

ADS ECO - CONCEPT NOTE

Eco-Industrial Circular Economy Complex | From Waste to Value - Clean Energy, Clean Armenia

ADS ECO

EXECUTIVE SUMMARY

Integrated Circular Economy & Eco-Industrial Platform

Transforming waste into valuable resources, clean energy, and new products — creating economic value, protecting the environment, and powering a better future.



CIRCULAR ECONOMY

End-to-end circular system transforming waste into resources and value.



RESOURCE RECOVERY

Recovering materials, organics, and energy with maximum efficiency.



CLEAN ENERGY

Generating renewable energy to power operations and the community.



ESG IMPACT

Strong Environmental, Social & Governance performance and reporting.



AGRO SOLUTIONS

Delivering organic fertilizers, compost, and bio-based solutions.



INVESTMENT PLATFORM

Attractive returns with sustainable impact and long-term value creation.

MEASURING WHAT MATTERS

Turning sustainability commitments into measurable outcomes.



128K

tCO₂e avoided annually

↑ vs. baseline



120K

tons diverted annually

↑ 95% diversion rate



78%

Recycling Performance

Material recovery rate

↑ +18pp vs. baseline



86 GWh

clean energy produced annually

↑ 35% self-generated



1,250+

green jobs created

↑ 3,800+ trained



25K+

people reached through programs

↑ 120+ community initiatives



100%

ESG reporting coverage

↑ Aligned with GRI & SASB standards

Integrated circular economy and eco-industrial platform.

ADS ECO is proposed as a next-generation eco-industrial and circular economy complex in Armenia. The project is designed to transform waste streams into valuable secondary raw materials, clean energy, organic products and new economic value while reducing landfill dependency, greenhouse gas emissions and environmental impact.

Purpose of this Concept Note: to present the project rationale, integrated solution, key modules, preliminary business model, financial framework, ESG impact and phased implementation approach for investor, partner and public sector review.

1. Project Identification

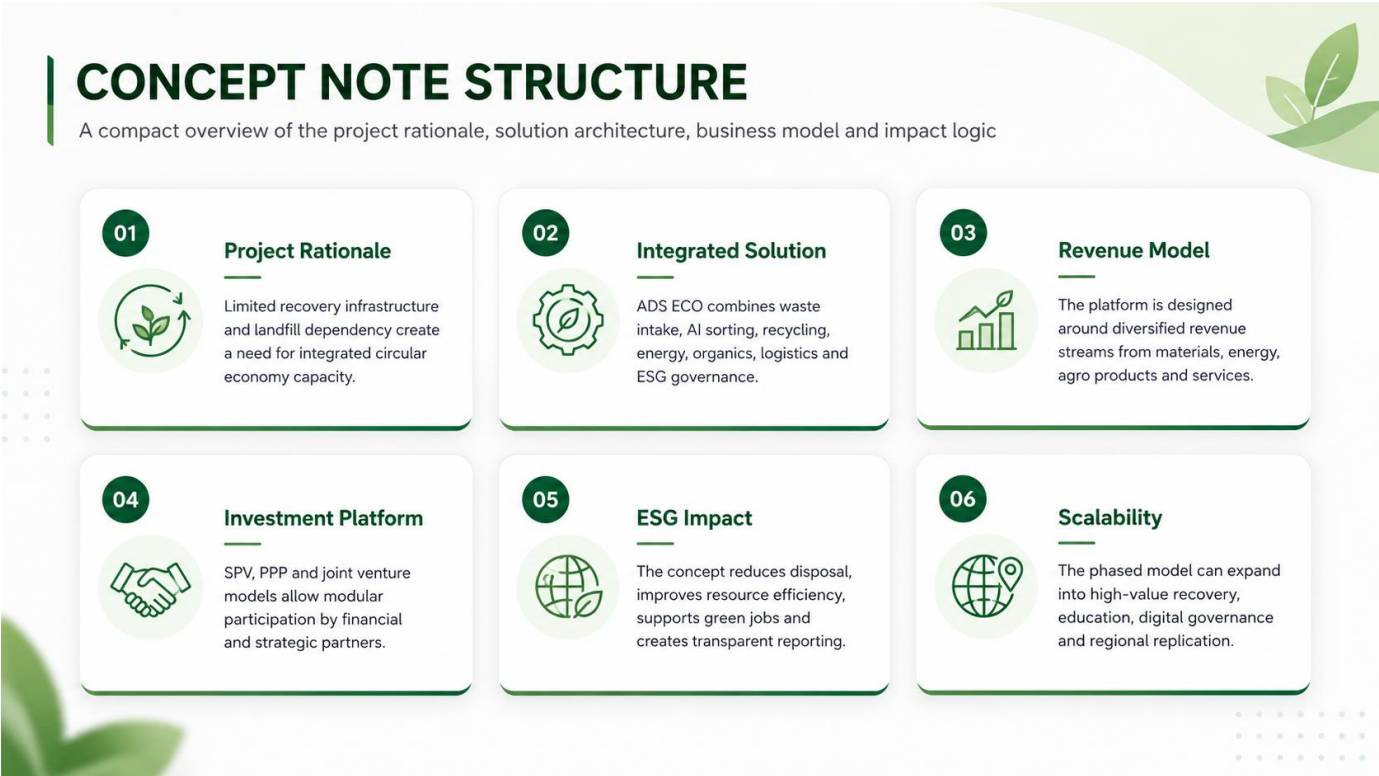
Project name	ADS ECO - Eco-Industrial Circular Economy Complex
Project slogan	From Waste to Value - Clean Energy, Clean Armenia
Project location	Armenia
Project model	SPV / PPP / Joint Venture / modular investment platform
Core focus	Waste-to-resource, recycling, clean energy, agro-bio products, ESG impact and green investment

