

ADS ECO

Executive Summary

Integrated Circular Economy & Eco-Industrial Platform for Armenia



16:9 strategic overview visual of the ADS ECO eco-industrial platform.

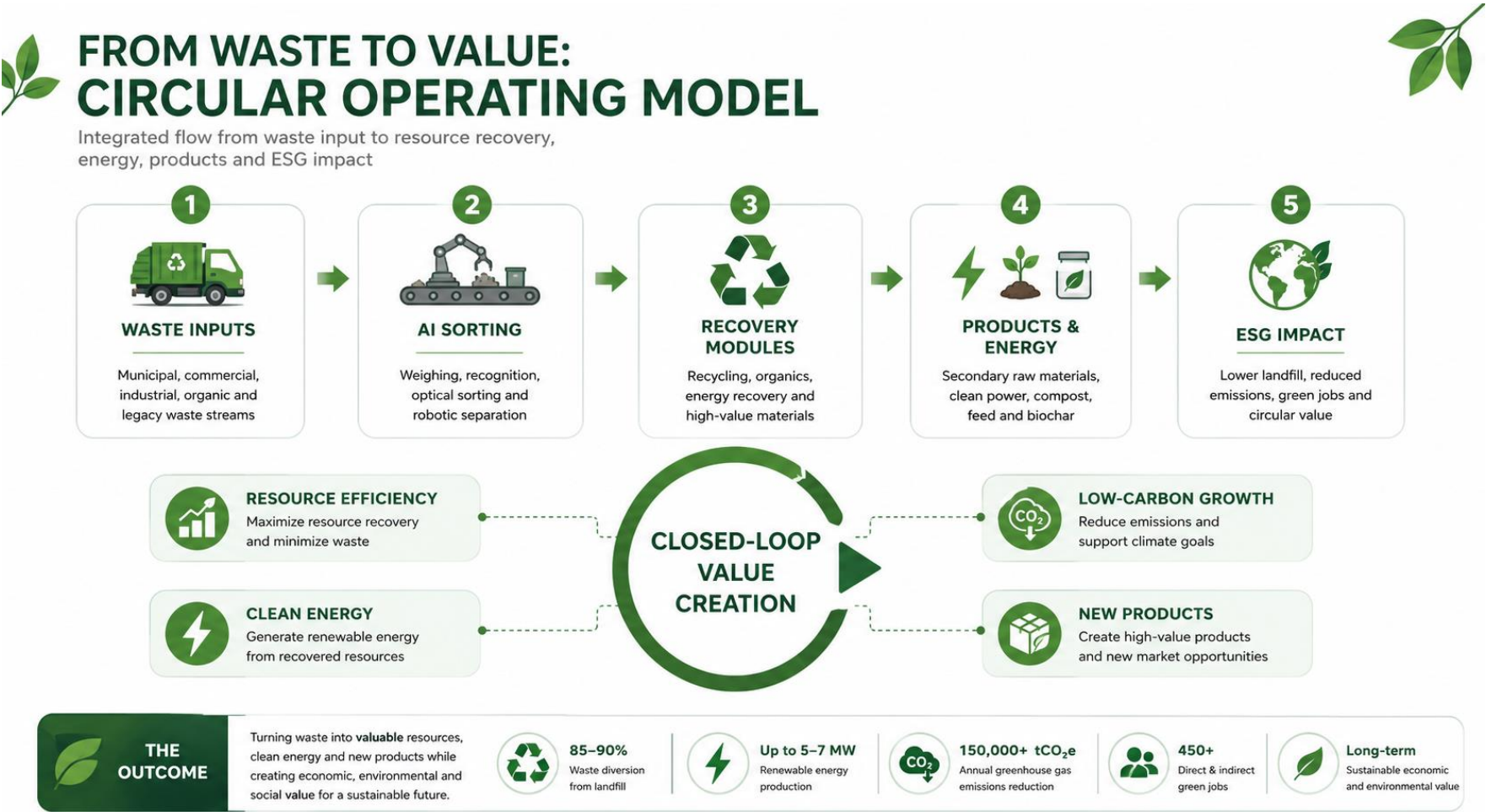
ADS ECO transforms waste streams into valuable resources, clean energy, organic products and new economic value, while reducing landfill dependency and supporting Armenia's low-carbon development.

1. Executive Overview

ADS ECO is conceived as a new-generation eco-industrial and circular economy platform in Armenia. The project integrates waste intake, AI-supported sorting, advanced recycling, resource recovery, waste-to-energy, agro-industrial processing, logistics, ESG governance and investment infrastructure into one coordinated green industrial ecosystem.

The core concept is to replace the traditional waste-disposal model with a modern resource-recovery and value-creation system. Municipal, commercial, industrial, organic and legacy waste streams are received, classified and directed into the most suitable value pathway: recycling, energy recovery, organic/agro production, high-value material recovery or controlled residual management.

