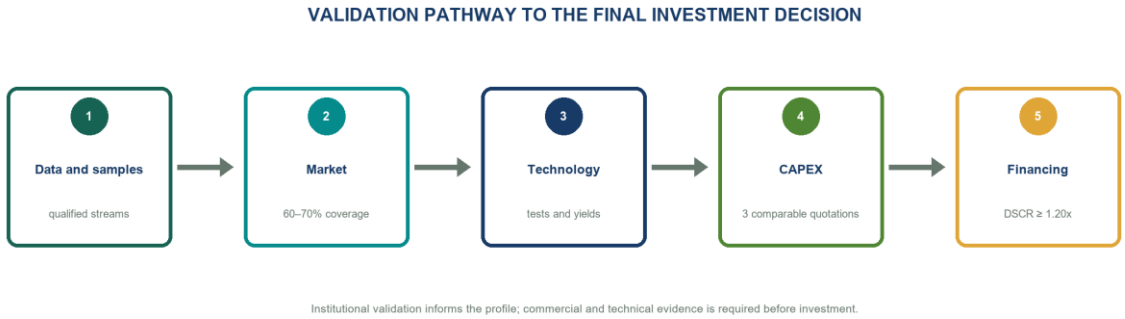
The project can connect emerging separate-collection systems, EPR schemes and the DRS with users of secondary raw materials. It can increase domestic plastics recovery, reduce disposal and partly replace virgin polymers. This is consistent with the Environment

Strategy 2024–2030, which seeks to develop regional waste management infrastructure, increase recycling, improve resource efficiency and support the transition to a green and circular economy.

Measurable impact indicators include approximately 6,750 t/year processed at 90% utilisation, approximately 5,670 t/year of saleable secondary material in Scenario B, a preliminary climate-assessment range of approximately 4.6–14.5 ktCO_2e/year for material directed to the module*, and an indicative employment level of 30–45 full-time equivalent (FTE) positions. Governance targets include 100% batch traceability, audits of EPR/DRS streams and environmental, social and governance (ESG) reporting. A lost-time injury frequency rate (LTIFR) below 1.0 is a planning target, and at least 24 hours of training per FTE per year is an operational benchmark. *A project-specific life-cycle assessment (LCA) is required before any public climate claim.

From the outset, the design will incorporate water recirculation and treatment, energy efficiency, dust and noise control, residue management, prevention of accidental pollution, occupational health and safety, and material traceability from reception to the secondary product.

8.4. Validation programme: 90 days



Validation pathway to the final investment decision.

- Reconcile POM, EPR and DRS data and map material streams by polymer, source, month and legal status.
- Test PET and HDPE/PP samples, establish mass balances and obtain at least three quotations for the centre and each candidate module.
- Secure commercial coverage of at least 60% for the module and at least two sales channels for pre-processed material.
- Conduct an initial assessment of two or three sites, including options from the preliminary screening list, without preference. Assess utilities, EIA requirements, wastewater and traffic.
- Update the model and decide whether to proceed, redesign or stop Scenario B. Treat Scenario C as a separate expansion decision.

Role of Invest Moldova

The Agency can support promotion of the opportunity, help connect relevant stakeholders, offer guidance on institutional dialogue and facilitate transparent access to information on the investment environment and available support instruments.

Contact: Invest Moldova I https://invest.gov.md

NOTICE. This is a preliminary investment assessment. It does not constitute a feasibility study, offer, prospectus, financial recommendation or commitment by an authority, operator or investor. The configuration, feedstock, site, partnerships, CAPEX/OPEX and financing require independent verification.

Selected sources

References: [S#] markers refer to the full source list [S1]–[S22] in the Substantiation Annex, Assumptions Register and financial model.

Principal sources:

[S11] UNDP Moldova / RWA Group, Study on Packaging Waste Management, June 2026. https://www.undp.org/sites/g/files/zskgke326/files/2026-06/packaging_study_eng_22.06.2026.pdf

[S16] Ministry of Environment / Government Decision No. 256/2026: implementation and appointment of the administrator of the packaging deposit return system.
https://mediu.gov.md/ro/comunicate-de-presa/sistemul-de-depozit-pentru-ambalaje-intra-etapa-de-implementare

[S21] Plastics Recyclers Europe, rigid-polyolefin market, 30 April 2025.
https://www.plasticsrecyclers.eu/news/rigid-polyolefins-recycling-market-hits-standstill/