2. Overall Project Description

ADS ECO is designed as an integrated eco-industrial platform based on circular economy, resource recovery, clean energy and sustainable development principles. Its central idea is to replace the traditional disposal-based waste management model with a value-creation model where waste is treated as an industrial input.

The complex brings together waste intake, AI-based sorting, advanced recycling, energy recovery, agro-industrial production, logistics, ESG governance and investor participation infrastructure into one coordinated operating system. This integrated approach allows different material streams to be separated, processed and monetized through the most appropriate recovery pathway.

The project is expected to support Armenia by reducing landfill pressure, increasing domestic resource recovery, improving environmental performance, attracting green investment and creating a replicable model for low-carbon industrial development.



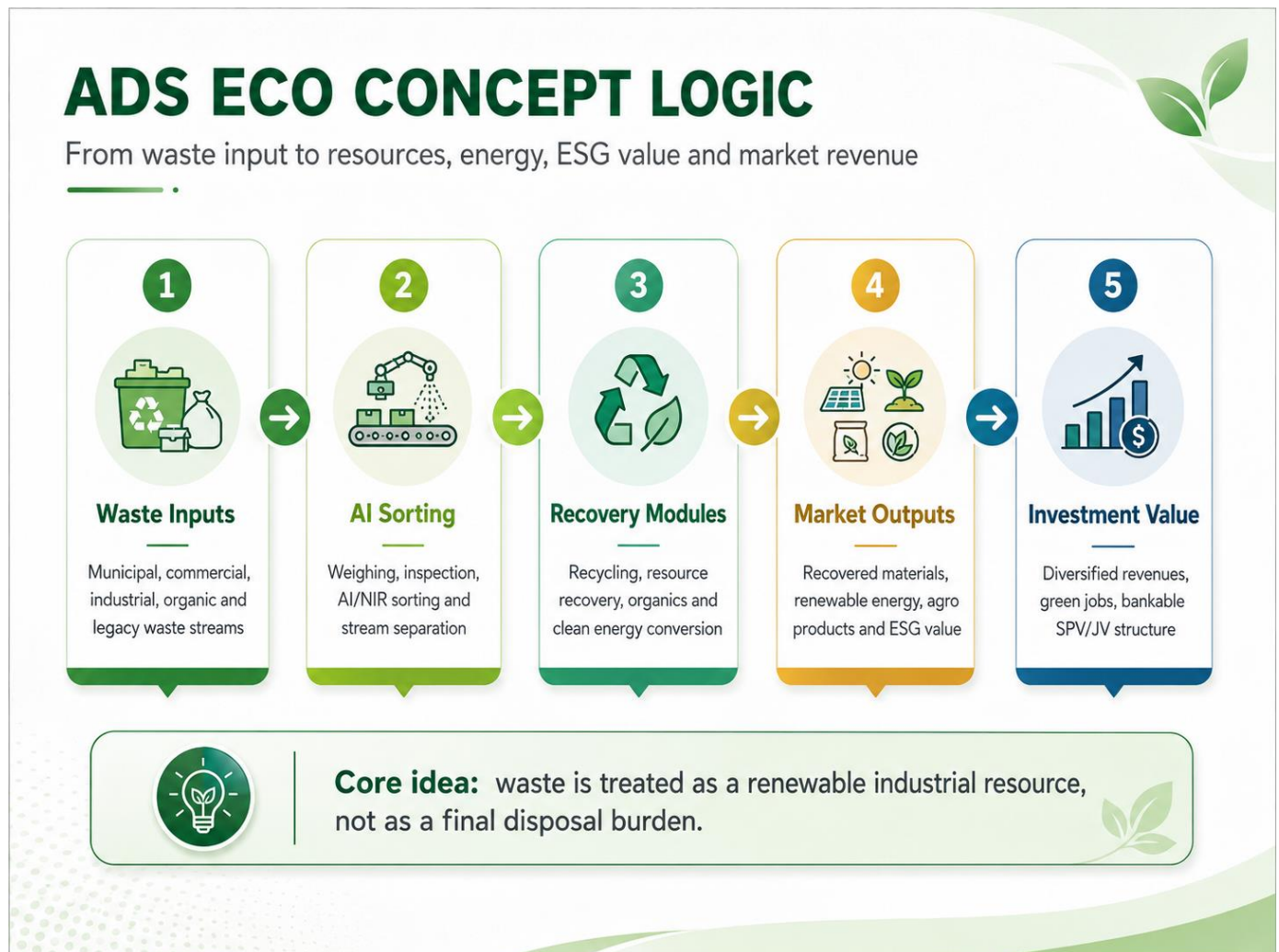
Concept Note structure and project logic.