By combining industrial efficiency with environmental responsibility, ADS ECO aims to reduce landfill dependency, lower greenhouse-gas emissions, generate clean energy, create new jobs, attract green investment and establish a replicable national model for circular economy development.



16:9 value-chain diagram showing the conversion of waste inputs into resources, energy, products and ESG impact.

2. Project Components and Master Plan Logic

The ADS ECO platform is structured as a modular ecosystem. Each operating zone performs a specific function, while all zones are connected through shared logistics, utilities, data systems, ESG monitoring and investment governance.



16:9 master plan overview showing the integrated operating zones of the ADS ECO complex.

Waste Intake & AI Sorting Receiving, weighing, pre-treatment, AI/NIR sorting and robotic separation.	Advanced Recycling & Recovery Processing of plastics, paper, metals, glass, textiles, wood, e-waste, batteries and PV panels.	Waste-to-Energy Conversion of residual non-recyclable streams into clean energy and utilities.	Agro & Organic Processing Compost, organic fertilizers, feed, bio-additives, biochar and greenhouse/agro outputs.
Logistics & Storage Internal transport, temporary storage, warehousing and outbound product dispatch.	Education & ESG Center Training, demonstration, stakeholder engagement, ESG monitoring and reporting.	Investor / SPV Platform SPV governance, joint venture participation, financial reporting and risk management.	Eco Real Estate / Community Zone Green amenities, supporting infrastructure and long-term community value.

3. Operating Architecture

ADS ECO is designed as an interconnected industrial platform rather than a single-function waste facility. Data, material flows, logistics, utilities and ESG governance are coordinated across modules, allowing the complex to scale in phases and to host separate investment partnerships under a common strategic framework.



16:9 operating architecture visual showing the modular ADS ECO platform and its connected functions.

Operating principle: every material stream is evaluated for its highest-value pathway before any residual disposal option is considered.

4. Circular Economy and Resource Recovery

ADS ECO is built on circular economy principles. The project focuses on recovering materials, energy and biological resources from waste streams and returning them to productive use. This creates a closed-loop industrial system that reduces pressure on landfills and lowers demand for virgin raw materials.



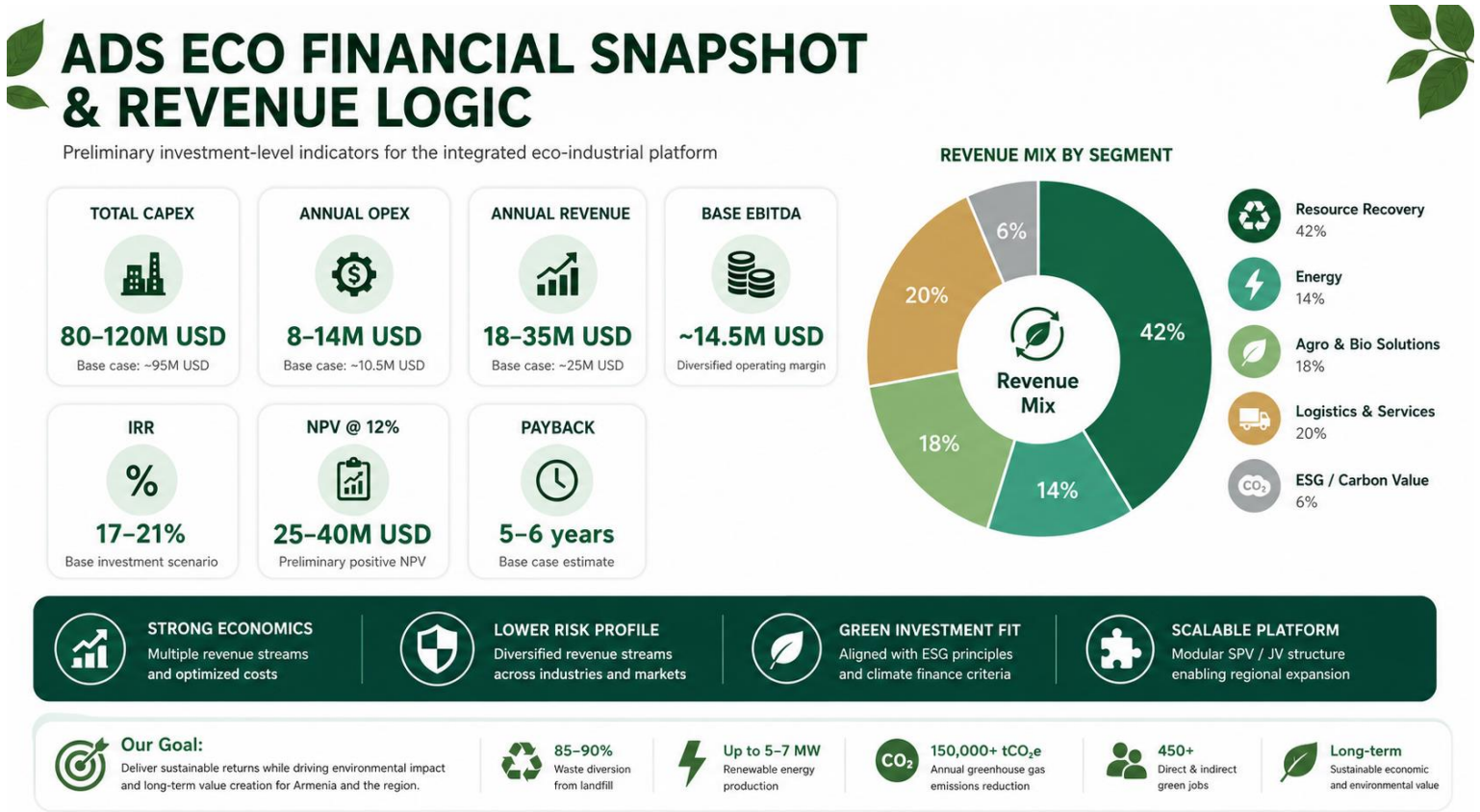
16:9 circular economy and resource recovery overview.