3. Project Rationale and Need

In many waste management systems, a large share of municipal, commercial and industrial waste is still directed to landfills, while potentially valuable materials remain underutilized. This creates environmental pressure, long-term land liabilities, greenhouse gas emissions, loss of recoverable resources and missed economic opportunities.

Armenia can benefit from an integrated platform that combines advanced sorting, recycling, energy recovery, organic processing and ESG-based management in one scalable industrial ecosystem. ADS ECO responds to this need by creating infrastructure that converts waste streams into marketable products, energy and measurable impact.

The project also addresses investor demand for bankable green infrastructure. By combining diversified revenues with modular development and transparent ESG reporting, ADS ECO can position itself as a project suitable for strategic investors, institutional funds, technology partners and public-sector cooperation.



From waste input to resources, energy, ESG value and market revenue.

4. Project Objectives

- Reduce landfill dependency and long-term environmental liability.
- Maximize material recovery, reuse and recycling.
- Produce valuable secondary raw materials and new industrial products.
- Generate clean and renewable energy from residual waste streams.
- Convert organic waste into compost, fertilizers, feed, bio-products and agro value.
- Create green jobs, technical capacity and local industrial skills.
- Deliver measurable environmental, social and governance impact.
- Attract green, infrastructure, ESG and strategic investment into Armenia.



Circular economy and resource recovery visual package.

5. Main Project Components

Component	Function
Waste Intake and AI Sorting	Receiving, weighing, inspection, pre-processing, AI/NIR optical sorting, robotic separation and routing of streams to recycling, energy, organics or residual handling.
Advanced Recycling and Resource Recovery	Processing of plastics, paper, cardboard, metals, glass, textiles, wood, rubber, e-waste, Li-Ion batteries, PV panels and other high-value flows.
Waste-to-Energy and Clean Utilities	Conversion of residual and non-recyclable streams into clean energy through advanced thermal or energy recovery technologies, supported by environmental control systems.
Agro and Organic Processing	Conversion of organic streams into compost, organic fertilizers, animal feed, bio-additives, biochar and agro-industrial products.
Logistics and Storage	Material flow management, internal transport, temporary storage, finished product warehousing, dispatch and platform logistics services.
ESG and Education Center	Environmental education, professional training, technology demonstration, ESG monitoring, public awareness and transparent reporting.
Investor and SPV Platform	Project governance, investment participation, JV structuring, financial management, risk allocation and exit strategy.

5.1 Operating Architecture Visual

ADS ECO functions as an interconnected platform, linking core industrial modules with data, operations, ESG governance and value creation.



Operating architecture and interconnected project modules.

6. Business and Investment Model

ADS ECO can be structured through a flexible SPV / PPP / Joint Venture model. The central SPV may hold the core project assets, contracts and governance framework, while module-specific joint ventures can be created for recycling, energy, agro-bio products, high-value recovery, logistics and ESG-related services.

This model allows investors to participate at different levels: platform-level equity, SPV-level participation, debt or structured finance, strategic technology partnerships, EPC participation, or module-specific co-investment. It also supports risk allocation by separating revenue streams and technology packages into clear business units.



Investment and participation structure - SPV, PPP and JV pathways.

Preliminary Revenue Streams

- Recycled materials and secondary raw materials.
- Clean energy generation and sale or internal use.
- Organic fertilizers, compost, bio-products, animal feed and agro outputs.
- High-value materials from batteries, e-waste and solar panels.
- Logistics, infrastructure and platform services.
- ESG, carbon value, education, training and demonstration services.



Illustrative revenue mix and diversified business model.

7. Preliminary Financial Framework

The preliminary financial framework is indicative and should be refined through a full feasibility study, technology selection, EPC pricing, market validation, site selection and financing negotiations.

At concept stage, ADS ECO is positioned as a multi-stream green infrastructure project with diversified revenues, modular capital deployment and ESG-aligned value creation.

Indicator	Preliminary Range	Comment
CAPEX	80-120M USD	Base case around 95M USD
OPEX	8-14M USD/year	Base case around 10.5M USD/year
Revenue	18-35M USD/year	Diversified multi-stream model
IRR	17-21%	Preliminary project return range
NPV @ 12%	25-40M USD	Indicative positive present value
Payback	5-6 years	Supported by diversified cash flows

PRELIMINARY FINANCIAL SNAPSHOT

Indicative figures to be refined through feasibility study, EPC pricing and market validation



CAPEX

80-120M USD

Base case approx. 95M USD



OPEX

8-14M USD/year

Base case approx.
10.5M USD/year



Revenue

18-35M USD/year

Diversified multi-stream model



IRR

17-21%

Base case project
return range



NPV @ 12%

25-40M USD

Indicative positive
present value



Payback

5-6 Years

Supported by diversified
cash flows

CAPEX LOGIC: modular investment across industrial, energy, logistics and ESG assets



Sorting



Recycling



Energy



Agro



Utilities/SCADA



Logistics/ESG

Preliminary financial snapshot with indicative CAPEX, OPEX, revenue, IRR, NPV and payback.

8. ESG and Sustainable Impact

ADS ECO is designed to deliver measurable environmental, social and governance impact. Environmental impact is expected through landfill diversion, resource recovery, emissions reduction, clean energy generation, water and air monitoring, and reduced reliance on primary raw materials.

Social impact is expected through green jobs, workforce development, technical training, environmental education, community awareness and long-term institutional capacity building. Governance impact is expected through transparent reporting, ESG monitoring, risk management, compliance and investor-grade disclosure.



ESG impact and strategic outcomes visual package.

9. Implementation Approach

Phase 1 - Preparation and Design

Site selection, feasibility study, permits, SPV/JV structuring, pre-engineering and investment readiness.

Phase 2 - Core Infrastructure

Access roads, utility connections, intake, weighing, AI sorting, logistics and initial environmental systems.

Phase 3 - Recycling and Energy

Advanced recycling lines, recovery modules, energy block and environmental monitoring systems.

Phase 4 - Agro, ESG and Education

Organic processing, agro-bio production, ESG center, training facilities and public demonstration areas.

Phase 5 - Expansion and High-Value Technologies

E-waste, batteries, PV panels, high-value materials, digital governance and additional JV modules.



Indicative phased development roadmap.

10. Conclusion and Next Steps

ADS ECO presents a modern, modular and investment-ready concept for an eco-industrial circular economy platform in Armenia. It is designed to transform waste into economic, energy, environmental and social value through integrated infrastructure and diversified revenue streams.

The project can become a national and regional demonstration model for circular economy development, offering clean energy, recovered raw materials, green jobs, ESG impact and long-term sustainable growth.

The next step is to move from concept-level positioning to feasibility study, site validation, technology selection, EPC costing, commercial structuring, regulatory engagement and investor outreach.

- Confirm target location and land availability.
- Prepare technical feasibility and environmental baseline assessment.
- Define waste supply, feedstock quality and offtake assumptions.
- Shortlist technology and EPC partners.
- Develop detailed financial model and financing strategy.
- Establish SPV / PPP / JV legal and governance structure.

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



Strategic outcomes - long-term value creation for economy, environment, society and governance.