- Plastics (PET, HDPE, PP)
- Paper and cardboard
- Ferrous and non-ferrous metals
- Glass
- Textiles and wood
- Organic fertilizers and compost
- Insect protein and animal feed
- Biochar
- Renewable electricity
- High-value materials from batteries, e-waste and solar panels

5. Investment and Business Model

ADS ECO can be implemented through SPV, PPP and Joint Venture structures. This allows strategic, technological, institutional, ESG and infrastructure investors to participate either in the full platform or in specific modules such as recycling, energy, agro-processing, logistics, education, ESG services or high-value materials.

Recycled materials	Sale of recovered plastics, paper/cardboard, metals, glass and other secondary raw materials.
Green energy	Electricity and utility value from residual waste-to-energy and clean-energy systems.
Organic & agro products	Compost, fertilizers, animal feed, bio-additives, biochar and greenhouse-related outputs.
High-value recovery	Materials recovered from e-waste, Li-Ion batteries, PV panels and complex streams.
ESG / carbon value	Potential carbon value, investor reporting, ESG services, education and demonstration programs.
Joint ventures	Project-specific partnerships with technology, energy, recycling, agro and real estate partners.



6. Preliminary Financial Snapshot

The preliminary financial assessment is indicative and should be refined through a feasibility study, EPC quotations, technology supplier proposals, site selection, waste-feedstock confirmation and market validation.

Total CAPEX 80-120M USD	Base CAPEX ~95M USD	Annual OPEX 8-14M USD	Annual Revenue 18-35M USD
Base EBITDA ~14.5M USD	IRR 17-21%	NPV @ 12% 25-40M USD	Payback 5-6 years

Base-case interpretation: ADS ECO shows potential investment attractiveness due to diversified revenues, modular implementation, resource-recovery economics and ESG positioning. The model is most resilient when recycling markets, energy use, organic products, high-value recovery and joint venture income are developed together rather than in isolation.

Indicative financial profile:

- ❖ **Total CAPEX 80-120M USD;**
- ❖ **base CAPEX ~95M USD;**
- ❖ **annual OPEX 8-14M USD;**
- ❖ **annual revenue 18-35M USD;**
- ❖ **base EBITDA ~14.5M USD;**
- ❖ **IRR 17-21%;**
- ❖ **NPV @ 12% 25-40M USD;**
- ❖ **Payback 5-6 years.**

7. ESG and Sustainable Impact

ADS ECO is designed to deliver measurable environmental, social and governance impact. The project can reduce landfill pressure, increase resource efficiency, produce clean energy, reduce greenhouse-gas emissions, create green jobs and support environmental education and public awareness.



16:9 ESG impact and strategic outcomes overview.

Environmental	Social	Governance
Landfill diversion, emissions reduction, resource recovery, clean energy generation and improved environmental monitoring.	Job creation, workforce training, educational access, community engagement and safer industrial practices.	SPV governance, ESG reporting, transparent monitoring, investor confidence and structured risk management.

8. Implementation Logic and Final Conclusion

ADS ECO can be implemented in phases, beginning with core infrastructure, intake and sorting, and then expanding into recycling, energy recovery, organics, high-value materials, ESG education and investment platform functions. This phased model improves capital efficiency, reduces implementation risk and allows technology and investment partners to enter the project progressively.

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Core infrastructure, gate systems, waste intake, AI sorting, logistics and primary storage.	Advanced recycling lines, resource recovery, energy recovery and utility systems.	Agro / organic processing, compost, fertilizers, feed, biochar and greenhouse-related outputs.	High-value recovery, e-waste, batteries, PV panels and advanced material streams.	ESG center, education platform, investor services, JVs and long-term expansion.

Final conclusion: ADS ECO establishes a modern, modular and investment-ready eco-industrial platform for Armenia. By transforming waste into economic, energy and environmental value, the project can become a national and regional reference model for circular economy, green industry and low-carbon development.

Core concept: From Waste to Value - Clean Energy, Clean Armenia.